US Army Corps
of Engineers®

Prepared for:
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Total Environmental Restoration Contract (TERC)

Final
INTERIM REMOVAL ACTION (RA) WORK PLAN FOR PCB-CONTAMINATED SOILS FORMER FORT SLOCUM / DAVIDS ISLAND

Davids Island/Fort Slocum
New Rochelle, NY

October 2009

Contract Number:
DACW33-03-D-0006
TASK ORDER 2

Prepared by:
Tetra Tech EC, Inc.
133 Federal Street
Boston, MA 02110

Submitted by Tetra Tech, EC, Inc., on behalf of:
Jacobs – Tetra Tech EC Joint Venture
55 Old Bedford Road
Lincoln, MA 01773

2009-O-JV02-0044

TETRA TECH EC, INC.

TETRA TECH EC, INC.

SUBMITTAL COVER SHEET

To:
US Army Corps of Engineers
New England District
696 Virginia Rd.
Concord, MA 01742

From:
Tetra Tech EC, Inc.
133 Federal St. 6th Floor
Boston, MA 02110

Davids Island / Fort Slocum Project
Davids Island, New Rochelle, New York
Contract Number: DACW – 03 – D – 0006
Task Order Number: 2

Date:	**10/27/09**
Submittal #:	**02.04.03.018**
Description of Item Submitted:	**Interim Removal Action (RA) Work Plan for PCB-Contaminated Soils at Former Fort Slocum/Davids Island (2009-O-JV02-0044)**
Number of Copies:	**10**
TtEC Document #:	**2009-O-JV02-0045**
TtEC Project File:	**1.1, 4.2**

Distribution:

G. Goepfert – USACE	**D. Sculley – TtEC (Submittal Sheet Only)**
Shewen Bian – USACE	**Brian Sielski – TtEC**
Lee Haymon – TtEC	**Rick Woodworth – TtEC**
Lynn Arabia – TtEC	**Jon Cary – TtEC**

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Name and Signature of Contractor

USACE Response to Submittal:

____ Receipt Acknowledged
____ Receipt Acknowledged, Comments Forthcoming
____ Approved as Submitted
____ Disapproved (See Attached)
____ Other (Specify)

Comments: _____

Date: _____

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James Kelly,
Engineering Technical Lead

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1.0 Introduction

Tetra Tech EC, Inc. (TtEC) is under contract to the U.S. Army Corps of Engineers (USACE), New York District to perform demolition and removal of buildings and related infrastructure at the former Fort Slocum, currently known as Davids Island (the Island), located in Long Island Sound, less than a mile east of the mainland at New Rochelle, New York. In addition, the City of New Rochelle, New York (the City) is in the process of performing the Davids Island Environmental Restoration Project, which includes a systematic, detailed site investigation and remedial alternatives analysis of the City of New Rochelle-owned portion of Davids Island. TtEC is also the contractor for the City's work.

During implementation of these projects, soils containing elevated levels of polychlorinated biphenyls (PCBs) were identified adjacent to select on-site buildings. The source of the PCBs is believed to be spilled electrical transformer fluids. Transformers were removed from their original locations and placed outside the buildings for metal salvaging purposes. Upon opening the transformers, fluid was released onto the ground.

PCBs are hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although Fort Slocum/Davids Island is not listed on the United States Environmental Protection Agency's (EPA's) National Priorities List (NPL), USACE is conducting this effort in accordance with CERCLA.

In September 2009, TtEC provided an Engineering Evaluation/Cost Analysis (EE/CA) to the USACE, New York District for these PCB-contaminated areas. After acceptance of the EE/CA Report, an Action Memorandum will be prepared. The Action Memorandum is the decision document of record that provides the authority and direction to conduct the approved removal response action. It is similar to the Record of Decision (ROD) used for NPL sites. The preferred removal response action is Removal of Surface and Subsurface PCB-Contaminated Soil and Off-Site Disposal, which would include the excavation of surface and/or subsurface soil that exceeded the comparison criterion of 1 mg/kg.

The cleanup level for PCBs in soil without further conditions, as outlined in the Toxic Substances Control Act (TSCA), 40 CFR 761.61(a)(4)(i), is less than 1 part per million (ppm, equivalent to milligrams per kilogram, mg/kg).

This Federal standard is equal to the NYSDEC residential, restricted-residential, commercial, and protection of ecological resources soil clean-up objective (SCO) values for the sum of PCBs listed in New York Code of Rules and Regulations, Title 6, Subpart 375-6, *Remedial Program Soil Cleanup Objectives* (6 NYCRR 375-6; December 2006). Therefore, use of 1 mg/kg for comparison will also achieve State standards.

This Interim Removal Action (RA) Work Plan discusses the methods and procedures that will be used to perform the approved removal response action. The Interim RA objectives are to perform the PCB-contaminated soil removal activities in accordance with applicable regulations and remove a potential source of soil and groundwater contamination from affecting human health and the environment. The Interim RA will be implemented to maintain compliance with applicable Federal, State, and local regulations.

1.1 Interim RA Work Plan Organization

- Section 1.0 – **Introduction.** Discusses the format of the Interim RA Work Plan and provides a regulatory overview.
- Section 2.0 – **Site Background.** A description of the Island is provided along with a brief history, and an overview of the PCB program at the Island including information about the nature and extent of PCB contamination.
- Section 3.0 – **Applicable Regulations.** Identifies the remedial standards to be applied during the implementation of the remedial activities.
- Section 4.0 – **Proposed Interim Remedial Actions.** Presents a description of the proposed remedial actions to be implemented.
- Section 5.0 – **Quality Assurance Project Plan.** Discusses the procedures to be followed in developing the Quality Assurance Project Plan (QAPP).
- Section 6.0 – **Permits.** Provides an overview of the permits necessary for the implementation of the proposed Interim RA.
- Section 7.0 – **Health and Safety Plan**. Summarizes the health and safety measures to be taken in order to ensure worker safety during the implementation of the proposed remedial actions.
- Section 8.0 – **Site Restoration.** Describes the plan to restore the areas affected by the Interim RA.
- Section 9.0 – **Remedial Structures and Equipment Removal.** Presents a description of procedures for dismantling and removal of remedial structures and equipment from the Island.
- Section 10.0 – **Operation, Maintenance, and Monitoring.** Describes the operation, maintenance, and monitoring activities proposed as part of the remedial action.
- Section 11.0 – **Interim RA Cost Estimate**. Presents an order of magnitude estimate for full implementation of the proposed Interim RA.
- Section 12.0 – **Interim RA Schedule.** Presents the schedule of events required to complete the Interim RA.
- Section 13.0 – **References.** Provides references used for preparation of this Interim RA Work Plan.

2.0 Site Background

2.1 Site Description and History

2.1.1 Site Description

Davids Island is an approximately 80-acre island located in Long Island Sound, less than a mile east of the mainland at New Rochelle, New York. The Island is the former location of a military base named Fort Slocum. The legal definition of the property is Block 780, Lot 1 in the City of New Rochelle, Westchester County, New York (AKRF, 2002). A location map is provided as Figure 1.

2.1.2 Site History

The Island has remained vacant since the United States military left the Island in the 1960s. Abandoned buildings and related infrastructure existed at the Island, but were severely deteriorated due to vandalism, neglect, and arson. In addition, dense vegetation covers much of the Island. Demolition and removal of most of the Island buildings have been undertaken by the USACE and are essentially complete. There is a Consolidated Edison Company (Con Edison)-owned utility corridor on the southwest side of the Island. A general layout of Davids Island, prior to building demolition, is presented on Figure 2.

2.1.3 Land Use

Currently, Davids Island is not utilized and has remained vacant since the United States military left the Island in the 1960s. Future use of the Island is unknown at this time; alternatives being discussed as part of the City's work include an active use park (restricted residential) and/or commercial uses. The ultimate goal for conducting remedial activities (*e.g.*, building demolition, investigation, removal actions, etc.) of the Island is to allow the future beneficial reuse of the Island.

2.1.4 Surface Features and Topography

The Island has an average elevation of approximately 20 feet above mean sea level (msl), and the ground surface generally slopes radially outward and down from the center of the Island to the surrounding Long Island Sound waters. The southeastern portion of the Island contains a topographic high, with the highest elevation at approximately 50 feet above msl.

There is little to no standing or flowing fresh water on the Island, and no fresh water wetlands are present (USACE, 2005).

2.1.5 Geology

Davids Island is located within the Piedmont physiographic province of New York. The Island is generally covered with approximately 5 to 20 feet of overburden soils. Bedrock outcrops are visible primarily along the southeastern shoreline of the Island (AKRF, 2002). The Geologic Map of New York State, as presented in AKRF, 2002, indicates the Island bedrock consists of metamorphic rock (amphibolite and schist) identified as the Hartland Formation.

The Hartland Formation is a northeast-southwest striking unit located throughout much of the Long Island Sound coastal area in Westchester County and eastern Bronx. A description of the Hartland Formation from observations made at Pelham Bay Park on Long Island Sound, about a mile southwest of Davids Island, indicates the exposed Hartland outcrop along the park's battered shoreline "consists of granitic and garnetiferous amphibolite gneiss with numerous quartz veins and migmatite dikes." The presence of migmatite resulted from igneous injection under high temperature and pressure into zones of weaknesses within the metamorphic rocks forming quartz and feldspar crystals.

Marine sand deposits have been observed at locations near the shoreline (AKRF, 2002). In the southeastern portion of the Island, bedrock dips steeply and is overlain by approximately 50 feet of overburden soils and fill.

The overburden soils consist mostly of glacial till comprising sand, silt, and gravel, along with substantial amounts of fill materials placed during the development and operation of the Island. The surficial soils throughout a majority of the upland areas of the Island consist of a layer of organic sandy silts and silty sands ranging to depths of 0.5 to 2.5 feet below ground surface (bgs). Varying amounts and thicknesses of fill materials consisting of coal fragments, cinder, brick, and ash were present in the surficial soils near a majority of the building footprints, roadways, and other areas of high activity (such as the former dock and the barracks) at the Island. The incinerator ash and landfill debris in the southeastern portion of the Island ranges in thickness from approximately one foot by the former incinerator (Former Building 115) to over 16 feet.

2.1.6 Soils

According to the Environmental Assessment performed by the USACE, the Soil Conservation Service (SCS) Soil Survey of Westchester County, and the United States Department of Agriculture website, four native soil types have been mapped above the tidal zone at Davids Island (USACE, 2005). The four upland soil types and approximate land percentages are: Urban land – Paxton Complex (50%), Udorthents (30%), Charlton – Chatfield Complex (15%) and Raynam Silt Loam (5%).

The Urban land-Paxton Complex is typically about one-half urban land, one-quarter Paxton soils, and one-quarter other soils. The Paxton component typically consists of well-drained soils (sandy loam) on uplands, formed in glacial till derived mainly from schist, gneiss, and granite. Bedrock is typically deeper than 5 feet, and the seasonal high water table is typically at depths of 1.5 to 2.5 feet bgs. This unit comprises much of Davids Island's interior core (although water is not present), with slopes less than 8 percent for at least 80 percent of its coverage. A small portion in the east-central interior is slightly steeper.

Udorthents are cut and fill areas, typically level or nearly level. Surface material consists of loose or firm glacial till or bedrock that may or may not contain rock rubble. Much of Davids Island's shoreline and several hundred feet inland along the southwestern portion consist of Udorthents, with a water table typically less than 2 feet bgs. This unit may include rocky fill, retaining walls, and piers. A slightly higher portion of the Island adjacent to the eastern embayment consists of Udorthents with a deeper water table.

Charlton-Chatfield Complex typically consists of well-drained, medium-texture, and moderately coarse-textured soils formed in gravelly and stony glacial till deposits. In this unit, rock

exposures 30 to 100 feet apart often cover about 10 to 25 percent of the surface. Bedrock is from 4 to 6 feet bgs.

Raynham Silt Loam consists of poorly-drained soils on marine plains, on slopes from 0 to 12 percent. Bedrock is typically deeper than 5 feet, and the seasonal high water table is typically at depths of 0.5 to 2 feet bgs. This unit is found on a small upland portion of the Island in the northwest.

