



## Final Engineering Report

NYSDEC ERP Site Number E623014

Former AFMC, Inc. Petroleum Bulk Storage Facility  
Operable Unit #1 - South Terminal

Ambrose Street, Sackets Harbor, New York

November 4, 2015



Strategic Environmental, LLC

## **Final Engineering Report**

NYSDEC ERP Site Number E623014

Former AFMC, Inc. Petroleum Bulk Storage Facility

Operable Unit #1 - South Terminal

Sackets Harbor, New York

Prepared for:

**The Village of Sackets Harbor**

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November 4, 2015

SE Project No. 2009-761



## Certifications

I, Henry N. Bradford III, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Interim Remedial Measures Work Plan for the Former AFMC, Inc. Petroleum Bulk Storage Facility-South Terminal Property was implemented and that all construction activities were completed in substantial conformance with the Department-approved Former AFMC, Inc. Petroleum Bulk Storage Facility-South Terminal Interim Remedial Measures Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Proposed Remedial Investigation Work Plan, the Former AFMC, Inc. South Terminal Property Interim Remedial Measures Work Plans, and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Henry Nevin Bradford, III, of 2705 NYS Route 370, Cato, NY, am certifying as Owner's Designated Site Representative for the site.

Signature: \_\_\_\_\_

Registration Number: 086008\_\_\_\_\_

Date: \_\_\_\_\_



## List of Acronyms

<b><u>Acronym</u></b>	<b><u>Definition</u></b>
CAMP	Community Air Monitoring Plan
ERP	Environmental Restoration Program
eV	Electron Volt
FER	Final Engineering Report
HASP	Health and Safety Plan
IRM	Interim Remedial Measures
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
mg/kg	Milligrams-per-kilogram
µg/kg	micrograms-per-kilogram
OSHA	United States Occupational Safety and Health Administration
PID	Photo-ionization Detector
PM-10	Particulate Matter, <10 microns
PPM	Parts – Per – Million
QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objectives
RI	Remedial Investigation
SAC	State Assistance Contract
SCO	Soil Cleanup Objectives
SVOC	Semi – Volatile Organic Compound
UST	Underground Storage Tank
VOC	Volatile Organic Compound



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## **1 Introduction and Background**

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### **1.1 Introduction**

The following Final Engineering Report (FER) provides documentation of Interim Remedial Measures (IRMs) that were implemented at Operable Unit #1 of the former AFMC, Inc. petroleum bulk storage and distribution facility located in Sackets Harbor, New York under New York State Environmental Restoration Program (ERP) Contract No. E623014. The site was remediated to Residential Soil Cleanup Objectives, as established in Part 375 of Title 6 of the New York Codes, Rules and Regulations (6NYCRR). The IRM activities were completed in accordance with the *Supplemental Interim Remedial Measure Work Plan, Operable Unit #1 (South Terminal), Former AFMC Petroleum Bulk Storage & Distribution Terminal*, prepared by Strategic Environmental, LLC (Strategic) and dated June 6, 2014. The Work Plan was approved by the New York State Department of Environmental Conservation (NYSDEC) prior to implementation.

This report is supported by figures, tables and appendices that are attached hereto. An electronic copy of this FER with all supporting documentation is included as Appendix E.

### **1.2 Site Description and Background**

The Former AFMC, Inc. Petroleum Bulk Storage & Distribution Terminal is located on the north and south sides of Ambrose Street, within the northwestern portion of the Village of Sackets Harbor, Town of Hounsfield, Jefferson County, New York. This facility historically operated as a petroleum bulk storage and distribution facility under several corporate ownerships from the 1920s through the late 1980s. The facility was decommissioned in 1988, and has remained vacant and idle since that time. The Village of Sackets Harbor, in association with its Local Development Corporation, purchased the property in 2000, with the intent of promoting redevelopment of this blighted property. Due to the considerable history of petroleum handling, as well as the presence of some known areas of petroleum contamination and documented historic releases, the Village applied to enter the site into the ERP program in 2006. The site was subsequently deemed eligible for the ERP program, and the Village signed a State Assistance Contract (SAC) with the NYSDEC in October 2008, formalizing the framework



for implementing a remedial investigation to identify and quantify the extents of petroleum contamination persisting from historic operations.

The former AFMC site consists of a combined land area of 19.55 acres that is distributed across two separate parcels that are divided by Ambrose Street. Based on its geometric configuration and history of operations, the site was divided into two (2) separate operable units (OUs) for purposes of the remedial investigation work. Operable units are generally considered to be portions of a site that can be addressed separately, for technical or administrative reasons, to investigate, eliminate or mitigate a release, threat of a release, or exposure pathway resulting from site contamination. Operable Unit #1 (OU1), also referred to as "South Terminal Area", represents the portion of the site positioned on the south side of Ambrose Street, encompassing 4.75 acres of land area. Operable Unit #2 (OU2), also referred to as "North Terminal Area", represents the remaining 14.80 acres of the facility that is situated north of Ambrose Street. Facility operations began on OU1 in the 1920s. In the mid-1950s, facility operations were expanded to encompass the area corresponding to OU2. Both OUs reportedly operated through the late 1980s. A Site Layout drawing, depicting the relationship of the two parcels to one another, and the relationship of each to existing streets, Lake Ontario, and neighboring development is attached as Figure 1.

Under the ERP Agreement, the objective of the remedial program was to meet Residential Use Soil Cleanup Objectives on Operable Unit 2, and Commercial Use Soil Cleanup Objectives (SCOs) on Operable Unit 1, as defined in 6NYCRR Part 375. Under 6NYCRR Part 375, "grossly contaminated media" is considered to be soil, sediment, surface water, or groundwater which contains sources or substantial quantities of mobile contamination in the form of non-aqueous phase liquid (NAPL) that is identifiable either visually, through strong odor, by elevated contaminant vapor levels, or otherwise readily detectable without laboratory analysis. 6NYCRR Part 375 requires that, in addition to achieving the target soil cleanup objectives for individual contaminants established for a particular site, all source areas and grossly-contaminated media must be addressed.

A Remedial Investigation (RI) of both parcels was previously completed by Strategic Environmental, LLC (SE). The methodologies and findings of the remedial investigation were previously detailed in SE's *Remedial Investigation and Interim Remedial Measure Report, NYSDEC ERP Site Number E623014, Former AFMC Petroleum Bulk Storage Facility*, dated June 7, 2012.

The RI identified two limited areas on OU #2 with petroleum constituents present in soil above NYSDEC





Residential Use SCOs, and two other areas where soil exhibited nuisance characteristics (petroleum-type odors, visible staining, and/or significantly elevated PID headspace screening values). Soil exhibiting such nuisance characteristics is considered to be grossly contaminated media and is required to be addressed under 6NYCRR Part 375. All areas were subsequently addressed through IRMs, and, as a result, that portion of the site was issued a No Further Action Record of Decision (ROD) by the NYSDEC in March 2013, meeting Residential SCOs.

The remedial investigation identified three (3) source areas of petroleum contamination on OU #1. One of the areas, located along the eastern edge of the site, exhibited petroleum constituent concentrations in soil above Commercial SCOs, and was removed through an IRM action (soil excavation and off-site disposal) in 2010. This work was previously summarized in the June 7, 2012 *Remedial Investigation and Interim Remedial Measure Report*.

The remaining two (2) areas of identified soil impact exhibited strong petroleum-type odors and staining characteristic of grossly contaminated soil, despite having target petroleum constituent concentrations below Commercial SCOs. Due to the strong odors and high PID screening results, further remediation was deemed necessary to address these areas of grossly impacted soil on OU1. One area of grossly impacted soil was present near the location of two (2) former loading racks on the northeastern portion of OU #1 that were used to transfer product from the on-site storage tanks to over-the-road delivery vehicles. The piping connecting the tanks to the loading racks was located above grade in the vicinity of the tanks, but was buried below grade in the immediate vicinity of the loading racks, to allow vehicle traffic around the racks. The second area of grossly impacted soil was located on the southern portion of OU1, where a valve house was located, and where two aboveground storage tanks and the historic rail access to the facility existed. This FER summarizes the methods and post-remedial conditions associated with IRM actions conducted in 2014 to address these areas of impacted soil.

### **1.3 Metes and Bounds Description**

The specific metes and bounds description for OU #1 is as follows:

*All that parcel of land located in the Village of Sackets Harbor, Town  
of Hounsfield, County of Jefferson and State of New York, bounded*



*and described as follows:*

*Beginning at a point in the southeast margin of Ambrose Street, said point being South 41 degrees 06 minutes 14 seconds West, 525.50 feet measured along said margin from a point at its intersection with the southwest margin of Edmund Street; and runs thence from the point of beginning, South 48 degrees 44 minutes 08 seconds East, 285.77 feet to a point; thence South 12 degrees 12 minutes 34 seconds East, 241.51 feet to a point; thence South 41 degrees 20 minutes 30 seconds West, 317.06 feet to a point; thence North 48 degrees 34 minutes 41 seconds West, 479.90 feet to a point in the southeast margin of Ambrose Street; thence North 41 degrees 25 minutes 14 seconds East, 319.58 feet along said margin to a point; thence North 41 degrees 06 minutes 14 seconds East, 139.90 feet continuing along the southeast margin of Ambrose Street to the point of beginning, containing 4.75 acres of land.*

*The above described parcel being a part of a 32.2 acre parcel conveyed by Sackets Harbor Local Development Corporation to the Village of Sackets Harbor by deed dated July 9, 2007 and recorded in the Jefferson County Clerk's Office on July 10, 2007 at Instrument 2007-00011856.*

*Together with and subject to rights, covenants, easements, restrictions and rights of way of record.*

#### **1.4 Previous Environmental Investigations and Interim Remedial Measures**

Between November 13, 2007 and December 13, 2007, investigation work was performed at the site by Strategic Environmental in accordance with a State approved work plan. A total of 136 soil borings, from which volatile organic compound readings and soil samples were collected, were advanced at the site on both the northern and southern sides of Ambrose Street. The following year, starting in December of 2008, investigation activities were resumed at the site and completed in January of 2009. Forty-nine additional borings were advanced at both the northern and southern sides of Ambrose Street during this phase of investigative work.