Beaches occupy the intertidal zones at the Island. The intertidal beaches are typically gently sloping and on the order of 100 feet wide at low tide, consisting of sand, gravel and cobbles of broken and weathered bedrock. The soils present at the beach along the western shore of the Island typically contain a higher silt component. Small sandy beaches are observed above the normal tidal zone near the piers on the western side and in the eastern embayment. The southwestern portion of the Island typically has small strips of sand interspersed with rocky areas. Incineration debris and coal fragments were noted within the gently sloping sand of the southeastern beach. At the mean low tide line, this beach drops off significantly (approximately 60 degree angle).

2.1.7 Hydrogeology

The Hartland Formation generally comprises much of the northwestern Long Island Sound shore including Davids Island. The Hartland Formation is a complex metamorphic geologic unit typically classified as schist. A substantial percentage of the county's groundwater supply is derived from the schist units occurring in the northern and southeastern (Hartland) portions of the county (Asselstein and Grossman, 1955). Two wells, installed in New Rochelle about a mile northwest of Davids Island, were reportedly completed in schist to depths of 109 feet and 550 feet bgs and yielded 25 and 35 gallons per minute (gpm), respectively (Asselstein and Grossman, 1955). These data suggest substantial groundwater transmitting properties through fractures, joints, faults, and intrusive units within the Hartland Formation.

At Davids Island, previous investigations conducted by the United States Coast Guard as part of an Environmental Impact Statement (EIS) indicated no significant groundwater reserves are present in either the overburden or bedrock at depths ranging between 1.5 and 120 feet bgs. Groundwater on Davids Island was not used as a significant source of potable water when Fort Slocum was an active military installation, and is not currently used as a source of potable water (AKRF, 2002; USACE, 2005). No future use of the groundwater on the Island for potable purposes is anticipated.

If present, the expected flow of groundwater within the overburden would likely be in a radially outward direction from the center of the Island towards the shorelines and Long Island Sound. Limited perched groundwater was encountered in the overburden during previous investigations conducted at the southwestern portion of the Island at depths ranging between approximately 5 to 7 feet bgs.

Observations made during the 2007/2008 activities for the City of New Rochelle indicated water was present as small isolated areas of seasonally-observed perched groundwater, with the exceptions of a portion of the eastern side and the perimeter around the Island. Within the eastern portion of the Island, groundwater was found to be perched on top of a clay layer at approximately 4 to 6 feet bgs at the location of a former pond that was filled in 1909 by the United States Army. The first 150 to 200 feet of the Island, generally from the shoreline to the

perimeter road, is tidally influenced by the Long Island Sound. Water is likely present in these border areas during the high point of the tide.

2.1.8 Tidal Wetlands

Tidal wetlands on or in the vicinity of Davids Island were delineated either by conducting a field assessment of vegetation, substrate and hydrology or by photographic interpretation followed by field verification and boundary adjustment. The following NYSDEC recognized categories were used to identify and classify tidal wetlands:

- Coastal Shoals, Bars and Mudflats (SM) – The tidal wetland zone that at high tide is covered by saline or fresh tidal waters, at low tide is exposed or is covered by water to a maximum depth of approximately one foot, and is not vegetated.
- Littoral Zone (LZ) – The tidal wetland zone that includes all lands under tidal waters which are not included in any other category. The littoral zone does not extend into waters deeper than six feet at mean low water.
- Formerly Connected (FC) – The tidal wetlands zone in which normal tidal flow is restricted by man-made causes. Common reed, *Phragmites* sp., is the dominant vegetation.
- Vegetated Coastal Shoals, Bars and Mudflats (SV) – The tidal wetland zone that at high tide is covered by saline or fresh tidal waters, at low tide is exposed or is covered by water to a maximum depth of approximately one foot, and is vegetated.
- Intertidal Marsh (IM) – The vegetated tidal wetland zone lying generally between average high and low tidal elevations in saline waters. The predominant vegetation in this zone is low marsh cordgrass, *Spartina alterniflora.*
- High Marsh (HM) – The normal upper most tidal wetland zone usually dominated by salt meadow grass, *Spartina patens*; and spike grass, *Distichlis spicata*. This zone is periodically flooded by spring and storm tides and is often vegetated by low vigor, *Spartina alterniflora* and Seaside lavender, *Limonium carolinianum*. Upper limits of this zone often include black grass, *Juncus Gerar*di; chairmaker's rush, *Scirpus* sp; marsh elder, *Iva frutescens*; and groundsel bush, *Baccharis halimifolia*.
- Dredged Spoil (DS) – All areas of fill material.

Areas likely to support tidal wetlands on or in the vicinity of Davids Island were divided into two categories based on the probability of disturbance resulting from potential remedial activities associated with the City of New Rochelle-owned portion of Davids Island: low and high priority areas. Wetland boundaries associated with low priority areas were delineated primarily by photo interpretation followed by field verification. Wetlands boundaries associated with higher priority areas (*i.e.*, those areas associated with the footprint of the incinerator landfill and other areas that may be affected by potential remedial activities, as determined during the City's Site Investigation) were field delineated through an assessment of vegetation, substrate and hydrology.

Based on desktop delineation and field verification of low priority areas and field delineation of high priority areas, four categories of tidal wetlands occur along the perimeter of Davids Island: Littoral Zone; Coastal Shoals, Bars and Mudflats; Intertidal Marsh; and High Marsh. SM and LZ tidal wetlands were the most abundant and together account for just over 70 acres. IM and HM are scattered along the eastern, western and northern shorelines in small isolated pockets, totaling approximately 0.5 acres. These wetlands generally occupy washed out areas just behind breaches in the former seawall.

Regulated Adjacent Areas (AAs) were also identified (Figure 2). AAs are defined as those land areas not included in the any of the above categories that are generally not inundated by tidal waters and that extend 300 feet landward of the most landward tidal wetlands boundary or to an elevation of ten feet. Additional guidance as described in the New York Code of Rules and Regulations (NYCRR), Chapter 6, Part 661, Article 24 was also used to determine the appropriate width of AAs.

2.2 Nature and Extent of Contamination

This section provides a brief summary of investigation findings to date at Davids Island as described in the EE/CA Report. The locations of the samples and the surface and subsurface analytical results discussed below are discussed and shown in the EE/CA as Tables 4-1 through 4-4 and Figures 4-1 through 4-7.

2.2.1 2002 Phase II Subsurface Investigation by AKRF

Samples were collected for PCB analyses by AKRF as part of their subsurface investigation in 2002. During the initial investigation (May to June 2002), PCB concentrations greater than 1 mg/kg were identified in soil samples collected from three areas:

- Northeast of (now Former) Building 32 (1.24 mg/kg at DI-32-B1 from 0 to about 1 foot bgs)
- West of (now Former) Building 32 (1.44 mg/kg at DI-32D-B1 at 0.5 feet bgs)
- West of (now Former) Building 20 (1.65 mg/kg at DI-22T-B1 from 0 to 0.5 feet bgs and 36,800 mg/kg at DI-22T-B2 from 0 to 0.5 feet bgs).

Further sampling of these locations was conducted in July 2002. Results of these samples showed the following:

- Step-out samples in the vicinity of DI-32-B1, northeast of (now Former) Building 32, contained no detectable levels of PCBs.
- Only one of the delineation samples on the western side of (now Former) Building 32 had PCB concentrations greater than comparison criteria. Total PCBs in the surface soil (0 to 0.5 feet bgs) at DI-32D-4 were 1.96 mg/kg. The other samples, collected between 0 and 2.5 feet bgs, ranged in concentration from non-detect to 0.921 mg/kg.
- Nine surface/near surface samples (between 0 and 1 foot bgs) were collected from west of (now Former) Building 20, and of these, six had PCB concentrations above comparison criteria, with a maximum occurrence of 169 mg/kg. There were five samples

collected between 1 and 2.5 feet bgs. Concentrations ranged from 1.19 mg/kg to 336 mg/kg, all exceedances.

In addition, during the July event, a sample from the southern side of (now Former) Building 11 contained Total PCBs of 1.21 mg/kg (marginally above the comparison criterion) at DI-11T-B2 from 0 to 0.5 feet bgs.

2.2.2 2007/2008 Site Investigation Sampling Event by TtEC for City of New Rochelle

The 2007/2008 sampling program strategy focused on the areas of the Island most likely to contain contamination based on previous site operations and features. Transformer Area samples (designated as "TR") were collected at locations where transformers were found after site reconnaissance or where transformers were known to previously exist based on historic documentation. Thirty-two (plus one field duplicate) transformer surface soil samples were collected during the first phase of the 2007/2008 sampling event (2007/2008 Phase 1). In addition, subsurface soil samples were collected from seven of the transformer locations (a total of ten samples and two field duplicate samples). During the second part of the investigation (2007/2008 Phase 2), to delineate potential contamination at select former transformer locations, an additional 19 surface and 21 subsurface samples were collected.

In addition, a power distribution conduit filled with PCB-containing oil was discovered during demolition of Former Building 59. A review of an electrical distribution system plan for Fort Slocum (revised through 1954) indicated a power distribution line running around the perimeter of the Island. Four test pits (designated as TP23 through TP26) were excavated adjacent to Former Building 59 and at junctures along the conduit to investigate whether oil within the conduit has affected surrounding soil. Soil samples were collected from select locations in these test pits.

2.2.2.1 Transformers – Former Building 133 (TR01 through TR03)

Aroclor-1260 was detected in the surface soil collected at location TR02 but less than criteria. There were no PCBs present in TR01 and TR03.

2.2.2.2 Transformers - Former Building 127A (TR04 through TR06)

The surface soil samples from TR04 through TR06 did not contain detectable levels of PCBs.

2.2.2.3 Transformers - Between Former Buildings 10 and 11 (TR07 through TR09; TR46 through TR49)

<u>Surface Soil</u>

Aroclor-1260 was the only PCB present, and it was detected in surface soil samples from TR07, TR08, and TR09. The concentration detected in the soil collected at TR08 (6,850 micrograms per kilogram [ug/kg], which corresponds to 6.85 mg/kg Total PCBs) exceeded criteria. Additional surface soil samples were obtained at four horizontal delineation sample locations (TR46 through TR49) to address this exceedance. The analysis of these soil samples indicated no concentrations in excess of comparison criteria.

Subsurface Soil

Three transformer area subsurface samples were collected from location TR08 (Phase 1), and one subsurface soil sample was collected from location TR46 (Phase 2) for PCB analysis. The 1.5 to 2.0-foot bgs interval of TR08 was obtained using a hand auger, while the other sample was collected using direct push drilling methods. Aroclor-1260 was detected within the 7 to 8-foot bgs sample from location TR08 at a concentration of 995 ug/kg, slightly below the Total PCB criterion of 1,000 ug/kg. PCBs were not detected in the other TR08 subsurface soil samples or the sample collected at location TR46.

2.2.2.4 Transformers - Former Building 8 (TR10 and TR11)

There were no PCBs present in the soil sample from TR10. Aroclor-1260 was detected in surface soil of TR11 at a concentration less than comparison criteria.

2.2.2.5 Transformers - Around Former Building 6 (TR12 through TR17)

No detectable levels of PCBs were found in the surface soil samples from TR12 through TR17.

2.2.2.6 Transformers - Former Building 70 (TR18 through TR20)

Surface soil was collected at three locations (TR18, TR19, and TR20) around a transformer area near the southern side of Former Building 70 and analyzed for PCBs. PCBs were not detected in any of these samples.

2.2.2.7 Transformers - Former Building 20 (TR21 through TR23; TR40 through TR45)

Surface Soil

PCBs were found at transformer soil points TR21, TR22, and TR23, located off the northwest corner of Former Building 20. The analytical results for TR21 (597 ug/kg) and TR23 (512 ug/kg) were below comparison criteria. The surface soil sample collected at location TR22 contained a concentration of Aroclor-1260 of 16,300,000 ug/kg (16,300 mg/kg or approximately 1.6% PCBs), which exceed the Total PCB value by four orders of magnitude.

Several horizontal delineation surface soil samples were collected surrounding location TR22. Aroclor-1260 was detected at 5340 ug/kg (TR42) and 2060 ug/kg (TR44), both of which are above criteria.

Subsurface Soil

Direct push drilling methods were used to collect two subsurface soil samples in this area: 1 to 2 feet bgs and 9 to 10 feet bgs for TR22. Aroclor-1260 was detected in TR22 at 24,600,000 ug/kg (24,600 mg/kg or almost 2.5% PCBs) in the 1 to 2-foot bgs interval and 3,200,000 ug/kg (3,200 mg/kg or approximately 0.3% PCBs) in the 9 to 10-foot bgs interval. These concentrations are four and three orders of magnitude, respectively, above comparison criteria.