Interim remedial measures involving the removal of impacted soil from the site were performed at both the northern and southern areas of the site in the winter of 2009 and summer of 2010, respectively. Excavation and transportation of impacted soil to an approved landfill were the remedial measures employed at both the northern and southern portions of the site. Field activities were guided by Strategic, with soil samples collected from along the perimeters of each excavation area to document concentration of contaminants remaining along each excavation wall. Details of this work are discussed in greater length in Section 4.1.1.

A report titled *Remedial Investigation Report*, that summarized all historic investigation and remedial work performed at the site, was prepared by Strategic and submitted to the NYSDEC in July of 2011. Following their review of the report, the NYSDEC raised concerns regarding nuisance odors and discoloration of soil that had been noted in boring logs from the soil investigations performed between 2007 and 2010. To address these concerns, Strategic prepared an additional work plan for the north terminal area titled, *Proposed Work Plan, Supplemental Interim Remedial Measures*, revision date September 14, 2012. This work plan focused on additional soil removal from two areas located at the north terminal side of the site where suspected petroleum impact was noted. In November of 2012, Strategic returned to the site to oversee excavation work that had been proposed in the revised work plan. Impacted soil was removed from two source areas where nuisance odors and staining of soil were observed. This soil was transported to an appropriate waste disposal facility and confirmatory samples were collected from the extents of each excavation to document post-excavation conditions at the site.



## 2.0 Summary of Site Remedy

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### 2.1 Remedial Action Objectives

Based on the results of the Remedial Investigation, the Remedial Action Objectives (RAOs) established for the site were to remediate to Residential SCOs, as defined in 6NYCRR Part 375. Based on the results of the Remedial Investigation, it was determined that meeting the Residential SCOs would require addressing impacted soil at two locations on OU #1, including an area which had historically contained a valve house, a rail spur, two (2) aboveground additive tanks, and several aboveground petroleum storage tanks and related aboveground piping (Area A), and an area where two (2) loading racks had historically existed (Area B). Considering site conditions, it was anticipated that these areas could be sufficiently remediated through the implementation of an IRM (soil removal and on-site treatment).

Results from analyses performed on groundwater collected at the site indicate exceedances of groundwater standards for a limited number of volatile organic compounds in overburden groundwater within one of the areas of grossly impacted soils targeted for further remediation (Area A). The groundwater data does not indicate a significant and widespread impact to either overburden or bedrock groundwater. The "protection of groundwater" soil cleanup objectives of 6NYCRR Part 375 were not applied to the site, based upon the following factors:

- a) The apparent source material for this minor contravention of overburden groundwater standards was addressed by removal and on-site treatment by mechanical aeration under the remedial program;
- b) Data from sampling of overburden groundwater does not indicate the contaminated groundwater is migrating;
- c) Data from sampling of bedrock groundwater beneath the site does not indicate that the bedrock groundwater regime has been significantly impacted nor is acting as a migratory pathway for the contamination;



- d) The lack of migration of the contaminated groundwater in the duration of time since the cessation of facility operations (some 25 years) suggests that it is unlikely that the contamination will migrate off-site; and
- e) The groundwater quality is expected to improve over time once the source material was addressed.

## **2.2 Description of Selected Remedy**

Review of data from the previous site investigations indicated that the implementation of IRMs in the form of on-site mechanical aeration of soils would be sufficient to reduce contaminant concentrations within soil to those defined in the RAO's outlined above.



### **3.0 Interim Remedial Measures, Operable Units and Remedial Contracts**

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#### **3.1 Overview of Interim Remedial Measures**

The IRM conducted at OU #1 was performed by Richardson & Sons of Ogdensburg, New York between July 14 and October 21, 2015, and involved the excavation and segregation of clean overburden, and subsequent removal and on-site treatment of volatile and semi-volatile impacted soils that existed at the two areas of the site. These areas included an area which had historically contained a valve house, a rail spur, two (2) aboveground additive tanks, and several aboveground petroleum storage tanks and related aboveground piping (Area A), and an area where two (2) loading racks had historically existed (Area B).

The IRM work generally included the following tasks:

- a) Clearing, grubbing and grading of areas of the site where soil removal was expected to occur, and where excavated soil was to be staged and mechanically processed;
- b) Excavation and on-site staging of petroleum impacted soil within each area of concern;
- c) Verification sampling to confirm and document that all soil having VOC concentrations above the Residential SCOs or nuisance characteristics was effectively removed from the subsurface;
- d) Temporary/rough grading and securing the excavations so that open excavations did not remain while the impacted soil was mechanically processed on site;
- e) Sampling and laboratory analysis of overburden soil that did not exhibit PID headspace readings above 10 ppm, visible staining, or other nuisance characteristics, to document concentrations of VOC and SVOC prior to use of that material as on-site backfill;
- f) Mechanical mixing and aeration of excavated impacted soils, using an Allu soil screening bucket, to promote biologic breakdown of organic contaminants;
- g) Screening of excavated soil periodically throughout the mechanical mixing and aeration process to gauge progress and effectiveness of the technique;



- h) Verification sampling of the processed soil at such time as field observations (i.e., odors, headspace screening results, visible staining, or obvious petroleum odors) suggested that mixing/aeration had reduced contaminant concentrations below Residential SCOs and removed nuisance characteristics; and
- i) Implementation of a Community Air Monitoring Program (CAMP) to verify that soil excavation and handling activities performed in connection with the work did not migrate from the site and affect the surrounding community.

The specific details of each task are described in the corresponding subsections below.

## **2.2 Clearing and Grading of Site**

Prior to undertaking the soil excavation and mechanical processing tasks, clearing and grubbing of site vegetation was conducted by Lone Oak Excavating of Richville, New York, to facilitate efficient movement around and between the target excavation areas and designated staging and soil processing areas. Existing vegetation (primarily woody brush and shrubs) was cut to just above grade, and moderate degree of pre-excavation site grading was performed to grub may also be necessary in and around the designated soil staging and processing area to promote efficient handling of soil and diversion/management of precipitation/runoff.

In addition to the clearing and grubbing, two (2) sheet metal buildings that remained at the site were removed by Lone Oak Excavating, to allow for excavation of impacted soil beneath the building footprints, as necessary. The two buildings included the former valve house on the southeastern portion of OU#1 (area of Excavation A) and a former loading rack (area of Excavation B). Prior to the removal of the buildings, Strategic performed an asbestos building survey to determine if suspect asbestos-containing materials existed. Suspect window glazing compound was identified and sampled from each building. The samples were submitted to Paradigm Environmental Services of Rochester, New York (NYS ELAP I.D. No. 10958) for analysis for asbestos. No asbestos was identified in the glazing compounds. No other suspect materials were identified on the buildings.



### **3.3 Soil Excavation and Staging**

Following site clearing and preparation, the initial task of the IRM action was to excavate impacted soil from its in-situ position within the two (2) areas exhibiting nuisance characteristics identified during the Remedial Investigation.

Throughout the excavation process, disturbed soil was subjected to field headspace screening, by placing a representative portion of soil into a re-sealable plastic bag, agitating the soil and collecting VOC concentration readings from the air space between the soil sample and the plastic bag. In each designated excavation area, soil removal began in an area of known or expected soil contamination, and proceeded vertically and laterally in each direction until soil no longer exhibits field-detectable nuisance characteristics (strong odors, visible staining) or headspace VOC readings above 10 parts-per-million (ppm), as measured with the portable PID. As soil was excavated, overburden that did not exhibit the identifiable nuisance characteristics or PID headspace screening values above 10 ppm was segregated for use as backfill, subject to suitable laboratory analysis results. Soil having PID headspace screening values above 10 ppm or exhibiting identifiable nuisance characteristics was moved to the designated on-site soil staging and processing area for subsequent mechanical mixing and aeration.

#### **Excavation A**

The first excavation was completed in the area of the former valve house, two (2) aboveground storage tanks, a rail spur, and several aboveground petroleum storage tanks and related aboveground piping at the southern end of the property. The excavation continued in extent vertically to the bedrock surface, encountered at depths ranging from 4.5 to 7.5 feet below grade across the excavation. Impacted soil was generally present throughout the lower 2.5 to 3.5 feet of soil, above the soil-bedrock interface.

A total of 11,946 cubic yards of soil was excavated from this area. The lateral extent of the final excavation encompassed a footprint of approximately 47,480 square feet, extending approximately 316 feet from east to west at its longest point, and approximately 240 feet in the north to south direction at its widest point. The excavation encompassed the majority of the southern half of the site. The relative footprint of the excavation area is illustrated on the Excavation Plan, attached as Figure 4.





### **Excavation B**

The second excavation was completed in the area of the two (2) former loading racks at the northernmost portion of the property. The excavation continued in extent vertically to the bedrock surface at a depth of approximately 5.5 feet below grade across the excavation, with a total of 3,543 cubic yards of soils excavated from this area.

The lateral extent of the final excavation encompassed a footprint of approximately 17,107 square feet, extending approximately 128 feet from east to west at its widest point, and approximately 200 feet in the north to south direction at its longest point. The relative footprint of the excavation area is illustrated on the Excavation Plan, attached as Figure 4.

### **3.4 Sampling and Analysis of Overburden to be used as On-Site Backfill**

During the excavation process, overburden material that was present above the zone of petroleum impact and which exhibited no visible staining, PID headspace screening results above 10 ppm, or strong petroleum odors, was segregated for potential use as backfill material within the excavations. Approximately 8,816 cubic yards of such overburden was segregated. At the conclusion of the excavation work, representative samples of this material were collected for laboratory analysis for VOC and SVOC, to ensure that all backfill material used was within the Unrestricted use SCO's of 6NYCRR Part 375. Fourteen (14) composite soil samples, identified as Samples BF-1 through BF-14, were collected from this segregated material. The samples were immediately placed on ice following collection, and were subsequently shipped to Absolute Resource Associates of Portsmouth, New Hampshire for analysis.

The results of analyses performed on the confirmation samples collected from the segregated overburden revealed no target VOC or SVOC concentrations exceeding the Unrestricted Use SCOs. The results of these analyses are tabulated in comparison to the 6NYCRR Part 375 SCOs in Tables 1A (VOC data) and 1B (SVOC data).

An electronic copy of the laboratory analyses reports for all samples is included in Appendix B.



### **3.5 Post-Excavation Sampling and Analysis of Excavation Walls**

Post-excavation verification soil samples were collected from the final sidewalls of each excavation, to demonstrate that Residential SCOs were achieved and to document concentrations of VOC and SVOC, if any, that remained in in-situ soil. The sampling was performed at a frequency of one sample for each approximately 30 feet of excavation sidewall, at depths corresponding to the contaminated soil horizon in each area at the limits of the excavation. As the excavation removed all soil to bedrock, bottom samples were not collected. The soil samples were submitted for laboratory analysis of VOC by EPA Method 8260, and SVOC by EPA Method 8270. These samples were submitted to Absolute Resource Associates for analysis.

A total of twenty-eight (28) verification samples were collected from the walls of Excavation A. These samples were identified as samples A-1 through A-28. The locations are indicated on attached Figure 4. The analysis results are summarized in attached Table 2A (VOC) and 2B (SVOC). The results of analyses performed on the confirmation samples collected from the final walls of Excavation A revealed no target VOC or SVOC concentrations exceeding the Residential Use SCOs. Only Acetone was detected at concentrations above the Unrestricted use SCOs in three samples from Excavation A.

A total of seventeen (17) verification samples were collected from the walls of Excavation B. These samples were identified as samples B-1 through B-17. The locations are indicated on attached Figure 4. The analysis results are summarized in attached Table 3A (VOC) and 3B (SVOC). The results of analyses performed on the confirmation samples collected from the final walls of Excavation B revealed no target VOC or SVOC concentrations exceeding the Residential Use SCOs. Only Acetone was detected at concentrations above the Unrestricted use SCOs in one sample from Excavation B.

An electronic copy of the laboratory analyses reports for all samples is included in Appendix B.

### **3.6 Mechanical Mixing and Aeration of Excavated Soil**

A total of 6,673 cubic yards of impacted soil was removed from the two excavations and staged for on-site mechanical aeration during the IRM work. The soil was divided into six (6) separate piles



to allow for easier handling during the mechanical aeration process. The soil was subjected to mechanical mixing and aeration, using an Allu soil screening bucket attached to a hydraulic excavator. The screening served to periodically aerate the staged soil to promote growth of naturally-occurring/indigenous aerobic microorganisms that will metabolize organics and hydrocarbons in the soil, and to re-distribute microbe populations and hydrocarbons to promote efficient and effective treatment of soil throughout the piles.

The aeration process continued until such time as field observations indicated that nuisance characteristics (i.e., strong petroleum odors) no longer persist, and PID headspace screening of soil from representative points throughout the staged material revealed no VOC detections above 25 ppm. Depending on the raw concentration of contaminants (PID screening values, petroleum odors/signs of impact) in the soil, the soil was processed through the @ALLU bucket a minimum of one time, with some soil requiring as many as three separate screening/processing events.

### **3.7 Verification Sampling of Mechanically Aerated Soil**

Once field observations nuisance characteristics no longer persisted, and PID headspace screening of soil from representative points throughout the staged material revealed no VOC detections above 25 ppm, representative samples of the processed soil were collected for laboratory analysis to verify the effectiveness of the process and to document concentrations of VOC and SVOC in the processed material. One grab sample for each approximately 1,000 cubic yards of staged material will be collected for laboratory analysis. The sample locations will be evenly distributed throughout the soil piles, and will be accessed using a hydraulic excavator or backhoe with a conventional excavation bucket. The collected samples will be submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260, and semi-volatile organic compounds by EPA Method 8270 (SVOCs). Samples will be submitted to a NYSDOH certified laboratory. NYSDOC ASP Category B deliverables will be provided.

Following completion of the mechanical aeration process, the processed soil was placed in ten (10) separate large piles of approximately equal size within the excavations to allow for uniform confirmation sampling prior to being graded off within the excavations as backfill. One (1) composite confirmatory soil sample was collected from each pile to ensure that all screened soils were in compliance with the Unrestricted use SCOs before final grading of the excavations. The samples were shipped on ice and under chain of custody to Absolute Resource Associates for



analysis

The results of analyses performed on the confirmation samples collected from the mechanically aerated soil piles revealed no target VOC or SVOC concentrations exceeding the Unrestricted use SCOs.

An electronic copy of the laboratory analyses reports for all samples is included in Appendix B.



## **4.0 Governing Documents**

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### **4.1 Community Air Monitoring Plan (CAMP)**

#### **4.1.1 Monitoring Methods**

Air monitoring for total VOC and respirable dust/airborne particulates less than 10 microns in size ("PM-10") was conducted continuously at the work zone during excavation, soil mixing/processing, soil handling, and site re-grading/restoration activities in compliance with the Community Air Monitoring Plan (CAMP) incorporated into the June 6, 2014 IRM Work Plan. A copy of the CAMP is also attached hereto in Appendix C. The CAMP was developed to reflect the requirements for volatile organic compound (VOC) and particulate matter monitoring established by the NYSDOH in that agency's *Generic Community Air Monitoring Plan* (included as part of the NYSDC's *Draft DER-10: Technical Guidance for Site Investigation and Remediation*, dated December 25, 2002 at Appendix 1A).

Real-time monitoring for total VOC and particulate matter less than 10 microns in size (PM-10) was conducted continuously at monitoring stations positioned at the downwind and upwind perimeter of the work zone to ensure that airborne contaminants (VOC and particulates) were not migrating from the site as a direct result of the intrusive work, and to allow appropriate mitigative measures to be implemented in the event that action levels established in this CAMP were exceeded.

Real time measurement of total VOC concentrations in air was performed using portable PIDs equipped with 10.6 eV lamps (RAE Systems MiniRae Model 2000 units). Calibration of the PIDs was performed at the start of each work day, using a 100 part-per-million isobutylene compressed gas. The PIDs were checked against the isobutylene calibration standard at the mid-point of each day, and the instruments were re-calibrated if the concentration recorded for the calibration gas mixture varied by more than two (2) parts-per-million from the 100 ppm standard value. One PID was placed on a tripod situated in an upwind location and another was located on a similar tripod at a downwind location. The tripods elevated the instruments approximately five (5) feet above grade, to represent a typical breathing zone of nearby individuals. Sampling locations were determined daily based on the prevailing wind conditions of that morning, and were modified as



necessary throughout the workday in cases of changes in wind direction. Once in place, the PIDs were set to continuously record total VOC readings. Alarms were programmed to sound and to activate a warning strobe if the total PID readings surpassed 5 ppm. Data gathered from the PIDs were downloaded daily to a laptop.

Real-time respirable dust monitors (TSI DusTRAK Aerosol Monitors) were used at the site to facilitate particulate monitoring under the CAMP. The TSI DusTRAK is capable of measuring particulate matter less than 10 microns in size, and of integrating the data over a fifteen (15) minute interval. One was placed at the upwind monitoring station and another at the downwind station, to allow comparison of background particulate concentrations in the area to the amount of particulates created by the work. The DustTRAK units were set to sound an audible alarm and activate a warning strobe if PM-10 concentrations in excess of 100 micrograms per cubic ( $\mu\text{g}/\text{m}^3$ ) meter were recorded.

#### **4.1.2 Action Levels**

The following action levels were applied for various contaminants included under this CAMP.

- VOC – The action level for VOC for the project was an exceedance of 5 PPM over a fifteen (15) minute period
- PM-10 – The action level for respirable dust for the project was an exceedance of 100 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) more than the upwind monitor or background levels over a fifteen (15) minute period

#### **4.1.3 Mitigation Protocols**

The following mitigative actions were to be applied for various contaminants included under the CAMP in the event that established action levels were breached:

- VOC – If the airborne concentration of VOC at the downwind perimeter monitoring station were recorded to be more than 5 ppm above that recorded at the upwind (background) monitoring station, work was to be suspended. Continuous monitoring



would subsequently continue, with no excavation or soil handling performed. If the VOC concentrations at the downwind monitoring station decreased below 5 PPM above background, work would resume with continuous air monitoring.

If the VOC at the downwind monitoring station persisted at concentrations over 5 ppm, but less than 25 ppm, above the background/upwind concentrations, mitigative measures, such as vapor suppression or modification of work practices, would be reviewed and implemented, as appropriate. Once these were implemented, continuous monitoring was to be performed at both the upwind and downwind stations, as well as at a point that is 200 feet (or one-half the distance to the nearest structure or receptor, if less than 200 feet), downwind of the work area. If the VOC concentrations at the downwind work area perimeter location were below 25 ppm above background/upwind concentrations, and concentrations at the more distant downwind monitoring location were below 5 ppm above background/upwind concentrations, work would resume and continue provided that those conditions remained.