2.2.2.8 Transformers - Former Building 17 (TR24 through TR26)

Surface Soil

Surface soil samples were collected for analysis of PCBs from sample locations TR24, TR25 and TR26, located near the southeast corner of Former Building 17. Only TR24 contained detectable levels of PCBs, with Aroclor-1260 occurring at 431 ug/kg. This level is less than criteria.

Subsurface Soil

A subsurface (7 to 8 feet bgs) sample was collected from TR24. No PCBs were detected in this soil.

2.2.2.9 Transformers – Surrounding Former Building 109 (TR27 through TR30; TR50 through TR56; TR51W10; TR56E10; TP11)

Surface Soil

Aroclor-1260 was detected in the surface soil collected at locations TR27, TR28, TR29, and TR30 during Phase 1. Out of these five occurrences, three (TR27, TR29, and TR30) contained PCB concentrations above comparison criteria (106,000 ug/kg; 5,990 ug/kg; and 1,090 ug/kg, respectively). These three points are located near Former Building 109, with the maximum concentration being present at the southeast side of the concrete structure.

Further surficial sampling was performed during Phase 2 at nine locations. Four samples (TR51W10, TR54, TR55, and TR56E10) contained detectable levels of PCBs, with exceedance concentrations found in two of them: 3,100 ug/kg in TR55 and 1,360 ug/kg in TR56E10.

Subsurface Soil

During Phase 1 of the 2007/2008 investigation, one shallow (1.5 to 2 feet bgs) subsurface sample was collected from TR27 using a hand auger, and two deeper subsurface soil samples were obtained from locations TR27 (7 to 8 feet bgs) and TR29 (8 to 9 feet bgs) using direct-push drilling methods. Visual signs of contamination were present at sample location TR27 and consisted of a layer of stained material with a slight petroleum odor at the 7 to 7.3-foot bgs interval. This location was a former drywell reported to have an empty transformer casing adjacent to it prior to the USACE demolition activities. The subsurface soil samples were analyzed for PCBs, and no constituents were detected.

Test pit TP11 was advanced to evaluate if the stained soils observed at boring TR27 extended northeast and connected to another stained layer over 150 feet to the northeast (non-transformer sample location AW52). The test pit was approximately 30 feet long and extended to a depth of 8 feet bgs. No evidence of impacted soils (*i.e.*, staining, odors, elevated PID readings, etc.) was observed at TP11, and no subsurface soil samples were collected from this test pit.

Additional subsurface intervals were collected from locations TR27 and TR29 as part of Phase 2. These samples, obtained between 5 and 7 feet bgs, did not contain detectable levels of PCBs. In addition, Phase 2 subsurface samples were collected from TR50 through TR56. Only one of these samples, TR50 at 6 to 7 feet bgs, had an occurrence, and Aroclor-1260 was found at 414 ug/kg, which is below its criterion.

2.2.2.10 Transformers - Between Former Buildings 32A and T-34 (TR31 and TR32)

Two surface soil sampling points were located near Former Building 32A and southeast of Former Building T-34. The sample collected at location TR31 contained an Aroclor-1260 concentration of 17,300 ug/kg which exceeds its criterion. PCBs were not detected in the TR32 soils.

One shallow subsurface sample (and a duplicate) was collected from location TR31 at a depth of 1.5 to 2 feet bgs using a hand auger. This sample contained no detectable levels of PCBs.

2.2.2.11 Electrical Distribution System – Between Former Buildings 57 and 64 (TP23)

TP23 was located near a conduit juncture between Former Buildings 57 and 64. The test pit ran approximately 10 feet out from the manhole in both directions, for a total length of 25 feet. The concrete conduit casing was present from about 2 to 4 feet bgs, with native material then from 4 feet bgs to the bottom depth of the excavation (6 feet bgs). Two subsurface soil samples were collected from test pit TP23. The 4-foot bgs samples were collected from the conduit/native material interface. Although Aroclor-1260 was detected in one of these samples, the concentration did not exceed comparison criteria.

2.2.2.12 Electrical Distribution System – Between Former Buildings 102 and 109 (TP24)

Test pit TP24, located between Former Buildings 102 and 109 at another conduit juncture, was excavated as three 10-foot trenches radially out from the manhole. In this area, the concrete casing for the conduit was present from 3 to 5 feet bgs. Silt, sand, and fill materials were present above, while native materials were below the conduit (to 7 feet bgs). Three samples, all at approximately 5 feet bgs, were collected from the test pit. PCBs were present in all three samples from this test pit, with two (TP24-02 and TP24-03) containing concentrations above comparison criteria. The concentration in TP24-02 was 1,430,000 ug/kg (1,430 mg/kg or over 0.1% PCBs).

2.2.2.13 Electrical Distribution System – Former Building 59 (TP25)

Test pit TP25 traced the conduit from Former Building 59, out approximately 26 feet in length. The concrete conduit was uncovered from 2 to 3 feet bgs, with fill material above and native soils below. The depth of the test pit was 6 feet bgs. One PCB (Aroclor-1260) was detected in the three subsurface soil samples from TP25 at concentrations below comparison criteria.

2.2.2.14 Electrical Distribution System – Former Building 67 (TP26)

Test pit TP26 was excavated along a portion of the eastern side of Former Building 67. This excavation measured approximately 3 feet in length by 3 feet in width by 3 feet in depth. Fill, brick, gravel, concrete, and sand were encountered in the test pit. There were no occurrences of PCB compounds in the one 3-foot bgs sample collected from test pit TP26.

2.2.3 2005/2008/2009 Concrete/Soil Removal in Building 109 by TtEC for USACE

Building 109 was formerly a one-story concrete-walled structure with a concrete floor that functioned as a transformer building. In 2005, during a pre-demolition inspection of the building, stained concrete was noted beneath the former transformer location on the east wall of the building. In addition, there was a dry well directly beneath this location. A concrete chip

sample, designated DI-S-C-109-01 (concrete), was collected and found to contain Total PCBs at 1,800 mg/kg.

In November 2008, three surface soil samples (DI-S-C-109-01 through DI-S-C-109-03) were collected from within the footprint area of the former building (it had been demolished in the intervening years). Aroclor-1260 was detected at concentrations above comparison criteria.

A soil removal action within the former building footprint was performed in December 2008. Soil was excavated from the entire foundation area, and eight post-excavation samples (DI-S-C-109-07 through DI-S-C-109-14) were collected from a depth of 3 feet bgs. During the activities, a concrete foundation was discovered at 2 feet bgs, and three sets of buried cables were observed entering the southern portion of the excavation within the east, south, and west side walls. A soil sample was collected from the side wall immediately beneath each of the sets of cables (DI-S-C-109-04, DI-S-C-109-05 and DI-S-C-109-06, respectively).

The soil sample from the former location of the dry well, DI-S-C-109-13, contained one PCB (Aroclor-1260) at a concentration of 69.6 mg/kg, which is above criteria. A second soil removal action focusing on this area was initiated in early January 2009. Of the four post-excavation samples collected, two had detectable levels of PCBs greater than comparison criteria (235 mg/kg at DI-S-C-109-15 and 5.5 mg/kg at DI-S-C-109-16.

A third removal action was then undertaken in mid-January 2009 to focus on the area around the DI-S-C-109-15 sample location. A set of three cables was uncovered entering the east wall of the excavation at 4.5 feet bgs. Stained soils and the odor of degraded chlorine were noted below this level. Excavation continued to 10 feet bgs, which was below the impacted soils interval. One soil sample was collected from the stained side wall soils at 6 feet bgs (DI-S-C-109-19), and it contained a total PCB concentration of 588 mg/kg. A soil sample was also collected from the bottom of the excavation. Aroclor-1260 was detected at 0.3 mg/kg, which is below comparison criteria.

2.2.4 2009 Delineation Sampling by TtEC for USACE

Pre-design sampling was performed in July 2009 to further delineate PCB-contaminated soils horizontally and/or vertically in select areas of the Island. Over 500 soil samples, plus 15 duplicates, were collected from grids overlayed on these areas, with 270 samples and 12 duplicates being analyzed by the laboratory. The results of this event, along with previous sampling locations with data greater than criteria, are also presented in the EE/CA as Table 4-4 and Figures 4-4 through 4-7.

2.2.4.1 Area 1 – Between Former Buildings 10 and 11

Surface soil was collected at 20 locations in this area, with three grid nodes (N4E1, N4E2 and N4E3) also having a 3.5 to 4-foot bgs sample. PCBs were not detected in most of these samples. Only the surficial soil from N4E2 contained Aroclor-1260, and the concentration (25 ug/kg) was less than comparison criteria.

2.2.4.2 Area 2A – Between Former Buildings 32A and T-34

Aroclor-1260 was detected in the soil collected from Area 2A between 0 and 1 foot bgs. Of the 18 occurrences, one (location N8E7) contained a PCB concentration above comparison criteria (5,900 ug/kg, or 5.9 mg/kg Total PCBs. This location is adjacent to the Con Edison-owned

utility corridor, and further delineation sampling to the east (in the corridor) could not be performed.

2.2.4.3 Area 2B – West of Former Building 32

Aroclor-1260 was detected in approximately half of the surface soil samples collected in this area but all were less than criteria. In addition, due to visual observations of potentially contaminated material by field personnel in the subsurface soils of N0E2 during drilling operations, the 7.5 to 8-foot bgs interval from this location was also analyzed. No PCBs were detected in this sample.

2.2.4.4 Area 3 – Former Building 20

Forty-five surface soil sampling points (and two duplicates) were located near Former Building 20 for horizontal delineation purposes. The samples collected at the following grid nodes contained Aroclor-1260 concentrations that exceeded comparison criteria: N3E3 (1,100 ug/kg); N3E4 (1,500 ug/kg); N4E-2 (1,100 ug/kg); N4E3 (62,000 ug/kg); N4E4 (1,400 ug/kg); N5E0 (2,200 ug/kg); N5E1 (11,000 ug/kg); N5E2 (2,800 ug/kg); N6E-2 (1,300 ug/kg); and N6E-1 (12,000 ug/kg).

Fourteen of the locations in Area 3 also were sampled from 3.5 to 4 feet bgs for vertical delineation purposes. PCBs were either not detected or found at concentrations less than criteria.

2.2.4.5 Area 4 – Former Building 109 and Between Former Buildings 102 and 109

The southern portion of Area 4 (typically from N1 through N7 grid axes) was sampled in the 0 to 0.125-foot and 3.5 to 4-foot depth intervals. Aroclor-1260 was the only PCB present. Five concentrations detected in the surficial soil exceeded criteria, as follows: 7,900 ug/kg in N2E7; 4,900 ug/kg in N3E7; 2,900 ug/kg in N3E10; 250,000 ug/kg (which corresponds to 250 mg/kg Total PCBs) in N4E8; and 1,600 ug/kg in N4E11. The corresponding deeper vertical interval samples at these locations contained either non-detectable levels of PCBs or concentrations that were below the comparison criterion.

Comparison criterion exceedances in the northern portion of Area 4 (typically from N8 to N16 grid axes) occurred in the subsurface soils. Node points N10E10 and N11E10 contained Aroclor-1260 at 1,400 ug/kg and 11,000 ug/kg, respectively, in the 7.5 to 8-foot bgs interval. In addition, a concentration of 33,000 ug/kg (or 33 mg/kg Total PCBs) was detected at 15 to 15.5 feet bgs in N11E10. Samples from beneath these soil intervals were analyzed, and PCB compounds were below comparison criteria indicating vertical delineation was achieved.

2.3 Previous PCB Site Remedial Actions

This section provides a brief summary of remedial actions described in the After Action Report (AAR) of the Remedial Action and Restoration for Davids Island, which was submitted to the USACE in July 2009. The locations of the structures, samples, and the analytical results discussed below are shown in the AAR.

2.3.1 Building 59 Demolition and PCB-impacted Concrete Slab/Soil Removal

During reconnaissance activities prior to the demolition of Building 59, three electrical transformers were discovered in a utility room in the northern end of the building's basement. A

black tar-like substance was observed on the floor beneath the transformers, and the cut ends of two electric cables were observed penetrating the lower back wall of the room. A wipe sample of the black tar-like substance was collected and analyzed for PCBs. Results showed the level of PCBs to be at 88.9 parts per million (ppm), above comparison criteria.