In the event that VOC concentrations at the downwind work area perimeter were more than 25 ppm above the background/upwind location, or if concentrations at the more distant downwind monitoring location were more than 5 ppm above the background/upwind concentrations, work would remain suspended, and application of additional vapor suppression methods or further alteration of site work practices would be evaluated.

- o Particulate Matter - If, during any fifteen minute period, the dust monitors recorded values at the downwind monitoring station of 100  $\mu\text{g}/\text{m}^3$  above background/upwind conditions for PM-10 particles, or, if airborne dust was observed to be leaving the work area, work was to be halted and dust suppression techniques were to be employed. After the dust suppression techniques were implemented and were functioning adequately, work was to resume at the site, with continuous monitoring. Work would continue provided that no airborne dust was observed leaving the work area, and



downwind PM-10 concentrations did not exceed 150  $\mu\text{g}/\text{m}^3$  above background/upwind concentrations.

In the event that the application of the dust suppression techniques was not successful in preventing visible dust migration from the work area and maintaining downwind PM-10 concentration at or below 150  $\mu\text{g}/\text{m}^3$  above background/upwind concentrations, work was to be suspended, and alternative/additional dust suppression or work practice modification would be evaluated and implemented.

#### **4.1.4 CAMP Results**

No VOC concentrations were recorded to be sustained at or above 5 ppm for a period of 5 minutes or more, and there were no measurable airborne particulates less than 10 microns in size recorded at concentrations at or above 100 micrograms per cubic meter ( $\text{mg}/\text{m}^3$ ) more than the upwind monitor or background levels over a fifteen (15) minute period during excavation activities. Copies of all field data sheets relating to the CAMP are provided in electronic format in Appendix D.





## 5.0 Summary and Conclusions

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- A total of 11,946 cubic yards of soil was excavated from the area corresponding to Excavation A on the southern portion of OU #1, with soil remaining on all terminal walls exhibiting no visible staining, strong petroleum odors, or PID headspace screening results above 10 ppm. The impacted soil was generally present in the lower 2.5 to 3.5 feet of the soil column, above the bedrock surface. The excavation extended to the bedrock surface in all areas. Non-impacted overburden was segregated for potential use as backfill, subject to suitable laboratory analysis results. Impacted soil was staged and later mechanically aerated through an ALLU bucket on a hydraulic excavator.
- A total of 3,543 cubic yards of soil was excavated from the area corresponding to Excavation B on the northern portion of OU #1, with soil remaining on all terminal walls exhibiting no visible staining, strong petroleum odors, or PID headspace screening results above 10 ppm. The impacted soil was generally present in the lower 2.5 to 3.5 feet of the soil column, above the bedrock surface. The excavation extended to the bedrock surface in all areas. Non-impacted overburden was segregated for potential use as backfill, subject to suitable laboratory analysis results. Impacted soil was staged and later mechanically aerated through an ALLU bucket on a hydraulic excavator.
- Of the total volume of soil excavated (15,489 cubic yards), 8,816 cubic yards was segregated as non-impacted overburden, and the remaining 6, 673 cubic yards was deemed impacted and subject to treatment through the mechanical aeration process.
- The fill material primarily consisted of brown loamy sand with random cobbles and small (12"-15") boulders scattered throughout the excavations.
- Bedrock was encountered at varying depths from 4.5 to 7.5 feet below grade across the site.



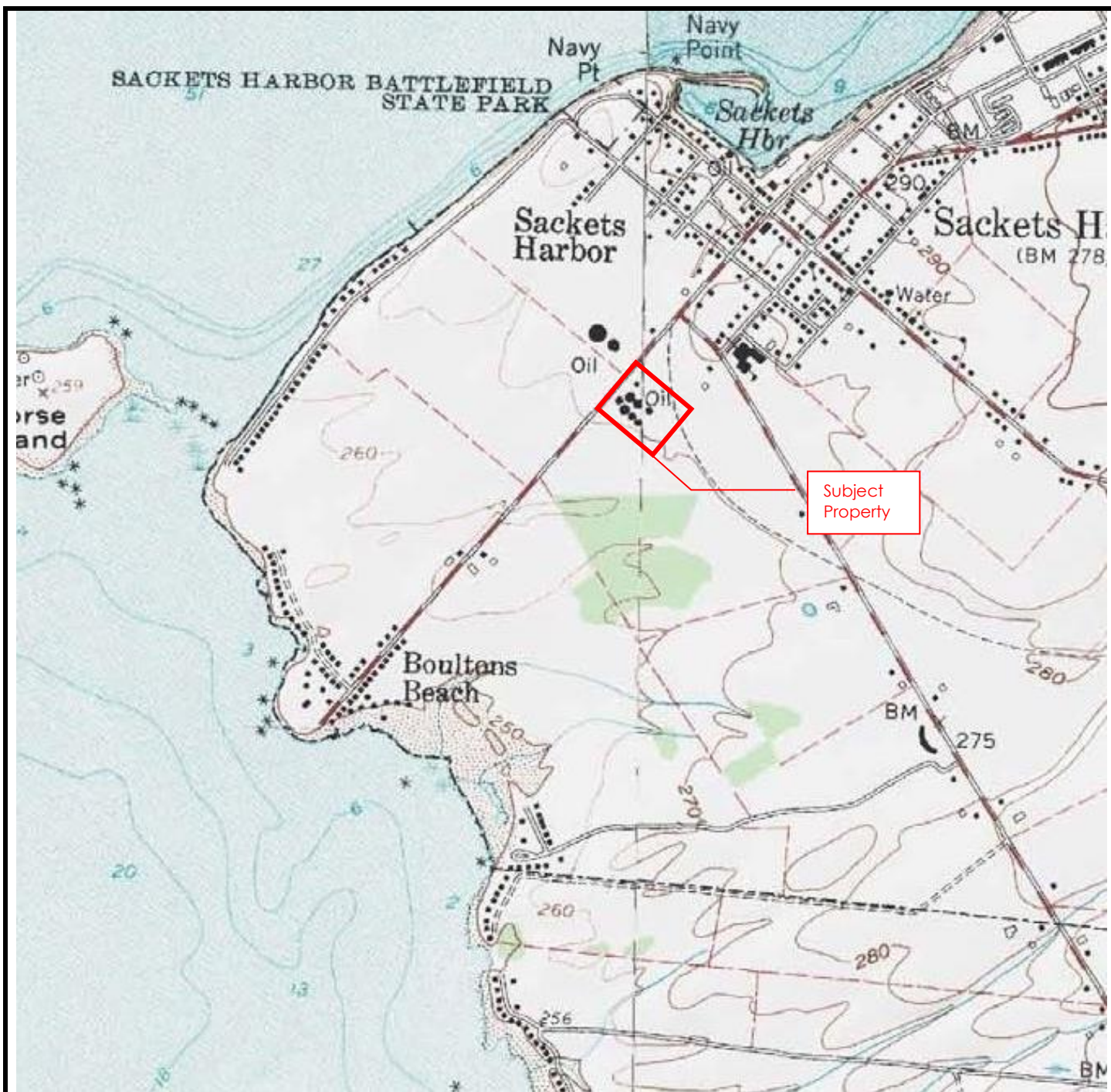
- Analysis data relating to samples collected from the material segregated as non-impacted overburden identified no VOC or SVOC concentrations above the Unrestricted use SCOs established in 6NYCRR Part 375. As such, this material was used as backfill in the excavations created by the soil removal process.
- Analysis data relating to verification samples collected from the final walls of Excavations A and B identified no VOC or SVOC concentrations above the Residential use SCOs established in 6NYCRR Part 375. All concentrations of VOC and SVOC, other than Acetone, were below the Unrestricted use SCOs. Acetone was detected in three samples from Excavation A and in one sample from Excavation B at concentrations above the Unrestricted use SCOs, but significantly below the Residential SCO. These data confirm that the excavation process was successful in removing soil having VOC and SVOC concentrations above the Remedial Action Objectives for the site.
- Impacted soil (6,673 cubic yards) segregated during the excavation process for on-site treatment was mechanically aerated on the northwestern portion of the site, using an ALLU bucket on a hydraulic excavator. The processing continued until field observations indicated that strong petroleum odors no longer persisted, and PID headspace screening results were below 10 ppm. At that time, confirmation samples were collected to document concentrations of VOC and SVOC remaining. The results of the analyses performed on these samples identified no VOC or SVOC concentrations above Unrestricted use SCOs established in 6NYCRR Part 375. As such, this processed material was placed into the excavations created by the soil removal process, and graded.
- In summary, the results of verification sampling and post-processing confirmation sampling indicate that the IRM actions implemented at the site were successful in achieving the Remedial Action Objectives established for OU #1.

## Figures

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Figure 1-Location Map  
Figure 2 – Property Boundary Survey  
Figure 3 – Historic Features  
Figure 4 – Excavation and Sampling Location Plan





Source: Digital-Topo-Maps.com



Strategic Environmental, LLC  
2705 State Route 370  
Cato, NY 13033  
Tel 315.635.8936

SITE LOCATION  
Former AFMC Bulk Storage &  
Distribution Terminal  
Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

**FIGURE 1**



NOTE: ALL BEARINGS, UNLESS OTHERWISE INDICATED, ARE REFERENCED TO GRID NORTH ON THE CENTRAL ZONE OF THE NEW YORK STATE PLANE COORDINATE SYSTEM.