Further reconnaissance for stained concrete within the transformer room was conducted due to the confirmed presence of PCB residue. A large, lightly stained area of the concrete floor extending from the southern half of the room to outside the south door was noted. TtEC developed a concrete sampling plan to evaluate the stained areas of the floor. A hammer-drill was used to pulverize the concrete floor at 10 locations. The powdered concrete was collected and sent to a laboratory for further testing.

The sample taken at location DI-S-C-59-04 had a result of 1.34 ppm PCBs, which exceeded the 1 ppm criterion. Since demolition of the overhead building was to take place prior to PCB-contaminated concrete removal, the concrete floor surrounding this sample location was protected. Building demolition followed.

The building's reinforced concrete slab and column construction allowed the building to be dismantled around the transformer room, which left the transformer room and its immediate surroundings intact. After most of the overhead demolition was completed, excess rubble was removed from around the transformer room and immediate area. Precise, selective demolition then proceeded and the overhead slab and supporting columns and walls of the transformer room were removed. Masonry rubble was removed from the top layer of plywood, while the plywood and underlying layers of polyethylene and plywood remained intact.

Once the demolition was complete, the removal of the protected concrete slab began. Two sets of offset stakes were driven into the ground to the south and east of the remaining building slab. These offset stakes identified the corners of the transformer room. Two more pairs of offset stakes were placed to the south and east of the remaining slab to identify the location of the DI-S-C-59-04 sample point. Paint lines were sprayed on the concrete to outline the area slated for removal. Also, removal of a slightly larger area of concrete allowed the excavation to be properly sloped or stepped in the event that the PCB contamination extended below 4 feet below-grade.

The concrete slab along the painted lines was broken and removed. To ensure all concrete debris was removed from the sampling area, the top 3 to 4 inches of soil were then scraped. The remaining north wall of the transformer room was removed to 18 inches below-grade.

Three conduits covered in concrete were found that trended northwest to a service box at the edge of Parker Road. Two of the conduits had cables within them. These cables were cut off, booted with neoprene, wrapped in duct tape and left undisturbed.

Verification Sampling

Once the concrete was removed from the sampling area, the location of sample number DI-S-C-59-04 and the corners of the transformer room were reestablished. A grid centered on sample DI-S-C-59-04 was established. It consisted of 11 points spaced at 1.5-meter intervals. Eight sample locations defined the area of inference for sample DI-S-C-59-04 and two were placed to the north of the area of inference. These two samples were placed in this area because the results from screening sample number DI-S-C-59-02 showed a slight elevation in levels, and the

presumed source for the PCBs were the cables penetrating the north wall of the transformer room. Samples were collected from the grid areas in accordance with the sampling plan.

With the exception of DI-S-C-59-13, laboratory results showed all verification samples to contain less than the 1 mg/kg PCBs. A second removal action was initiated. Soil was removed to a depth of 1 foot below present grade (15-inches below the grade at the base of the former slab) and from 1.5 meters to the south and 2.5 meters to the north of sample location DI-S-C-59-13. Once this was completed, a new grid of nine sample locations was laid out. Their placement was parallel and perpendicular to the first verification sample grid, but shifted 1 meter to the north and 1 meter to the east, in accordance with the sampling plan. The three northernmost sample locations included soil from beneath the former location of the conduits that had penetrated the north wall of the transformer room. Laboratory results showed that sample number DI-S-C-59-23 (the verification sample collected nearest DI-S-C-59-13) was still above 1.0 ppm PCBs. All other round two verification results were non-detect for PCBs. A third removal action was initiated.

An area 2 meters by 2 meters square, centered on DI-S-C-59-23, was excavated to 2 feet below the former slab grade. A grid of six sample locations was placed 1 meter north, 1 meter east, and parallel to the existing verification round two sample grid in accordance with the sampling plan. The same coring device and sample procedures were employed to collect and process these samples. Laboratory analysis verified that these third round soil samples were all non-detect for PCBs.

Restoration of Excavated Area

The Building 59 transformer room was backfilled to 18 inches below grade, covered with geotextile fabric and processed material, and graded over as part of the Building 58, 59, and 60 fill areas.

2.3.2 Building 109 Demolition and PCB-impacted Concrete Slab/Soil Removal

Building 109 was a one-story concrete-walled structure with a concrete floor that functioned as a transformer building. A pre-demolition inspection noted stained concrete beneath the former transformer location on the east wall of the building. A dry well was directly beneath the transformer location. A concrete chip sample, designated DI-S-C-109-01, was collected and found to contain 1,800 ppm PCBs. During the first season of demolition, the above-grade, non-PCB-contaminated portion of the building was removed. At the time of the building's demolition, removal and disposal of PCB-contaminated materials were not in the scope of work; therefore, it was decided that the remaining building floor and foundation would be covered with 6 millimeter (mil) polyethylene sheeting and plywood for removal at a later date.

During the second construction season in 2006 and 2007, the concrete slab was excavated and placed in lined roll offs for disposal at a PCB landfill.

As part of the investigation effort for the City (2007/2008), surface soil samples were collected from around the outside of the former Building 109 location. Analytical results showed that some of these soils contained PCBs above the goal of 1.0 ppm (see Section 2.2.2.9).

In November of 2008, the demolition field team collected three surface soil samples from within the building footprint area. All were found to contain PCBs above the 1.0 ppm level. A soil removal action within the footprint was initiated on December 2, 2008. Soil was excavated from

the entire foundation area and loaded into a lined roll off container. The initial excavation uncovered a concrete foundation at 2 feet bgs. Three sets of direct buried cables were observed entering the excavation on the west, south, and east side walls in the southern end of the excavation. A soil sample was collected from the side wall immediately beneath each of the sets of cables. This sampling was performed to investigate whether PCBs were associated with these cables. Eight additional soil samples were collected within the walls of the buried foundation. These were collected in a grid pattern and taken from a depth of 3 feet bgs.

Analytical results showed that sample DI-S-C-109-13 had a PCB result of 69.6 ppm. This location coincided with the former location of the dry well. A second soil removal action focused on the area around the DI-S-C-109-13 sample location. This was initiated on January 6, 2009. Analytical results showed that sample DI-S-C-109-15 was above the criterion at 236 ppm.

A final soil removal action was undertaken on January 21, 2009 and focused around the DI-S-C-109-15 sample location, which coincided with the location of the former dry well. A set of three cables was uncovered entering the east wall of the excavation at 4.5 feet bgs. Stained soils and the odor of degraded chlorine were noted below this level. Excavation continued to a level below the impacted soils (approximately 10 feet bgs). Two soil samples were then taken; one from the stained side wall soils at 6 feet bgs and one from the bottom of the excavation in non-stained soils at 10 feet bgs. GPS coordinates of these sample locations and the four corners of the round three excavation were collected. The analytical results showed that the side wall sample DI-S-C-109-19 contained 588 ppm PCBs. The bottom sample, DI-S-C-109-20, contained 0.3 ppm PCBs, below the 1 ppm cleanup level.

At this time, the USACE determined that further soil removal at this location was beyond the scope of work. The excavation was backfilled on January 27, 2009. Two layers of geotextile fabric were used to line the entire excavation. A warning barrier of orange high visibility fence was placed over the fabric. Processed 3 inch minus rubble was placed in the excavation and brought up to 18 inches below-grade. Another layer of geotextile fabric was placed over the rubble and more rubble was used to bring the excavation to within 6 inches of grade. The organic mix was then placed to bring the excavation to grade.

3.0 Applicable Regulations

Soil removal actions must, to the extent practicable, contribute to the efficient performance of anticipated long-term remedial actions at a project site. The cleanup level for PCBs in soil without further conditions, as outlined in the Toxic Substances Control Act (TSCA), 40 CFR 761.61(a)(4)(i), is less than 1 part per million (ppm, equivalent to milligrams per kilogram, mg/kg).

This Federal standard is equal to the NYSDEC restricted use residential, restricted-residential, commercial, and protection of ecological resources soil clean-up objective (SCO) values for the sum of PCBs (1 mg/kg), listed in New York Code of Rules and Regulations, Title 6, Subpart 375-6, *Remedial Program Soil Cleanup Objectives* (6 NYCRR 375-6; December 2006). The industrial and protection of groundwater SCOs are 25 mg/kg and 3.2 mg/kg, respectively. Therefore, use of 1 mg/kg for comparison will also achieve these restricted use State standards, which, in regard to PCBs only, would permit land usage from single family homes through manufacturing facilities, but disallow raising live stock or producing animal products for human consumption on the property.

Definitions for the uses are as follows (from 6 NYCRR 375-1 and 6 NYCRR 375-6):

- Residential use allows a site to be used for any use other than raising live stock or producing animal products for human consumption. Restrictions on the use of groundwater are allowed, but no other institutional or engineering controls are allowed. This is the land use category considered for single family housing.
- Restricted-residential use applies to sites with a common ownership or a single owner/managing entity of the site. Restricted-residential use shall, at a minimum, include restrictions which prohibit any vegetable gardens on a site (although community vegetable gardens may be considered with NYSDEC approval) and single family housing; and includes active recreational uses, which are public uses with a reasonable potential for soil contact.
- Commercial use is considered for the primary purpose of buying, selling or trading of merchandise or services. Commercial use includes passive recreational uses, which are public uses with limited potential for soil contact.
- Industrial use applies for the primary purpose of manufacturing, production, fabrication or assembly processes and ancillary services. Industrial use does not include any recreational component.

Protection of Ecological Resources SCOs are applied for the upland soils at a site where terrestrial flora and fauna are identified or may be present under a reasonably anticipated future use. These SCOs do not apply to sites or portions of sites where the condition of the land precludes the existence of an ecological resource which constitutes an important component of the environment (*e.g.*, paved, covered by buildings). They also do not apply for protection of the aquatic environment or non-wild biota (*e.g.*, pets, livestock, agricultural or horticultural crops, landscaping).

Protection of Groundwater SCOs are applicable at a restricted use site where contamination has been identified in on-site soil and groundwater resources are, or may become, threatened by the presence of this soil contamination.

The 1 mg/kg standard value is presented on the data tables (Tables 1 through 4), and exceedances of this criterion are shown using yellow shading.

4.0 Proposed Interim Remedial Actions

The Interim RA approach described in this Work Plan represents a generalized description of site activities to be performed during contaminated soil removal. Specific means and methods employed by the remediation contractor may differ from those described herein based upon observed field conditions and regulatory approvals; however, all activities will be conducted in accordance with USEPA and NYSDEC regulations and guidance.

The overall Interim RA approach is to use this Work Plan for the self-performing work at Davids Island. The work will consist of:

- Removing contaminated soil;
- Procuring subcontractors;
- Acquiring the required permits prior to Interim RA activities;
- Notifying the Westchester County Department of Health (WCDOH), NYSDEC, and local fire department;
- Notifying the appropriate authorities of contamination when necessary; and
- Preparing documentation pertaining to cleanup actions for incorporation into an After Action Interim RA Summary Report.

Utility markouts will be performed and Con Edison will be consulted for work in the vicinity of their right of way. This section discusses the proposed Interim RA activities that will be implemented to achieve the project objectives.

4.1 Pre-Remedial Construction Activities

4.1.1 Mobilization/Site Preparation

Site preparation activities are expected to include, but not be limited to, the following:

- Mobilization of personnel, equipment, supplies, and materials to the Island;
- Mobilization and set up of temporary barge landing area;
- Underground utility mark-out (Con Edison);
- Installation of site control measures (*i.e.*, security fencing, barricades, warning signs, caution tape, etc.) to maintain the safety of the public and prevent unauthorized access to the work areas and the Island;
- Installation and maintenance of temporary erosion control measures, as per the approved Stormwater Pollution Prevention Plan. The measures will include the use of hay bales and/or silt fences, stabilized construction access/egress, etc. Periodic inspections of the soil erosion and sediment control measures will be performed along with inspections before and after storm events;
- Installation of temporary facilities including field offices, equipment storage, decontamination pad and associated facilities, health and safety storage, stockpiling and material storage areas, fences, and barriers; and

- Demarcation of exclusion zones, contaminant reduction zones, and support zones as required in the Site-specific Health and Safety Plan.

4.2 Soil and Sediment Erosion Control

A NYSDEC-approved Stormwater Pollution Prevention Plan (SWPPP), consistent with applicable requirements and standards, has been developed for the Island (TtEC, July 2005) and is attached as Appendix A. In a May 1, 2008 letter from the NYSDEC, the technical/design components of the SWPPP were renewed with the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-08-001) and are effective until April 30, 2010. The grading, excavation, and restoration activities at the Island will be required to meet the technical/design requirements of the SPDES General Permit. The erosion and sedimentation control measures, as outlined in the SWPPP, will include the use of silt fences around areas of soil disturbance, stabilized construction access/egress, etc. Periodic inspections of the soil erosion and sediment control measures will be performed along with inspections before and after storm events. If unforeseen field conditions develop, modifications to existing plans may be necessary.

4.3 Soil Excavation and Disposal

The remediation of PCBs at the Island will consist of the removal of surface and subsurface soils with concentrations of PCBs that exceed the 1.0 ppm cleanup goal. Excavations will originate in locations where analytical data has previously identified PCBs above 1.0 ppm. Excavations are anticipated to occur above the water table and dewatering is not expected. Limited amounts of perched groundwater have been observed on the Island. Should excavation activities encounter perched water, the excavation will be temporarily halted while the condition is evaluated. Based on the amount of water encountered, possible resolutions include continuing to excavate in the wet soil, collecting manageable amounts of water in drums, or ceasing excavation activities. The overall soil removal will consist of numerous surface soil removals and three (3) hot-spot subsurface soil removals. Below is an area-specific description of soil removal.

Area 1

One (1) surface soil removal will take place in Area A1 at the location of soil boring TR08. Soil will be removed from a 4-foot by 4-foot area centered on boring location TR08. Soil will be removed to an approximate depth of 1.5 feet below ground surface (bgs). The excavation area is shown on Figure 3. A total of approximately 1 cubic yard (cy) of soil will be removed from Area 1.

Area 2A

Two (2) surface soil removals will take place in Area 2A at the locations of soil borings TR31 and N8E7. Location TR31 and N8E7 are within the ConEd 50 foot buffer adjacent to the utility corridor. Removal of these areas will be accomplished with light hand and light mechanical methods. A ConEd representative will be present during this portion of the removal. Soil will be removed from a 4 foot by 4 foot area centered on each boring location. Soil will be removed to an approximate depth of 1.5 feet bgs. The excavation areas are shown on Figure 4. A total of approximately 2 cy of soil will be removed from Area 2A.

Area 2B

Two (2) surface soil removals will take place in Area 2B at the locations of soil borings DI-32D-4 and DI-32D-B1. Soil will be removed from a 4-foot by 4-foot area centered on each boring location. Soil will be removed at each surface soil removal area to an approximate depth of 1.5 feet bgs. The excavation areas are shown on Figure 4. A total of approximately 2 cy of soil will be removed from Area 2B.

Area 3

Surface soil removal will take place in Area 3 at the locations of soil borings N6E-2, N6E-1, N5E0, N5E1, N5E2, TR42, TR44, N4E3, N4E4, and N3E4. Removals at locations N4E-2 and TR44 will be isolated 4-foot by 4-foot area surface soil removals. The remaining surface soil removal locations will be connected and excavated as one large surface soil excavation due to their proximity and the absence of clean samples between adjacent locations (see Figure 5 for excavation areas). Surface soil will be removed from all surface soil removal areas to an approximate depth of 1.5 feet bgs.

In addition to surface soil removals in Area 3, there will be one (1) area of hot-spot soil removal at depth. Soil will be removed to 10 feet bgs (the depth of known PCBs in excess of 1.0 ppm) from an 8-foot by 8-foot area centered on the location of soil boring TR22. The size of this removal area is greater than the 4-foot by 4-foot surface soil removal areas to account for side-sloping subsurface excavation methods. Due to the size and location of the removal area centered on the location of boring TR22, PCBs in excess of 1.0 ppm in surface soils at the location of soil boring N3E3 will also be removed. This subsurface excavation area is shown on Figure 5.

A total of approximately 40 cy of soil will be removed from Area 3.

Area 4

Surface soil removal will take place in Area 4 at the locations of soil borings TR29, TR30, N2E7, N3E7, N4E8, TR27, TR55, N3E10, N4E10, and N4E11. The removal at location TR29 will be an isolated 4-foot by 4-foot area surface soil removal. The remaining surface soil removal locations will be connected and excavated as one large surface soil excavation due to their proximity and the absence of clean samples between adjacent locations (see Figure 6 for excavation areas).

In addition to surface soil removals in Area 4, there will be two (2) areas of hot-spot soil removals at depth. The first hot-spot removal will be an 8-foot by 8-foot area centered on boring location N11E10. At this location, soil will be removed to 16 feet bgs (the depth of known PCBs in excess of 1.0 ppm). The second hot-spot soil removal at depth will encompass the locations of soil boring N10E10 and test pits TP24-01, -02, and -03. The soil removal area encompassing these locations will be approximately 15 feet in length and 8 feet in width and soil will be removed to a depth of 8 feet bgs (the depth of known PCBs in excess of 1.0 ppm). The excavation areas are shown on Figure 6.

A total of approximately 120 cy of soil will be removed from Area 4.

Totals

A minimum of approximately 170 cy of soil will be excavated and removed from the Island. However, it is approximated that up to 240 cy of soil may be excavated to account for sloping/benching methods and removal of additional soils based on confirmation sampling. Excavated soils will be transported off the Island for off-site disposal. Soil is removed from the Island in covered roll-off containers that are placed on a barge for transport to the mainland. The marine transportation subcontractor is responsible for the safe handling and transport of the material over the water. Barge shipments will only take place when tide and sea conditions are considered safe by the tug boat captain. The disposal facility (or facilities) to be used will be selected at the time of the remedial action and will be approved by USACE. Facilities will be properly certified to dispose the waste materials. Disposal activities will be conducted in accordance with applicable Federal, State, and local regulations.

4.4 Post Remediation Sampling

Post remediation sampling will be performed in the same manner for all excavation areas. After each excavation, the soil will be sampled in accordance with NYSDEC Division of Environmental Remediation (DER) Draft Technical Guidance for Site Investigation and Remediation document (Draft DER-10) to verify that the cleanup level of < 1.0 ppm PCBs has been met. The following requirements are summarized from Draft DER-10:

- For excavations less than 20 feet in perimeter, one bottom sample and one sample from each sidewall (with one of the sidewall samples biased in the direction of surface runoff) will be collected.
- For excavations 20 to 300 feet in perimeter, samples will be collected as follows:

  (a) For surface excavations, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area; and

  (b) For subsurface excavations, one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

An estimated total of 100 post-remediation samples would be required based on the excavations described above.

4.5 Site Restoration

The excavations will be followed by site restoration activities. The excavated sites will be restored using restoration techniques implemented during the demolition phase of the project. Each excavated area will be filled with the crushed concrete and brick that has been spread over Buildings 58, 59, and 60 footprints. "Natural organic" decomposed material from roadways and other areas of the Island will be used to dress the top of the excavations. The beneficial reuse letter is included in Appendix B.

4.6 Dust, Odor, and Vapor Control

Dust, odor, and vapor control methods to be implemented during the performance of the remedial activities are described in the following paragraphs.

Fugitive dust emissions may result from the performance of the excavation activities. Therefore, engineering controls will be used to control dust emissions. These controls may include the following: (1) keeping surfaces adequately wet during removal activities; (2) restricting trucks, barges, and equipment to designated travel routes to and from the subject site; and, (3) covering materials during transportation to prevent fugitive dust emissions.

Odors are possible with this remedial action during the implementation of the remedial activities. Mitigative measures for odor and vapor control will include one or more of the following: (1) covering exposed areas of contaminated soils within the excavation areas with clean fill materials; (2) covering contaminated materials with plastic sheeting, tarpaulins, or other appropriate materials; (3) use of odor suppressant materials; and, (4) other approved methods of vapor/odor suppression.

The following air monitoring program will be implemented during these activities to monitor dust levels at the perimeter of the exclusion zone and/or beyond, document findings, and describe what steps will be taken to reduce dust emissions and when those steps will be activated. Action levels provided in this section are from Appendix 1A NYSDOH Community Air Monitoring Plan from Draft DER-10 Technical Guidance for Site Investigation and Remediation (December 2002).

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone (test pit locations) at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if the airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Dust suppression measures will consist of spraying water over the active area of the excavation. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and maintained in a database, and will be available for NYSDEC and NYSDOH personnel to review.

5.0 Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP) was developed by TtEC for sampling, analysis, testing, and monitoring as part of the previous construction activities. A Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP) for the Investigation, Remedial Action, and Restoration of Davids Island/Fort Slocum, December 2006 were prepared as part of the demolition activities, with Amendments specific to the PCB delineation sampling (*e.g.*, grids, flowchart of sampling/analysis) prepared in June 2009. The post-excavation sampling will be performed in accordance with these plans/addenda as applicable. Prior to mobilization, the plans and addenda will be reviewed and modified, if necessary.

6.0 Permits

The permits and agreements referred to in this section are based on the proposed remedial action activities described above.

6.1 Property Agreements/Deed Restrictions

An institutional control will be implemented in the form of a deed restriction or other agreement that will require limiting the use and development of the property to commercial use, which will also permit industrial use and certain recreational uses.

6.2 Soil Erosion and Sediment Control

A NYSDEC-approved SWPPP, consistent with applicable requirements and standards, has been developed for the Island (TtEC, July 2005) and is attached as Appendix A. In a May 1, 2008 letter from the NYSDEC, the technical/design components of the SWPPP were renewed with the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-08-001) and are effective until April 30, 2010. The grading, excavation, and restoration activities at the Island are required to meet the technical/design requirements of the SPDES General Permit.

6.3 State Permits

Under Part 661 activities in tidal wetlands and adjacent areas are regulated. The substantive requirement to be met for the proposed remedial activity is that tidal wetlands must be preserved and protected. In addition, their present and potential values must be enhanced. In particular, tidal wetlands must be protected from erosion, turbidity, and sedimentation. No work will take place in tidal wetlands; however, remedial activities will take place in adjacent areas.

To meet the substantive requirements, best management practices (BMPs) will be implemented to preserve the adjacent areas, and preserve and protect adjacent tidal wetlands. BMPs will include stabilizing the restored adjacent areas by seeding, and then mulching with the restored area with straw (for slopes gentler or equal to 3:1) or with biodegradable erosion control blanketing (for slopes steeper than 3:1). This will preserve the adjacent areas and their bio-filtration function, and protect tidal wetlands from erosion, turbidity, and sedimentation.

6.4 Federal Permits

Remedial activities will occur outside of the mean high water line and only occur within the wetland adjacent areas; therefore, Federal permits would not be required.

7.0 Site Specific Health and Safety Plan

A site-specific Health and Safety Plan (SHSP) was prepared by TtEC as part of the construction activities on the Island. The SHSP addresses the health and safety of on-site workers, visitors, and the surrounding public during remedial construction. The Health and Safety Plan was prepared in accordance with applicable Federal, State, and Local requirements including, but not limited to, the requirements of the Occupational Safety and Health Administration (OSHA). In order to address the additional health and safety practices that was employed by all site workers participating in the PCB-contaminated soil sampling and remediation activities commencing in June 2009 at Davids Island, an Addendum to the Site Specific Health and Safety Plan was written for the work. The proposed work will be executed under the existing SHSP and Addendum. Prior to mobilization, the SHSP will be reviewed and modified, if necessary.

8.0 Site Restoration

The excavations will be followed by site restoration activities. The excavated sites will be restored using restoration techniques implemented during the demolition phase of the project. Each excavated area will be filled with the crushed concrete and brick that has been spread over Buildings 58, 59, and 60 footprints. "Natural organic" decomposed material from roadways and other areas of the Island will be used to dress the top of the excavation.

9.0 Remedial Structures and Equipment Removal

Subsurface soil excavations will be completed through the use of side-sloping construction methods; therefore, eliminating the need for remedial structures (*e.g.*, sheet piling). Remedial construction equipment will be removed from the Island once site restoration activities are complete.

Equipment that comes into contact with the PCB material will be properly decontaminated in accordance with 40 CFR 761.79(c)(2) and wipe samples will be collected to verify decontamination prior to being demobilized from the site.