REMAINING PORTION OF THE VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-0011856 (PART OF 40.08 ACRE PARCEL)

VILLAGE OF SACKETS HARBOR INSTRUMENT 2009-00016964 TAX PARCEL 88.35-1-4.32

VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-00001023 TAX PARCEL 88.27-1-29.1

WILLIAM E. & MARY E. SIMMONS L.1029, P.226 TAX PARCEL 88.27-1-19

POINT OF BEGINNING OF DESCRIPTION 14.80 ACRE PARCEL

REMAINING LANDS OF THE VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-0011856 (PART OF 32.2± ACRE PARCEL)

DEED REFERENCE  
BEING A PART OF SACKETS HARBOR LOCAL DEVELOPMENT CORPORATION TO VILLAGE OF SACKETS HARBOR DEED DATED 7/9/2007 RECORDED 7/10/2007 INSTRUMENT 2007-00011856 PART OF TAX PARCELS 88.35-1-4.1 & 88.35-1-4.31

## THE VILLAGE OF SACKETS HARBOR

VILLAGE OF SACKETS HARBOR, TOWN OF HOUNSFIELD, JEFFERSON COUNTY, NEW YORK

LAFAVE, WHITE & MCGIVERN, L.S., P.C.

LAND SURVEYORS PHOTOGRAMMETRISTS

THERESA BOONVILLE ROME

NEW YORK

ROBERT J. BUSLER, P.L.S.  
N.Y.S. LIC. NO. 050345

DRAWN HPL	CHECKED RJB	DATE 2/20/2012	SCALE 1"=100'	FILE 2012S-05	SHEET 1 OF 1
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TAX PARCEL

14.80 ACRE PARCEL  
BEING A PART OF THE LANDS OF THE VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-0011856 (PART OF 40.08 ACRE PARCEL)

4.75 ACRE PARCEL  
BEING A PART OF THE LANDS OF THE VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-0011856 (PART OF 32.2± ACRE PARCEL)

REMAINING LANDS OF THE VILLAGE OF SACKETS HARBOR INSTRUMENT 2007-0011856 (PART OF 32.2± ACRE PARCEL)

### LEGEND

- - NOW OR FORMERLY AN EXISTING IRON ROD
- - NOW OR FORMERLY AN EXISTING IRON PIPE
- - EXISTING CONCRETE HIGHWAY MONUMENT
- - UTILITY POLE
- Ⓜ - MONITORING WELL
- DU — OVERHEAD UTILITY LINES
- - UTILITY SERVICE BOX
- Ⓢ - WATER VALVE
- Ⓢ - HYDRANT
- CHAIN LINK FENCE
- Ⓢ - CONCRETE
- Ⓢ - SANITARY SEWER MANHOLE

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Certifications on this boundary survey map signify that the map was prepared in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. The certification is limited to persons for whom the boundary survey map is prepared, to the title company, to the governmental agency, and to the lending institution listed on this boundary survey map.

The certifications hereon are not transferable.

The location of underground improvements or encroachments are not always known and often must be estimated. If any underground improvements or encroachments exist, they are not covered by this certificate.

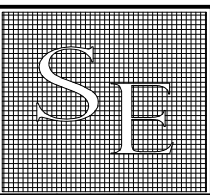
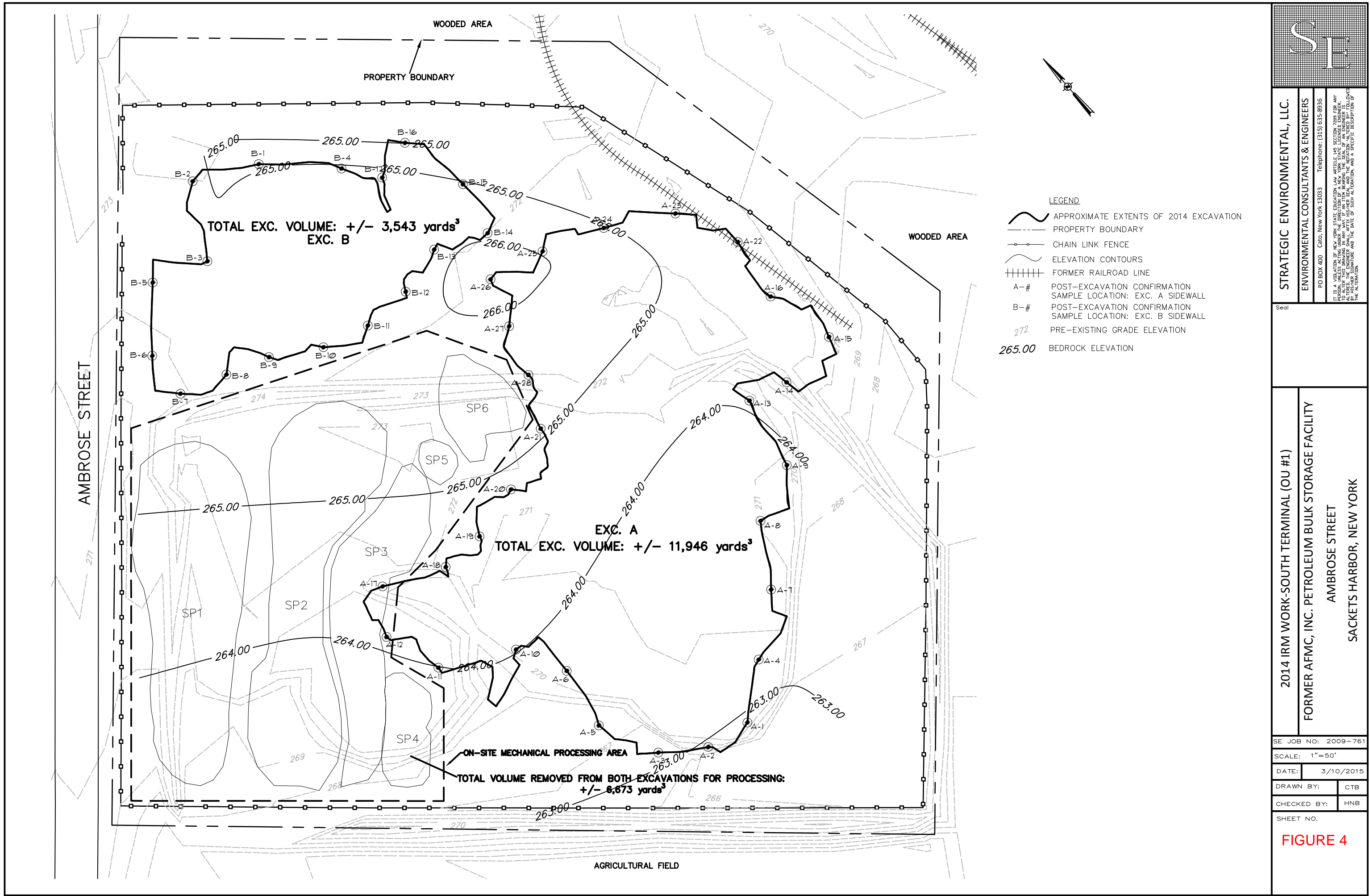
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### GRAPHIC SCALE



( IN FEET )  
1 inch = 100 ft.





STRATEGIC ENVIRONMENTAL, LLC.

ENVIRONMENTAL CONSULTANTS & ENGINEERS

PO BOX 400 Cato, New York 13033 Telephone: (315) 635-8936

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Seal

2014 IRM WORK-SOUTH TERMINAL (OU #1)

FORMER AFMC, INC. PETROLEUM BULK STORAGE FACILITY

AMBROSE STREET

SACKETS HARBOR, NEW YORK

SE JOB NO: 2009-761

SCALE: 1"=50'

DATE: 3/10/2015

DRAWN BY: CTB

CHECKED BY: HNB

SHEET NO.

FIGURE 4

## Tables

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Table 1A-Overburden Soil VOC Data
Table 1B-Overburden Soil SVOC Data
Table 2A-Excavation A Sidewall Verification Sample VOC Data
Table 2B-Excavation A Sidewall Verification Sample SVOC Data
Table 3A-Excavation B Sidewall Verification Sample VOC Data
Table 3B-Excavation B Sidewall Verification Sample SVOC Data
Table 4A-Mechanically Aerated Soil Confirmation Sample VOC Data
Table 4B-Mechanically Aerated Soil Confirmation Sample SVOC Data





**Table 1A**  
**Overburden VOC Data**  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	BF-1	BF-2	BF-3	BF-4	BF-5	BF-6	BF-7	BF-8	BF-9	BF-10	BF-11	BF-12	BF-13	BF-14
EPA 8260 (mg/kg)																
1,1,1-Trichloroethane	0.68	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,1,2,2-Tetrachloroethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,1,2-Trichloroethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,1-Dichloroethane	0.27	19	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,1-Dichloroethene	0.33	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,2,3-Trichlorobenzene	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
1,2,4-Trichlorobenzene	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
1,2,4-Trimethylbenzene	3.6	47	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	0.00813
1,2-Dibromo-3-chloropropane	NE	NE	<0.0469	<0.0369	<0.0361	<0.0338	<0.0335	<0.0291	<0.0385	<0.0388	<0.0288	<0.0391	<0.0352	<0.0417	<0.0386	<0.0391
1,2-Dibromoethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,2-Dichlorobenzene	1.1	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,2-Dichloroethane	0.02	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,2-Dichloropropane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,3,5-Trimethylbenzene	8.4	47	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	0.0169
1,3-Dichlorobenzene	2.4	17	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,4-Dichlorobenzene	1.8	9.8	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
1,4-dioxane	0.1	9.8	<0.0938	<0.0738	<0.0723	<0.0676	<0.067	<0.0582	<0.0771	<0.0776	<0.0576	<0.0783	<0.0704	<0.0834	<0.0772	<0.0782
2-Butanone (MEK)	0.12	NE	<0.0469	<0.0369	<0.0361	<0.0338	<0.0335	<0.0291	<0.0385	<0.0388	<0.0288	<0.0391	<0.0352	<0.0417	<0.0386	<0.0391
2-Hexanone	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
4-Methyl-2-pentanone	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
Acetone	0.05	100	<0.0469	<0.0369	<0.0361	<0.0338	<0.0335	<0.0291	<0.0385	<0.0388	<0.0288	<0.0391	<0.0352	<0.0417	<0.0386	<0.0391
Benzene	0.06	2.9	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Bromochloromethane	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
Bromodichloromethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Bromoform	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
Bromomethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Carbon disulfide	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Carbon Tetrachloride	0.76	1.4	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Chlorobenzene	1.1	100	<0.0938	<0.0738	<0.0723	<0.0676	<0.0667	<0.0582	<0.0771	<0.0776	<0.0576	<0.0783	<0.0704	<0.0834	<0.0772	<0.0782
Chloroethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Chloroform	0.37	10	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Chloromethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
cis-1,2-Dichloroethene	0.25	59	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
cis-1,3-Dichloropropene	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Cyclohexane	NE	NE	<0.0469	<0.0369	<0.0361	<0.0338	<0.0335	<0.0291	<0.0385	<0.0388	<0.0288	<0.0391	<0.0352	<0.0417	<0.0386	<0.0391
Dibromochloromethane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Dichlorodifluoromethane	NE	NE	<0.0938	<0.0738	<0.0723	<0.0676	<0.0667	<0.0582	<0.0771	<0.0776	<0.0576	<0.0783	<0.0704	<0.0834	<0.0772	<0.0782
Ethylbenzene	1	30	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Freon 113	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Isopropylbenzene	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
m-Xylene & p-Xylene	NE	NE	<0.0938	<0.0738	<0.0723	<0.0676	<0.0667	<0.0582	<0.0771	<0.0776	<0.0576	<0.0783	<0.0704	<0.0834	<0.0772	0.111
Methyl acetate	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Methyl tert-Butyl Ether	0.93	62	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Methylcyclohexane	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Methylene Chloride	0.05	51	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
Naphthalene	12	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0194	<0.0144	<0.0196	<0.0176	<0.0209	<0.0193	<0.0195
n-Butylbenzene	12	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
n-Propylbenzene	3.9	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
o-Xylene	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
p-Isopropyltoluene	NE	NE	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
sec-Butylbenzene	11	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Styrene	NE	NE	<0.0235	<0.0185	<0.0181	<0.0169	<0.0168	<0.0146	<0.0193	<0.0388	<0.0144	<0.0196	<0.0176	<0.0209	<0.0386	<0.0195
tert-Butylbenzene	5.9	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Tetrachloroethene	1.3	5.5	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.00782
Toluene	0.7	100	<0.00938	<0.00738	<0.00723	<0.00676	<0.00667	<0.00582	<0.00771	<0.00776	<0.00576	<0.00783	<0.00704	<0.00834	<0.00772	<0.

## Notes

\* All values are in mg/Kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

NE = Not Established.

Table 1B  
Overburden SVOC Data  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

Analyses	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	BF-1	BF-2	BF-3	BF-4	BF-5	BF-6	BF-7	BF-8	BF-9	BF-10	BF-11	BF-12	BF-13	BF-14
8270 (mg/kg)																
phenol	0.33	100	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2&3-methylphenols	NE	NE	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-methylphenol	NE	NE	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
naphthalene	12	100	0.5	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	0.53
acenaphthylene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
fluorene	30	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
pentachlorophenol	0.8	2.4	<0.7	<0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.6	<0.5	<0.6
phenanthrene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.16	0.1
anthracene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
fluroanthene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
pyrene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
benzo(a)anthracene	1	1	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
chrysene	1	1	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
benzo(b)fluoranthene	1	1	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
benzo(k)fluoranthene	0.8	1	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
benzo(a)pyrene	1	1	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
indeno(1,2,3-cd)pyrene	0.5	0.5	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
dibenzo(a,h)anthracene	0.33	0.33	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06
benzo(g,h,i)perylene	100	100	<0.07	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.06	<0.05	<0.06

Notes

\* All values are in mg/Kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

NE = Not Established.

Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York

**Notes**

\* All values are in mg/Kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

\* NE - guidance values not established by the NYSDEC.

orange-shaded cells indicates target compound concentrations exceeding Unrestricted use SCOs.

**Table 2A**  
**Excavation A Confirmation Sample VOC Data**  
 2014 Interim Remedial Measures-Operable Unit #1  
 Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
 NYSDEC ERP Site No. E623014

	Unrestricted Use SCO	Residential Use SCO														
Analyses	(ppm)	(ppm)	A-15D	A-16D	A-17D	A-18D	A-19D	A-20D	A-21D	A-22D	A-23D	A-24D	A-25D	A-26D	A-27D	A-28
8260 (mg/kg)																
1,1,1-Trichloroethane	0.68	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,1,2,2-Tetrachloroethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,1,2-Trichloroethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,1-Dichloroethane	0.27	19	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,1-Dichloroethene	0.33	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,2,3-Trichlorobenzene	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
1,2,4-Trichlorobenzene	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
1,2,4-Trimethylbenzene	3.6	47	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,2-Dibromo-3-chloropropane	NE	NE	<0.0447	<0.0365	<0.0482	<0.0324	<0.0334	<0.053	<0.0421	<0.0367	<0.0344	<0.0356	<0.035	<0.0387	<0.032	<0.0448
1,2-Dibromoethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,2-Dichlorobenzene	1.1	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,2-Dichloroethane	0.02	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,2-Dichloropropane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,3,5-Trimethylbenzene	8.4	47	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,3-Dichlorobenzene	2.4	17	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,4-Dichlorobenzene	1.8	9.8	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
1,4-dioxane	0.1	9.8	<0.0894	<0.0729	<0.0963	<0.0649	<0.0669	<0.106	<0.0841	<0.0735	<0.0688	<0.0712	<0.0699	<0.0775	<0.064	<0.0895
2-Butanone (MEK)	0.12	NE	<0.0447	<0.0365	<0.0482	<0.0324	<0.0334	<0.053	<0.0421	<0.0367	<0.0344	<0.0356	<0.035	<0.0387	<0.032	<0.0448
2-Hexanone	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
4-Methyl-2-pentanone	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
Acetone	0.05	100	<0.0447	<0.0365	<0.0482	<0.0324	<0.0334	<0.053	<0.0421	<0.0367	<0.0344	<0.0356	<0.035	<0.0387	<0.032	<.0.448
Benzene	0.06	2.9	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Bromochloromethane	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
Bromodichloromethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Bromoform	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
Bromomethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Carbon disulfide	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Carbon Tetrachloride	0.76	1.4	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Chlorobenzene	1.1	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Chloroethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Chloroform	0.37	10	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Chloromethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
cis-1,2-Dichloroethene	0.25	59	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
cis-1,3-Dichloropropene	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Cyclohexane	NE	NE	<0.0447	<0.0365	<0.0482	<0.0324	<0.0334	<0.053	<0.0421	<0.0367	<0.0344	<0.0356	<0.035	<0.0387	<0.032	<0.0448
Dibromochloromethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Dichlorodifluoromethane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Ethylbenzene	1	30	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Freon 113	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Isopropylbenzene	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
m-Xylene & p-Xylene	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Methyl acetate	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Methyl tert-Butyl Ether	0.93	62	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Methylcyclohexane	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Methylene Chloride	0.05	51	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
Naphthalene	12	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
n-Butylbenzene	12	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
n-Propylbenzene	3.9	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
o-Xylene	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
p-Isopropyltoluene	NE	NE	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
sec-Butylbenzene	11	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Styrene	NE	NE	<0.0223	<0.0182	<0.0241	<0.0162	<0.0167	<0.0265	<0.021	<0.0184	<0.0172	<0.0178	<0.0175	<0.0194	<0.016	<0.0224
tert-Butylbenzene	5.9	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Tetrachloroethene	1.3	5.5	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.0064	<0.00895
Toluene	0.7	100	<0.00894	<0.00729	<0.00963	<0.00649	<0.00669	<0.0106	<0.00841	<0.00735	<0.00688	<0.00712	<0.00699	<0.00775	<0.00	

Table 2B  
Excavation A Verification SVOC Data  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

Analyses	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12	A-13	A-14
8270 (mg/kg)																
phenol	0.33	100	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.3
2&3-methylphenols	NE	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.3
4-methylphenol	NE	NE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.3
naphthalene	12	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
acenaphthylene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
fluorene	30	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
pentachlorophenol	0.8	2.4	<0.7	<0.7	<0.7	<0.7	<0.6	<0.7	<0.7	<0.6	<0.6	<0.7	<0.6	<0.5	<0.6	<0.6
phenanthrene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
anthracene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
fluroanthene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
pyrene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
benzo(a)anthracene	1	1	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
chrysene	1	1	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
benzo(b)fluoranthene	1	1	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
benzo(k)fluoranthene	0.8	1	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
benzo(a)pyrene	1	1	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
indeno(1,2,3-cd)pyrene	0.5	0.5	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
dibenzo(a,h)anthracene	0.33	0.33	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06
benzo(g,h,i)perylene	100	100	<0.07	<0.07	<0.07	<0.07	<0.06	<0.07	<0.07	<0.06	<0.06	<0.07	<0.06	<0.05	<0.06	<0.06

Notes

\* All values are in mg/Kg or (ppm).  
\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).  
NE = value not established by NYSDEC.