10.0 Operation, Maintenance, and Monitoring

Since the remedial activities outlined in this Interim RA Work Plan only address PCBs, contaminated media will remain at the Island, and a Site Management Plan will be instituted following future remedial actions addressing the remaining contaminants of concern. Five-year reviews will also be performed to assess any changes in the risk to human health and the environment posed by the Island.

The Site Management Plan will detail the necessary maintenance and monitoring of the Site. The plan will include at a minimum:

a) Procedures for long-term monitoring;

b) Identification of any use restrictions on the Site;

c) Fencing or other means to control site access;

d) Provisions for the continued proper operation and maintenance of the components of the remedy.

The Site Management Plan will develop parameters, conditions, procedures, and protocols to determine the effectiveness of the remedial action for the Island, including a schedule of periodic sampling of all media of concern. The plan will include a description of operation, maintenance, and monitoring activities to be undertaken after the NYSDEC has approved the final remedial design, including the number of years during which such activities will be performed (where appropriate) and a specific description of the criteria to be used to decide when operation of such activities may be discontinued.

11.0 Interim RA Cost Estimate

The cost estimate for the implementation of the proposed Interim RA for is approximately $1.1 million. This preliminary cost estimate should be considered an order of magnitude cost estimate. The actual cost of the performance of the Interim RA will be provided in an After Action Report that will be submitted among the project stakeholders.

12.0 Interim RA Schedule

The proposed time for initiation of the remedial actions is October 2009. The overall schedule for the Interim RA activities is expected to span approximately 2 months. Figure 7 shows the proposed project schedule.

13.0 References

AKRF, 2002. Phase II Subsurface Investigation Draft Report, Davids Island, New Rochelle, New York. Prepared for the Westchester County Department of Planning. Prepared by AKRF, Inc. September 2002.

Asselstein and Grossman, 1955. "The Water Resources of Westchester County, New York." USGS Bulletin GW-35.

NYSDEC, 2002. Draft DER-10 Technical Guidance for Site Investigation and Remediation. Division of Environmental Remediation, New York State Department of Environmental Conservation. December 2002.

NYSDEC, 2006. Remedial Program Soil Cleanup Objectives. 6 NYCRR Subpart 375-6. New York State Department of Environmental Conservation. December 2006.

TtEC, 2005. Final Work Plan for the Investigation, Remedial Action, and Restoration of Davids Island/Fort Slocum, New Rochelle, New York. Prepared for U.S. Army Corps of Engineers, New England District. Prepared by Tetra Tech EC, Inc. Submitted on behalf of Jacobs – Tetra Tech FW Joint Venture. August 2005.

USACE, 2005. Environmental Assessment, Building Demolition, Debris Removal, and Remediation of Asbestos Materials, Davids Island/Former Fort Slocum, New York. Prepared by U.S. Army Corps of Engineers, New York District. March 2005.

TABLES

TABLE 1 (Page 1 of 5)
Summary of PCB Exceedances from 2002 Sampling Event

Location Area		Northeast of Former Building 32 / Near Former Building 32A								
Location ID		DI-32-B1	DI-32-B2	DI-32T-5	DI-32T-7	DI-32T-8	DI-32T-9	DI-32T-9	DI-32T-10	DI-32T-11
Sample ID		DI-32-B1	DI-32-B2	DI-32T-5	DI-32T-7	DI-32T-8	DI-32T-9	DI-32T-9	DI-32T-10	DI-32T-11
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		5/23/2002	5/23/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002
Top Depth (ft)		0	0	0	0	0	1	0	0	1
Bottom Depth (ft)		1.1	2	0.5	0.4	0.5	1.5	1	1	1.5
Polychlorinated Biphenyls (ug/kg)										
Aroclor-1254	**1,000** *	--	--	--	--	--	--	--	--	--
Aroclor-1260	**1,000** *	**1240**	604	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	**1.24**	0.604	--	--	--	--	--	--	--

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

This table lists only samples/constituents in areas that contained exceedances. For full results, see Appendix A or the Phase II Subsurface Investigation Draft Report (AKRF, September 2002).

TABLE 1 (Page 2 of 5)
Summary of PCB Exceedances from 2002 Sampling Event

Location Area		West of Former Building 32								
Location ID		DI-32D-B1	DI-32D-B2	DI-32D-B3	DI-32D-B4	DI-32D-B5	DI-32D-B8	DI-32D-B8	DI-32D-B8	DI-32D-B8
Sample ID		DI-32D-B1	DI-32D-B2	DI-32D-B3	DI-32D-B4	DI-32D-B5	DI-32D-B8	DI-32D-B8	DUPLICATE	DI-32D-B8
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Drums	Drums	Drums	Drums	Drums	Drums	Drums	Drums	Drums
Sample Date		5/28/2002	5/28/2002	5/28/2002	7/25/2002	7/25/2002	7/25/2002	7/25/2002	7/25/2002	7/25/2002
Top Depth (ft)		0.5	1.5	1	0	1.5	0	1	1	2
Bottom Depth (ft)		0.5	1.5	1	0.5	2	1	2	2	2.5
Polychlorinated Biphenyls (ug/kg)										
Aroclor-1254	**1,000 ***	**1010**	--	--	**1960**	764	--	--	--	--
Aroclor-1260	**1,000 ***	427	--	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	**1.44**	--	--	**1.96**	0.764	--	--	--	--

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

This table lists only samples/constituents in areas that contained exceedances. For full results, see Appendix A or the Phase II Subsurface Investigation Draft Report (AKRF, September 2002).

TABLE 1 (Page 3 of 5)
Summary of PCB Exceedances from 2002 Sampling Event

Location Area		West of Former Building 32 (Cont'd)			West of Former Building 20 / Between Former Buildings 20 and 22					
Location ID		DI-32D-B9	DI-32D-B10	DI-32D-B11	DI-22T-B1	DI-22T-B2	DI-20T-B3	DI-20T-B4	DI-20T-B5	DI-20T-B6
Sample ID		DI-32D-B9	DI-32D-B10	DI-32D-B11	DI-22T-B1	DI-22T-B2	DI-20T-B3	DI-20T-B4	DI-20T-B5	DI-20T-B6
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Drums	Drums	Drums	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		7/25/2002	7/25/2002	7/25/2002	5/22/2002	5/22/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002
Top Depth (ft)		0	0	0	0	0	0	0	1	1
Bottom Depth (ft)		1	1	0.5	0.5	0.5	1	1	2	1.5
Polychlorinated Biphenyls (ug/kg)										
Aroclor-1254	**1,000 ***	--	--	--	--	--	--	--	--	--
Aroclor-1260	**1,000 ***	689	921	--	**1650**	**36,800,000**	608	**169,000**	**97,400**	**104,000**
Total PCBs (mg/kg)	**1**	0.689	0.921	**--**	**1.65**	**36,800**	0.608	**169**	**97.4**	**104**

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

This table lists only samples/constituents in areas that contained exceedances. For full results, see Appendix A or the Phase II Subsurface Investigation Draft Report (AKRF, September 2002).

TABLE 1 (Page 4 of 5)
Summary of PCB Exceedances from 2002 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	West of Former Building 20 / Between Former Buildings 20 and 22 (Cont'd)							
Location ID		DI-20T-B7	DI-20T-B8	DI-20T-B9	DI-20T-B10	DI-20T-B11	DI-20T-B13	DI-20T-B14	DI-20T-B15
Sample ID		DI-20T-B7	DI-20T-B8	DI-20T-B9	DI-20T-B10	DI-20T-B11	DI-20T-B13	DI-20T-B14	DI-20T-B15
Sample Source Type		Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002	7/24/2002
Top Depth (ft)		2	0	0.5	0	1	0	1	0
Bottom Depth (ft)		2.5	0.5	1	1	2	1	2	0.5
Polychlorinated Biphenyls (ug/kg)									
Aroclor-1254	**1,000** *	--	--	--	--	--	--	--	--
Aroclor-1260	**1,000** *	**336,000**	**1580**	--	**1160**	**1230**	**4080**	**1190**	**1330**
Total PCBs (mg/kg)	**1**	**336**	**1.58**	--	**1.16**	**1.23**	**4.08**	**1.19**	**1.33**

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

This table lists only samples/constituents in areas that contained exceedances. For full results, see Appendix A or the Phase II Subsurface Investigation Draft Report (AKRF, September 2002).

TABLE 1 (Page 5 of 5)
Summary of PCB Exceedances from 2002 Sampling Event

Location Area		Former Buildings 20/22 (Cont'd)		Southern Side of Former Building 11	
Location ID		DI-20T-B16	DI-20T-B17	DI-11T-B1	DI-11T-B2
Sample ID		DI-20T-B16	DI-20T-B17	DI-11T-B1	DI-11T-B2
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Transformers	Transformers	Transformers	Transformers
Sample Date		7/24/2002	7/24/2002	7/24/2002	7/24/2002
Top Depth (ft)		0	0	0	0
Bottom Depth (ft)		1	1	0.5	0.5
Polychlorinated Biphenyls (ug/kg)					
Aroclor-1254	**1,000 ***	--	--	--	**1210**
Aroclor-1260	**1,000 ***	--	**14,900**	--	--
Total PCBs (mg/kg)	**1**	--	**14.9**	--	**1.21**

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

This table lists only samples/constituents in areas that contained exceedances. For full results, see Appendix A or the Phase II Subsurface Investigation Draft Report (AKRF, September 2002).

TABLE 2 (Page 1 of 6)
Summary of PCB Detections for 2007/2008 Sampling Event

Location Area		Former Building 133	Between Former Buildings 10 and 11							Former Building 8
Location ID		TR02	TR07	TR08	TR08	TR08	TR08	TR09	TR46	TR11
Sample ID	**FEDERAL COMPARISON CRITERION**	TR02SS	TR07SS	TR08SS	TR08SB-1.5-2.0	TRSB08 3-4	TRSB08-07-08	TR09SS	TRSS46	TR11SS
Sample Source Type		Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		3/27/2007	4/2/2007	4/2/2007	4/25/2007	1/2/2008	7/5/2007	4/2/2007	1/2/2008	4/3/2007
Top Depth (ft)		0	0	0	1.5	3	7	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	2	4	8	0.125	0.125	0.125
Polychlorinated Biphenyls (ug/kg)										
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	253	220	**6,850**	--	--	995	170	83.3 J	255
Total PCBs (mg/kg)	**1**	0.253	0.22	**6.85**	--	--	0.995	0.17	0.0833	0.255

[Notes provided on Page 6]

TABLE 2 (Page 2 of 6)
Summary of PCB Detections for 2007/2008 Sampling Event

Location Area		Former Building 20									
Location ID		TR21	TR22	TR22	TR22	TR23	TR40	TR41	TR42	TR42	TR43
Sample ID	**FEDERAL COMPARISON CRITERION**	TR21SS	TR22SS	TRSB22-01-02	TRSB22-09-10	TR23SS	TRSS40	TRSS41	TRSS42	TRSB42 10-11	TRSS43
Sample Source Type		Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		4/2/2007	4/2/2007	7/5/2007	7/5/2007	4/2/2007	1/2/2008	1/2/2008	1/2/2008	1/2/2008	1/2/2008
Top Depth (ft)		0	0	1	9	0	0	0	0	10	0
Bottom Depth (ft)		0.125	0.125	2	10	0.125	0.125	0.125	0.125	11	0.125
Polychlorinated Biphenyls (ug/kg)											
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	597	**16,300,000**	**24,600,000**	**3,200,000**	512	136	252	**5,340**	97.5	471
Total PCBs (mg/kg)	**1**	0.597	**16,300**	**24,600**	**3,200**	0.512	0.136	0.252	**5.34**	0.0975	0.471

[Notes provided on Page 6]

TABLE 2 (Page 3 of 6)
Summary of PCB Detections for 2007/2008 Sampling Event

Location Area		Former Building 20 (Cont'd)			Former Building 17		Former Building 109					
Location ID		TR44	TR44	TR45	TR24	TR24	TR27	TR27	TR27	TR27	TR28	TR29
Sample ID	**FEDERAL COMPARISON CRITERION**	TRSS44	TRSB44 8-9	TRSS45	TR24SS	TRSB24-07-08	TR27SS	TR27SB-1.5-2.0	TRSB27 5-6	TRSB27-07-08	TR28SS	TR29SS
Sample Source Type		Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers	Transformers
Sample Date		1/2/2008	1/2/2008	1/2/2008	4/3/2007	7/5/2007	4/5/2007	4/25/2007	1/7/2008	7/5/2007	4/5/2007	4/5/2007
Top Depth (ft)		0	8	0	0	7	0	1.5	5	7	0	0
Bottom Depth (ft)		0.125	9	0.125	0.125	8	0.125	2	6	8	0.125	0.125
Polychlorinated Biphenyls (ug/kg)												
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	**2,060**	--	415	431	--	**106,000**	--	--	--	726	**5,990**
Total PCBs (mg/kg)	**1**	**2.06**	--	0.415	0.431	--	**106**	--	--	--	0.726	**5.99**