Table 2B  
Excavation A Verification SVOC Data  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

	Unrestricted Use SCO	Residential Use SCO														
Analyses	(ppm)	(ppm)	A-15	A-16	A-17	A-18	A-19	A-20	A-21	A-22	A-23	A-24	A-25	A-26	A-27	A-28
8270 (mg/kg)																
phenol	0.33	100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2&3-methylphenols	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-methylphenol	NE	NE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
naphthalene	12	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
acenaphthylene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
fluorene	30	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
pentachlorophenol	0.8	2.4	<0.6	<0.6	<0.5	<0.5	<0.6	<0.6	<0.5	<0.6	<0.6	<0.5	<0.5	<0.6	<0.5	<0.5
phenanthrene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
anthracene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
fluroanthene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
pyrene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
benzo(a)anthracene	1	1	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
chrysene	1	1	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
benzo(b)fluoranthene	1	1	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
benzo(k)fluoranthene	0.8	1	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
benzo(a)pyrene	1	1	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
indeno(1,2,3-cd)pyrene	0.5	0.5	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
dibenzo(a,h)anthracene	0.33	0.33	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05
benzo(g,h,i)perylene	100	100	<0.06	<0.06	<0.05	<0.05	<0.06	<0.06	<0.05	<0.06	<0.06	<0.05	<0.05	<0.06	<0.05	<0.05

Notes

\* All values are in mg/Kg or (ppm).  
\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).  
NE = value not established by NYSDEC.

**Table 3A**  
**Excavation B Verification VOC Data**  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17
Analyses																			
8260 (mg/kg)																			
1,1,1-Trichloroethane	0.68	100	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,1,2,2-Tetrachloroethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,1,2-Trichloroethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,1-Dichloroethane	0.27	19	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,1-Dichloroethene	0.33	100	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,2,3-Trichlorobenzene	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
1,2,4-Trichlorobenzene	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
1,2,4-Trimethylbenzene	3.6	47	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,2-Dibromo-3-chloropropane	NE	NE	<0.0424	<0.049	<0.0385	<0.0367	<0.0374	<0.0457	<0.038	<0.0394	<0.0419	<0.0388	<0.0352	<0.039	<0.041	<0.0435	<0.0432	<0.0406	<0.042
1,2-Dibromoethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,2-Dichlorobenzene	1.1	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,2-Dichloroethane	0.02	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,2-Dichloropropane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,3,5-Trimethylbenzene	8.4	47	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,3-Dichlorobenzene	2.4	17	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,4-Dichlorobenzene	1.8	9.8	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
1,4-dioxane	0.1	9.8	<0.0849	<0.098	<0.0771	<0.0734	<0.0748	<0.0913	<0.076	<0.0789	<0.0837	<0.0776	<0.0704	<0.078	<0.082	<0.087	<0.0864	<0.0813	<0.084
2-Butanone (MEK)	0.12	NE	<0.0424	<0.049	<0.0385	<0.0367	<0.0374	<0.0457	<0.038	<0.0394	<0.0419	<0.0388	<0.0352	<0.039	<0.041	<0.0435	<0.0432	<0.0406	<0.042
2-Hexanone	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
4-Methyl-2-pentanone	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
Acetone	0.05	100	<0.0424	<0.049	<0.0385	0.0727	<0.0374	<0.0457	<0.038	<0.0394	<0.0419	<0.0388	<0.0352	<0.039	<0.041	<0.0435	<0.0432	<0.0406	<0.042
Benzene	0.06	2.9	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Bromochloromethane	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
Bromodichloromethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Bromoform	NE	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
Bromomethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Carbon disulfide	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Carbon Tetrachloride	0.76	1.4	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Chlorobenzene	1.1	100	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Chloroethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Chloroform	0.37	10	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Chloromethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
cis-1,2-Dichloroethene	0.25	59	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
cis-1,3-Dichloropropene	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Cyclohexane	NE	NE	<0.0424	<0.049	<0.0385	<0.0367	<0.0374	<0.0457	<0.038	<0.0394	<0.0419	<0.0388	<0.0352	<0.039	<0.041	<0.0435	<0.0432	<0.0406	<0.042
Dibromochloromethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Dichlorodifluoromethane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Ethylbenzene	1	30	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Freon 113	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Isopropylbenzene	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
m-Xylene & p-Xylene	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Methyl acetate	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Methyl tert-Butyl Ether	0.93	62	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Methylcyclohexane	NE	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0078	<0.0082	<0.0087	<0.00864	<0.00813	<0.0084
Methylene Chloride	0.05	51	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
Naphthalene	12	NE	<0.0212	<0.0245	<0.0193	<0.0184	<0.0187	<0.0228	<0.019	<0.0197	<0.0209	<0.0194	<0.0176	<0.0195	<0.0205	<0.0218	<0.0216	<0.0203	<0.021
n-Butylbenzene	12	NE	<0.00849	<0.0098	<0.00771	<0.00734	<0.00748	<0.00913	<0.0076	<0.00789	<0.00837	<0.00776	<0.00704	<0.0					

## Notes

\* All values are in mg/Kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

\* NE - guidance values not established by the NYSDEC.

orange-shaded cells indicates target compound concentrations exceeding Unrestricted use SCOs.

**Table 3B**  
**Excavation B Verification SVOC Data**  
2014 Interim Remedial Measures-Operable Unit #1  
Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
NYSDEC ERP Site No. E623014

	Unrestricted Use SCO	Residential Use SCO																	
Analyses	(ppm)	(ppm)	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17
<b>8270 (mg/kg)</b>																			
phenol	<b>0.33</b>	<b>100</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2&3-methylphenols	<b>NE</b>	<b>NE</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-methylphenol	<b>NE</b>	<b>NE</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
naphthalene	<b>12</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
acenaphthylene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
fluorene	<b>30</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
pentachlorophenol	<b>0.8</b>	<b>2.4</b>	<0.5	<0.6	<0.5	<0.5	<0.6	<0.7	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.5	<0.5
phenanthrene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
anthracene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
fluroanthene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
pyrene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
benzo(a)anthracene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
chrysene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
benzo(b)fluoranthene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
benzo(k)fluoranthene	<b>0.8</b>	<b>1</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
benzo(a)pyrene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
indeno(1,2,3-cd)pyrene	<b>0.5</b>	<b>0.5</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
dibenzo(a,h)anthracene	<b>0.33</b>	<b>0.33</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
benzo(g,h,i)perylene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.05	<0.05	<0.06	<0.07	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05

**Notes**

\* All values are in mg/Kg or (ppm).  
\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).  
NE = value not established by NYSDEC.



**Table 4A**  
**Mechanically Aerated Soil Confirmation VOC Data**  
**2014 Interim Remedial Measures-Operable Unit #1**  
**Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York**  
**NYSDEC ERP Site No. E623014**

Analyses	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10
<b>8260 (mg/kg)</b>												
1,1,1-Trichloroethane	0.68	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,1,2,2-Tetrachloroethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,1,2-Trichloroethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,1-Dichloroethane	0.27	19	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,1-Dichloroethene	0.33	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,2,3-Trichlorobenzene	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
1,2,4-Trichlorobenzene	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
1,2,4-Trimethylbenzene	3.6	47	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	0.00613	<0.00804	<0.00643	<0.00808
1,2-Dibromo-3-chloropropane	NE	NE	<0.0422	<0.0487	<0.0337	<0.0439	<0.0446	<0.0395	<0.0304	<0.0402	<0.0322	<0.0404
1,2-Dibromoethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,2-Dichlorobenzene	1.1	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,2-Dichloroethane	0.02	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,2-Dichloropropane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,3,5-Trimethylbenzene	8.4	47	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,3-Dichlorobenzene	2.4	17	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,4-Dichlorobenzene	1.8	9.8	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
1,4-dioxane	0.1	9.8	<0.0843	<0.0973	<0.0674	<0.0877	<0.0892	<0.0790	<0.0608	<0.0804	<0.0643	<0.0808
2-Butanone (MEK)	0.12	NE	<0.0422	<0.0487	<0.0337	<0.0439	<0.0446	<0.0395	<0.0304	<0.0402	<0.0322	<0.0404
2-Hexanone	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
4-Methyl-2-pentanone	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
Acetone	0.05	100	<0.0422	<0.0487	<0.0337	<0.0439	<0.0446	<0.0395	<0.0304	<0.0402	<0.0322	<0.0404
Benzene	0.06	2.9	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Bromochloromethane	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
Bromodichloromethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Bromoform	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
Bromomethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Carbon disulfide	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Carbon Tetrachloride	0.76	1.4	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Chlorobenzene	1.1	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Chloroethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Chloroform	0.37	10	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Chloromethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
cis-1,2-Dichloroethene	0.25	59	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
cis-1,3-Dichloropropene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Cyclohexane	NE	NE	<0.0422	<0.0487	<0.0337	<0.0439	<0.0446	<0.0395	<0.0304	<0.0402	<0.0322	<0.0404
Dibromochloromethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Dichlorodifluoromethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Ethylbenzene	1	30	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Freon 113	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Isopropylbenzene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
m-Xylene & p-Xylene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Methyl acetate	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Methyl tert-Butyl Ether	0.93	62	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Methylcyclohexane	NE	NE	0.00923	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	0.0206	0.0175	0.015	<0.00808
Methylene Chloride	0.05	51	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
Naphthalene	12	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
n-Butylbenzene	12	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
n-Propylbenzene	3.9	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
o-Xylene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
p-Isopropyltoluene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
sec-Butylbenzene	11	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Styrene	NE	NE	<0.0211	<0.0243	<0.0168	<0.0219	<0.0223	<0.0197	<0.0152	<0.0201	<0.0161	<0.0202
tert-Butylbenzene	5.9	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Tetrachloroethene	1.3	5.5	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Toluene	0.7	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
trans-1,2-Dichloroethene	0.19	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
trans-1,3-Dichloropropene	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Trichloroethene	0.47	10	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Trichlorofluoromethane	NE	NE	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Vinyl chloride	0.02	0.21	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808
Xylenes, total	0.26	100	<0.00843	<0.00973	<0.00674	<0.00877	<0.00892	<0.00790	<0.00608	<0.00804	<0.00643	<0.00808

**Notes**

\* All values are in mg/kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

\* NE - guidance values not established by the NYSDEC.