[Notes provided on Page 6]

TABLE 2 (Page 4 of 6)
Summary of PCB Detections for 2007/2008 Sampling Event

Location Area		Former Building 109 (Cont'd)										
Location ID	**FEDERAL COMPARISON CRITERION**	TR29	TR29	TR30	TR30	TR50	TR51W10	TR54	TR55	TR55	TR56	TR56E10
Sample ID		TRSB29 6-7	TRSB29-08-09	TR30SS	TRSB30 2-3	TRSB50 6-7	TRSS51W10	TRSS54	TRSS55	TRSB55 3-4	TRSS56	TRSS56E10
Sample Source Type		Transformers	Transformers	Transformers	Transformers	Transformers	Transformers - Step Out W10	Transformers	Transformers	Transformers	Transformers	Transformers - Step Out E10
Sample Date		1/7/2008	7/5/2007	4/5/2007	1/7/2008	1/7/2008	1/7/2008	1/7/2008	1/7/2008	1/7/2008	1/7/2008	1/7/2008
Top Depth (ft)		6	8	0	2	6	0	0	0	3	0	0
Bottom Depth (ft)		7	9	0.125	3	7	0.125	0.125	0.125	4	0.125	0.125
Polychlorinated Biphenyls (ug/kg)												
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	**1,090**	--	414	68.3	115	**3,100**	--	322	**1,360**
Total PCBs (mg/kg)	**1**	--	--	**1.09**	--	0.414	0.0683	0.115	**3.1**	--	0.322	**1.36**

[Notes provided on Page 6]

TABLE 2 (Page 5 of 6)
Summary of PCB Detections for 2007/2008 Sampling Event

Location Area		Between Former Buildings 32A and T-34			Former Buildings 57 and 64	Between Former Buildings 102 and 109			Former Building 59		
Location ID		TR31	TR31	TR31	TP23	TP24-01	TP24-02	TP24-03	TP25	TP25	TP25
Sample ID		TR31SS	TR31SB-1.5-2.0	TR81SB-1.5-2.0	TP23-02	TP24-01	TP24-02	TP24-03	TP25-01	TP25-02	TP25-03
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Transformers	Transformers	Transformers	Electrical Distribution System	Electrical Distribution System	Electrical Distribution System	Electrical Distribution System	Electrical Distribution System	Electrical Distribution System	Electrical Distribution System
Sample Date		4/5/2007	4/25/2007	4/25/2007	4/16/2008	4/16/2008	4/16/2008	4/16/2008	4/17/2008	4/17/2008	4/17/2008
Top Depth (ft)		0	1.5	1.5	4	5	5	5	4	3	4
Bottom Depth (ft)		0.125	2	2	4	5	5	5	4	3	4
Polychlorinated Biphenyls (ug/kg)											
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	**17,300**	--	--	36.5 J	312	**1,430,000**	**8,630**	11.7 J	51 J	197
Total PCBs (mg/kg)	**1**	**17.3**	--	--	0.0365	0.312	**1,430**	**8.63**	0.0117	0.051	0.197

[Notes provided on Page 6]

TABLE 2 (Page 6 of 6)
Summary of PCB Detections

Notes:
* Criteria is for the sum of PCBs.

J indicates estimated value.
-- indicates not detected. In addition, the following samples contained no detectable level of PCBs:

TR01 at 0-0.125 ft bgs;
TR02 at 7-8 ft bgs [DUP];
TR02 at 7-8 ft bgs;
TR03 at 0-0.125 ft bgs;
TR04 at 0-0.125 ft bgs;
TR05 at 0-0.125 ft bgs;
TR06 at 0-0.125 ft bgs;
TR10 at 0-0.125 ft bgs;
TR12 at 0-0.125 ft bgs;
TR13 at 0-0.125 ft bgs;
TR14 at 0-0.125 ft bgs;
TR15 at 0-0.125 ft bgs;
TR16 at 0-0.125 ft bgs;
TR17 at 0-0.125 ft bgs [DUP];
TR17 at 0-0.125 ft bgs;
TR18 at 0-0.125 ft bgs;
TR19 at 0-0.125 ft bgs;
TR20 at 0-0.125 ft bgs;
TR25 at 0-0.125 ft bgs;
TR26 at 0-0.125 ft bgs;
TR32 at 0-0.125 ft bgs;
TR40 at 8-9 ft bgs;
TR41 at 8-9 ft bgs;
TR43 at 7-8 ft bgs;
TR45 at 6.5-7.5 ft bgs;
TR46 at 4-5 ft bgs;
TR47 at 0-0.125 ft bgs;
TR47 at 2-3 ft bgs;
TR48 at 0-0.125 ft bgs;
TR48 at 2-3 ft bgs;
TR49 at 0-0.125 ft bgs;
TR49 at 1.5-2.5 ft bgs;
TR50 at 0-0.125 ft bgs;
TR51 at 0-0.125 ft bgs;
TR51 at 5-6 ft bgs;
TR52 at 0-0.125 ft bgs;
TR52 at 5.5-6 ft bgs;
TR53 at 0-0.125 ft bgs;
TR53 at 6-7 ft bgs;
TR54 at 4-5 ft bgs;
TR56 at 6-7 ft bgs;
TP23-01 at 4 ft bgs; and
TP26-01 at 3 ft bgs.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

TABLE 3 (Page 1 of 3)
Summary of PCB Detections for 2005/2008/2009 Former Building 109 Sampling Event

Location Area		Inside Former Building 109 Footprint						
Location ID		01	01	02	03	04	05	06
Sample ID		DI-S-C-109-01	DI-S-C-109-01	DI-S-C-109-02	DI-S-C-109-03	DI-S-C-109-04	DI-S-C-109-05	DI-S-C-109-06
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer
Sample Date		12/15/2005	11/12/2008	11/12/2008	11/12/2008	12/2/2008	12/2/2008	12/2/2008
Top Depth (ft) **		Concrete	0	0	0	0	0	0
Bottom Depth (ft) **		Chip	0.5	0.5	0.5	0.5	0.5	0.5
Remediation Activities		Bldg Demolished	Area Excavated	Area Excavated	Area Excavated			
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254	**1,000 ***	***	--	--	--	--	--	--
Aroclor-1260	**1,000 ***	***	**15,100**	**292,000**	**39,900**	60.8	--	--
Total PCBs (mg/kg)	**1**	**1,800**	**15.1**	**292**	**39.9**	0.06	--	--

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.
** Top and bottom depth reference from the surface level of the excavated area. If actual depth known, shown below in parentheses.

*** The actual Aroclor detected is not known.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

TABLE 3 (Page 2 of 3)
Summary of PCB Detections for 2005/2008/2009 Former Building 109 Sampling Event

Location Area		Inside Former Building 109 Footprint (Cont'd)						
Location ID		07	08	09	10	11	12	13
Sample ID		DI-S-C-109-07	DI-S-C-109-08	DI-S-C-109-09	DI-S-C-109-10	DI-S-C-109-11	DI-S-C-109-12	DI-S-C-109-13
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer
Sample Date		12/2/2008	12/2/2008	12/2/2008	12/2/2008	12/2/2008	12/2/2008	12/2/2008
Top Depth (ft) **		0	0	0	0	0	0	0
Bottom Depth (ft) **		0.5 (~3 feet bgs)	0.5 (~3 feet bgs)	0.5 (~3 feet bgs)	0.5 (~3 feet bgs)	0.5 (~3 feet bgs)	0.5 (~3 feet bgs)	0.5 (~3 feet bgs)
Remediation Activities								Area Excavated
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260	**1,000** *	406	507	104	--	888	238	**69,600**
Total PCBs (mg/kg)	**1**	0.4	0.5	0.1	--	0.89	0.23	**69.6**

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.
** Top and bottom depth reference from the surface level of the excavated area. If actual depth known, shown below in parentheses.

*** The actual Aroclor detected is not known.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

TABLE 3 (Page 3 of 3)
Summary of PCB Detections for 2005/2008/2009 Former Building 109 Sampling Event

Location Area		Inside Former Building 109 Footprint (Cont'd)						
Location ID		14	15	16	17	18	19	20
Sample ID		DI-S-C-109-14	DI-S-C-109-15	DI-S-C-109-16	DI-S-C-109-17	DI-S-C-109-18	DI-S-C-109-19	DI-S-C-109-20
Sample Source Type	**FEDERAL COMPARISON CRITERION**	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer	Former Transformer
Sample Date		12/2/2008	1/6/2009	1/6/2009	1/6/2009	1/6/2009	1/21/2009	1/21/2009
Top Depth (ft) **		0	0	0	0	0	0	0
Bottom Depth (ft) **		0.5 (~3 feet bgs)	0.5 (~3.5 feet bgs)	0.5 (~3.5 feet bgs)	0.5 (~3.5 feet bgs)	0.5 (~3.5 feet bgs)	0.5 (~6 feet bgs)	0.5 (~10 feet bgs)
Remediation Activities			Area Excavated					
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260	**1,000** *	471	**236,000**	**5,530**	--	--	**588,000**	353
Total PCBs (mg/kg)	**1**	0.47	**236**	**5.5**	--	--	**588**	0.35

Notes:
-- indicates not detected.
* Criteria is for the sum of PCBs.
** Top and bottom depth reference from the surface level of the excavated area. If actual depth known, shown below in parentheses.

*** The actual Aroclor detected is not known.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDEC Subpart 375-6 (December 2006). Therefore, use of 1 ppm for comparison will also achieve State standards.

TABLE 4 (Page 1 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 1 - Between Former Buildings 10 and 11						
Location ID		N0E0	N0E0	N0E1	N0E2	N0E3	N0E4	N1E0
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		A1-N0E0-SS	A19-N0E0-SS	A1-N0E1-SS	A1-N0E2-SS	A1-N0E3-SS	A1-N0E4-SS	A1-N1E0-SS
Sample Date		07/07/09	07/07/09 DUPLICATE	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 2 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 1 - Between Former Buildings 10 and 11						
Location ID		N1E1	N1E2	N1E3	N1E4	N2E0	N2E1	N2E2
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		A1-N1E1-SS	A1-N1E2-SS	A1-N1E3-SS	A1-N1E4-SS	A1-N2E0-SS	A1-N2E1-SS	A1-N2E2-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 3 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 1 - Between Former Buildings 10 and 11						
Location ID		N2E3	N2E4	N3E3	N3E4	N4E1	N4E1	N4E2
Top Depth (ft)		0	0	0	0	0	3.5	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	4	0.125
Sample ID		A1-N2E3-SS	A1-N2E4-SS	A1-N3E3-SS	A1-N3E4-SS	A1-N4E1-SS	A1-N4E1-3.5-4	A1-N4E2-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/20/09	07/20/09	07/20/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	25 J
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	0.025

[Notes provided on Page 43]

TABLE 4 (Page 4 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 1 - Between Former Buildings 10 and 11				Area 2A - Between Former Buildings 32A and T-34		
Location ID		N4E2	N4E2	N4E3	N4E3	N4E4	N4E5	N4E6
Top Depth (ft)		3.5	3.5	0	3.5	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	4	4	0.125	4	0.125	0.125	0.125
Sample ID		A1-N4E2-3.5-4	A1-N14E2-3.5-4	A1-N4E3-SS	A1-N4E3-3.5-4	2A-N4E4-SS	2A-N4E5-SS	2A-N4E6-SS
Sample Date		07/20/09	07/20/09 DUPLICATE	07/20/09	07/20/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	31 J	41 J	12 J
Total PCBs (mg/kg)	**1**	--	--	--	--	0.031	0.041	0.012

[Notes provided on Page 43]