**Table 4B**  
**Mechanically Aerated Soil Confirmation SVOC**  
 2014 Interim Remedial Measures-Operable Unit #1  
 Former AFMC Bulk Storage and Distribution Terminal, Sackets Harbor, New York  
 NYSDEC ERP Site No. E623014

Analyses	Unrestricted Use SCO (ppm)	Residential Use SCO (ppm)	CS-1	CS-2	CS-3	CS-4	CS-5	CS-6	CS-7	CS-8	CS-9	CS-10
<b>8270 (mg/kg)</b>												
phenol	<b>0.33</b>	<b>100</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2&3-methylphenols	<b>NE</b>	<b>NE</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
4-methylphenol	<b>NE</b>	<b>NE</b>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
naphthalene	<b>12</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
acenaphthylene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
fluorene	<b>30</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
pentachlorophenol	<b>0.8</b>	<b>2.4</b>	<0.5	<0.6	<0.6	<0.6	<0.5	<0.6	<0.5	<0.5	<0.6	<0.5
phenanthrene	<b>100</b>	<b>100</b>	<0.05	0.15	<0.06	0.16	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
anthracene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
fluoranthene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
pyrene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
benzo(a)anthracene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
chrysene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
benzo(b)fluoranthene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
benzo(k)fluoranthene	<b>0.8</b>	<b>1</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
benzo(a)pyrene	<b>1</b>	<b>1</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
indeno(1,2,3-cd)pyrene	<b>0.5</b>	<b>0.5</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
dibenzo(a,h)anthracene	<b>0.33</b>	<b>0.33</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
benzo(g,h,i)perylene	<b>100</b>	<b>100</b>	<0.05	<0.06	<0.06	<0.06	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05

**Notes**

\* All values are in mg/Kg or (ppm).

\*Soil Cleanup Objectives (SCO) values are established in 6NYCRR Part 375, Tables 6.8(a) and 6.8(b).

\* NE - guidance values not established by the NYSDEC.

## Appendix A

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### Site Photographs



## Appendix B

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Electronic Copy of Laboratory Analysis Data



**Final Engineering Report**  
*Operable Unit #1, Former AFMC Bulk Storage & Distribution Terminal*  
*Ambrose Street, Sackets Harbor, New York*  
*NYSDEC ERP Site No, E623014*

## Appendix C

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### Community Air Monitoring Program



**Final Engineering Report**  
*Operable Unit #1, Former AFMC Bulk Storage & Distribution Terminal*  
*Ambrose Street, Sackets Harbor, New York*  
*NYSDEC ERP Site No, E623014*

**COMMUNITY AIR MONITORING PLAN  
INTERIM REMEDIAL MEASURES  
FORMER AFMC, INC. PETROLEUM BULK STORAGE FACILITY  
AMBROSE STREET, SACKETS HARBOR, NEW YORK**

**NYSDEC ENVIRONMENTAL RESTORATION PROJECT  
SITE NUMBER E-623014**

**INTRODUCTION**

The following Community Action Monitoring Plan (CAMP) was prepared for use during interim remedial measures to be conducted at the former AFMC Petroleum Bulk Storage Facility, located on Ambrose Street in the Village of Sackets Harbor, Jefferson County, New York, to be performed under NYSDEC Environmental Restoration Project Site Number E-623014.

Both the New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC) have requirements for community air monitoring at remediation sites; these have been adhered to as nearly as possible in this CAMP. This CAMP has been developed to reflect the requirements for volatile organic compound (VOC) and particulate matter monitoring established by the NYSDOH in that agency's *Generic Community Air Monitoring Plan* (included as part of the NYSDEC's *Draft DER-10: Technical Guidance for Site Investigation and Remediation*, dated December 25, 2002 at Appendix 1A).

Protection of the public from air borne contamination originating at the site is the primary objective of the CAMP. Toward that end, real-time monitoring at the upwind and downwind portions of the site will be conducted to ensure that airborne contaminants are not migrating from the site as a direct result of the intrusive work, and to allow appropriate mitigative measures to be implemented in the event that action levels established in this CAMP are exceeded.

This plan is not intended to establish air monitoring that will be performed under the Health and Safety Plan for workers performing the investigation, but for the protection of the surrounding community from potential airborne contaminant release. Provisions for worker exposure monitoring and related action levels and protective measures have been established in the separate *Site-Specific Health and Safety Plan* for the project, dated January 19, 2007.

This CAMP shall supplement and be incorporated into Strategic Environmental's *Supplemental Interim Remedial Measure Work Plan-Operable Unit #1 (South Terminal)*, dated June 6, 2014, by reference.

## **MONITORING**

Real-time air monitoring for total VOC and particulate matter less than 10 microns in size (PM-10) will be conducted continuously at monitoring stations positioned at the downwind and upwind perimeter of each work zone during any ground-intrusive and soil processing or handling activities. The monitoring at each station will consist of the following:

### *Volatile Organic Compounds*

Real time measurement of total volatile organic compound (VOC) concentrations in air will be obtained using portable photo-ionization detectors (PIDs) equipped with 10.6 eV lamps (RAE Systems MiniRae Model 2000 units). Calibration of the PIDs will be performed at the start of each work day, using a 100 part-per-million isobutylene compressed gas. The PIDs will be checked against the isobutylene calibration standard at the mid-point of each day, and the instruments will be re-calibrated if the concentration recorded for the calibration gas mixture varies by more than two (2) parts-per-million from the 100 ppm standard value.

One PID will be placed on a stand situated in an upwind location and another will be located on a similar stand at a downwind location. The stands will serve to elevate the instruments approximately five (5) feet above grade, to represent a typical breathing zone of nearby individuals. Stand locations will be determined daily based on the prevailing wind conditions of that morning, and will be modified as necessary throughout the workday in cases of changes in wind direction.

Once in place, the PIDs will be set to continuously record total VOC readings. Alarms will be programmed to sound if the total PID readings surpass 5 ppm. Data gathered from the PIDs will be downloaded daily to a laptop and the recordings saved.

### *Particulate Matter*

Two real-time respirable dust monitors (TSI DustTRAK Aerosol Monitor) will be used at the site to facilitate particulate monitoring under this CAMP. The TSI DustTRAK is capable of measuring particulate matter less than 10 microns in size, and of integrating the data over a fifteen (15) minute interval. One will be placed at the upwind monitoring station and another at the downwind station. This will be done in an effort to identify background particulates in the area and how it relates to the amount of particulates created by the investigative work.

The DustTRAK units will be set to sound an audible alarm to sound if PM-10 concentrations in excess of 100 micrograms per cubic ( $\mu\text{g}/\text{m}^3$ ) meter are recorded.

## **ACTION LEVELS AND MITIGATION**

The following action levels and resultant mitigative actions will apply for the contaminants included under this CAMP.

### *Volatile Organic Compounds*

If the airborne concentration of VOC at the downwind perimeter monitoring station is recorded to be more than 5 ppm above that recorded at the upwind (background) monitoring station, work will be suspended. Continuous monitoring will subsequently continue, with no excavation or soil handling performed. If the VOC concentrations at the downwind monitoring station decrease below 5 PPM above background, work will resume with continuous air monitoring.

If the VOC at the downwind monitoring station persist at concentrations over 5 ppm, but less than 25 ppm, above the background/upwind concentrations, mitigative measures, such as vapor suppression or modification of work practices, will be reviewed, and implemented. Once these are implemented, continuous monitoring will be performed at both the upwind and downwind stations, as well as at a point that is 200 feet (or one-half the distance to the nearest structure or receptor, if less than 200 feet), downwind of the work area. If the VOC concentrations at the downwind work area perimeter location are below 25 ppm above background/upwind concentrations, and concentrations at the more distant downwind monitoring location are below 5 ppm above background/upwind concentrations, work will resume and will continue provided that these conditions remain.

In the event that VOC concentrations at the downwind work area perimeter are more than 25 ppm above the background/upwind location, or if concentrations at the more distant downwind monitoring location are more than 5 ppm above the background/upwind concentrations, work will remain suspended, and application of additional vapor suppression methods or further alteration of site work practices will be evaluated.

### *Particulate Matter*

If, during any fifteen minute period, the dust monitors record values at the downwind monitoring station of 100  $\mu\text{g}/\text{m}^3$  above background/upwind conditions for PM-10 particles, or, if airborne dust is observed to be leaving the work area, work will be halted and dust suppression techniques will be employed. After the dust suppression techniques have been implemented and are functioning adequately, work may resume at the site, with continuous monitoring. Work will continue provided that no airborne dust is observed leaving the work area, and downwind PM-10 concentrations do not exceed 150  $\mu\text{g}/\text{m}^3$  above background/upwind concentrations.

In the event that the application of the dust suppression techniques are not successful in preventing visible dust migration from the work area and maintaining downwind PM-10 concentration at or below 150  $\mu\text{g}/\text{m}^3$  above background/upwind concentrations, work will be suspended, and alternative/additional dust suppression or work practice modification will be evaluated and implemented.



## Appendix D

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Electronic Copy of CAMP Monitoring Data



**Final Engineering Report**  
*Operable Unit #1, Former AFMC Bulk Storage & Distribution Terminal*  
*Ambrose Street, Sackets Harbor, New York*  
*NYSDEC ERP Site No, E623014*

## Appendix E

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Electronic Copy of Final Engineering Report



**Final Engineering Report**  
*Operable Unit #1, Former AFMC Bulk Storage & Distribution Terminal*  
*Ambrose Street, Sackets Harbor, New York*  
*NYSDEC ERP Site No, E623014*