TABLE 4 (Page 5 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 2A - Between Former Buildings 32A and T-34						
Location ID		N4E6	N4E7	N5E4	N5E5	N5E6	N5E7	N6E4
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		2A-N4E6A-SS	2A-N4E7-SS	2A-N5E4-SS	2A-N5E5-SS	2A-N5E6-SS	2A-N5E7-SS	2A-N6E4-SS
Sample Date		07/07/09 DUPLICATE	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	37 JP	35 J	45	150	39 J	--
Total PCBs (mg/kg)	**1**	--	0.037	0.035	0.045	0.15	0.039	--

[Notes provided on Page 43]

TABLE 4 (Page 6 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 2A - Between Former Buildings 32A and T-34						
Location ID		N6E5	N6E6	N6E7	N7E4	N7E5	N7E5	N7E6
Top Depth (ft)		0	0	0.5	0	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	1	0.125	0.125	0.125	0.125
Sample ID		2A-N6E5-SS	2A-N6E6-SS	2A-N6E7-0.5-1	2A-N7E4-SS	2A-N7E5-SS	12A-N7E5-SS	2A-N7E6-SS
Sample Date		07/07/09	07/07/09	07/15/09	07/07/09	07/07/09	07/07/09 DUPLICATE	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	39 J	--	510 D	36 J	74 P	48 P	--
Total PCBs (mg/kg)	**1**	0.039	--	0.51	0.036	0.074	0.048	--

[Notes provided on Page 43]

TABLE 4 (Page 7 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 2A - Between Former Buildings 32A and T-34						
Location ID		N7E7	N7E7	N7E7	N8E5	N8E6	N8E7	N9E7
Top Depth (ft)		0	0.5	0.5	0	0	0	0
Bottom Depth (ft)		0.125	1	1	0.125	0.125	0.125	0.5
Sample ID		2A-N7E7-SS	2A-N7E7-0.5-1	22A-N7E7-0.5-1	2A-N8E5-SS	2A-N8E6-SS	2A-N8E7-SS	2A-N9E7-0-0.5
Sample Date		07/07/09	07/15/09	07/15/09 DUPLICATE	07/07/09	07/07/09	07/07/09	07/15/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	91	550 D	600 D	21 J	47 J	**5900 D**	570 D
Total PCBs (mg/kg)	**1**	0.091	0.55	0.6	0.021	0.047	**5.9**	0.57

[Notes provided on Page 43]

TABLE 4 (Page 8 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 2B - West of Former Building 32						
Location ID		N0E0	N0E1	N0E2	N0E2	N1E0	N1E1	N1E2
Top Depth (ft)		0	0	0	7.5	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	8	0.125	0.125	0.125
Sample ID		2B-N0E0-SS	2B-N0E1-SS	2B-N0E2-SS	2B-N0E2-7.5-8	2B-N1E0-SS	2B-N1E1-SS	2B-N1E2-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/09/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	38 J	38 J	--	--	22 J	--	63
Total PCBs (mg/kg)	**1**	0.038	0.038	--	--	0.022	--	0.063

[Notes provided on Page 43]

TABLE 4 (Page 9 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 2B - West of Former Building 32						
Location ID		N2E0	N2E1	N2E2	N3E0	N3E1	N3E2	N4E0
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		2B-N2E0-SS	2B-N2E1-SS	2B-N2E2-SS	2B-N3E0-SS	2B-N3E1-SS	2B-N3E2-SS	2B-N4E0-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	14 JP	--	--	18 J	10 J
Total PCBs (mg/kg)	**1**	--	--	0.014	--	--	0.018	0.01

[Notes provided on Page 43]

TABLE 4 (Page 10 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 2B - West of Former Building 32					Area 3 - Former Building 20	
Location ID		N4E1	N4E2	N5E0	N5E1	N5E2	N0E0	N0E1
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		2B-N4E1-SS	2B-N4E2-SS	2B-N5E0-SS	2B-N5E1-SS	2B-N5E2-SS	A3-N0E0-SS	A3-N0E1-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	47	16 J	90	--	53	56 P
Total PCBs (mg/kg)	**1**	--	0.047	0.016	0.09	--	0.053	0.056

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TABLE 4 (Page 11 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N0E2	N0E3	N0E4	N0E5	N0E6	N1E0	N1E1
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		A3-N0E2-SS	A3-N0E3-SS	A3-N0E4-SS	A3-N0E5-SS	A3-N0E6-SS	A3-N1E0-SS	A3-N1E1-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	100	--	59	53	76
Total PCBs (mg/kg)	**1**	--	--	0.1	--	0.059	0.053	0.076

[Notes provided on Page 43]

TABLE 4 (Page 12 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N1E2	N1E3	N1E4	N1E5	N1E6	N2E0	N2E1
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		A3-N1E2-SS	A3-N1E3-SS	A3-N1E4-SS	A3-N1E5-SS	A3-N1E6-SS	A3-N2E0-SS	A3-N2E1-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	78 P	190	120	100	65	41	140 P
Total PCBs (mg/kg)	**1**	0.078	0.19	0.12	0.1	0.065	0.041	0.14

[Notes provided on Page 43]

TABLE 4 (Page 13 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N2E2	N2E3	N2E4	N2E5	N2E6	N3E0	N3E1
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)		0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		A3-N2E2-SS	A3-N2E3-SS	A3-N2E4-SS	A3-N2E5-SS	A3-N2E6-SS	A3-N3E0-SS	A3-N3E1-SS
Sample Date		07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	150	180	300	--	210	100	110
Total PCBs (mg/kg)	**1**	0.15	0.18	0.3	--	0.21	0.1	0.11

[Notes provided on Page 43]

TABLE 4 (Page 14 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N3E2	N3E3	N3E3	N3E4	N3E4	N3E4	N3E5
Top Depth (ft)		0	0	3.5	0	3.5	3.5	0
Bottom Depth (ft)		0.125	0.125	4	0.125	4	4	0.125
Sample ID		A3-N3E2-SS	A3-N3E3-SS	A3-N3E3-3.5-4	A3-N3E4-SS	A3-N3E4-3.5-4	A13-N3E4-3.5-4	A3-N3E5-SS
Sample Date		07/07/09	07/07/09	07/16/09	07/07/09	07/16/09	07/16/09 DUPLICATE	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	170	**1100 D**	--	**1500 D**	130	--	350
Total PCBs (mg/kg)	**1**	0.17	**1.1**	--	**1.5**	0.13	--	0.35

[Notes provided on Page 43]

TABLE 4 (Page 15 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N4E-2	N4E-2	N4E-1	N4E-1	N4E-1	N4E0	N4E1
Top Depth (ft)		0	3.5	0	0	3.5	0	0
Bottom Depth (ft)		0.125	4	0.125	0.125	4	0.125	0.125
Sample ID		A3-N4E-2-SS	A3-N4E-2-3.5-4	A3-N4E-1-SS	A13-N4E-1-SS	A3-N4E-1-3.5-4	A3-N4E0-SS	A3-N4E1-SS
Sample Date		07/15/09	07/15/09	07/15/09	07/15/09 DUPLICATE	07/15/09	07/07/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	**1100 D**	--	310	230	--	500 D	640 D
Total PCBs (mg/kg)	**1**	**1.1**	--	0.31	0.23	--	0.5	0.64

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TABLE 4 (Page 16 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N4E2	N4E3	N4E3	N4E4	N4E4	N5E-2	N5E-2
Top Depth (ft)		0	0	3.5	0	3.5	0	3.5
Bottom Depth (ft)		0.125	0.125	4	0.125	4	0.125	4
Sample ID		A3-N4E2-SS	A3-N4E3-SS	A3-N4E3-3.5-4	A3-N4E4-SS	A3-N4E4-3.5-4	A3-N5E-2-SS	A3-N5E-2-3.5-4
Sample Date		07/07/09	07/07/09	07/15/09	07/07/09	07/16/09	07/15/09	07/15/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	890 D	**62000 D**	9 J	**1400 D**	48	370	--
Total PCBs (mg/kg)	**1**	0.89	**62**	0.009	**1.4**	0.048	0.37	--

[Notes provided on Page 43]

TABLE 4 (Page 17 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N5E-1	N5E-1	N5E0	N5E0	N5E1	N5E1	N5E2
Top Depth (ft)		0	3.5	0	3.5	0	3.5	0
Bottom Depth (ft)		0.125	4	0.125	4	0.125	4	0.125
Sample ID		A3-N5E-1-SS	A3-N5E-1-3.5-4	A3-N5E0-SS	A3-N5E0-3.5-4	A3-N5E1-SS	A3-N5E1-3.5-4	A3-N5E2-SS
Sample Date		07/15/09	07/15/09	07/07/09	07/15/09	07/07/09	07/15/09	07/07/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	760 D	--	**2200 D**	--	**11000 D**	32 J	**2800 D**
Total PCBs (mg/kg)	**1**	0.76	--	**2.2**	--	**11**	0.032	**2.8**

[Notes provided on Page 43]

TABLE 4 (Page 18 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 3 - Former Building 20						
Location ID		N5E2	N5E3	N5E3	N6E-2	N6E-2	N6E-1	N6E-1
Top Depth (ft)		3.5	0	3.5	0	3.5	0	3.5
Bottom Depth (ft)		4	0.125	4	0.125	4	0.125	4
Sample ID		A3-N5E2-3.5-4	A3-N5E3-SS	A3-N5E3-3.5-4	A3-N6E-2-SS	A3-N6E-2-3.5-4	A3-N6E-1-SS	A3-N6E-1-3.5-4
Sample Date		07/15/09	07/07/09	07/16/09	07/15/09	07/15/09	07/15/09	07/15/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	290	--	**1300 D**	--	**12000 D**	--
Total PCBs (mg/kg)	**1**	--	0.29	--	**1.3**	--	**12**	--

[Notes provided on Page 43]

TABLE 4 (Page 19 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 3 - Former Building 20				Area 4		
Location ID		N6E0	N6E0	N6E1	N6E2	N1E6	N1E6	N1E7
Top Depth (ft)		0	0	0	0	0	3.5	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	4	0.125
Sample ID		A3-N6E0-SS	A39-N6E0-SS	A3-N6E1-SS	A3-N6E2-SS	A4-N1E6-SS	A4-N1E6-3.5-4	4-N1E7-SS
Sample Date		07/07/09	07/07/09 DUPLICATE	07/07/09	07/07/09	07/17/09	07/17/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	660 D	850 D	410	84	--	--	60
Total PCBs (mg/kg)	**1**	0.66	0.85	0.41	0.084	--	--	0.06

[Notes provided on Page 43]

TABLE 4 (Page 20 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N1E7	N2E6	N2E6	N2E7	N2E7	N2E8	N2E8
Top Depth (ft)		3.5	0	3.5	0	3.5	0	3.5
Bottom Depth (ft)		4	0.125	4	0.125	4	0.125	4
Sample ID		A4-N1E7-3.5-4	A4-N2E6-SS	A4-N2E6-3.5-4	4-N2E7-SS	A4-N2E7-3.5-4	4-N2E8-SS	A4-N2E8-3.5-4
Sample Date		07/16/09	07/17/09	07/17/09	07/08/09	07/16/09	07/08/09	07/16/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	190	--	**7900 D**	--	680 D	--
Total PCBs (mg/kg)	**1**	--	0.19	--	**7.9**	--	0.68	--

[Notes provided on Page 43]

TABLE 4 (Page 21 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N3E6	N3E6	N3E7	N3E7	N3E8	N3E8	N3E8
Top Depth (ft)		0	3.5	0	3.5	0	0	3.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	4	0.125	4	0.125	0.125	4
Sample ID		4-N3E6-SS	A4-N3E6-3.5-4	4-N3E7-SS	A4-N3E7-3.5-4	4-N3E8-SS	14-N3E8-SS	A4-N3E8-3.5-4
Sample Date		07/08/09	07/17/09	07/08/09	07/17/09	07/08/09	07/08/09 DUPLICATE	07/17/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	84	--	**4900 D**	--	720 D	560 D	--
Total PCBs (mg/kg)	**1**	0.084	--	**4.9**	--	0.72	0.56	--

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TABLE 4 (Page 22 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N3E9	N3E9	N3E10	N3E10	N4E3	N4E4	N4E5
Top Depth (ft)		0	3.5	0	3.5	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	4	0.125	4	0.125	0.125	0.125
Sample ID		4-N3E9-SS	A4-N3E9-3.5-4	A4-N3E10-SS	A4-N3E10-3.5-4	4-N4E3-SS	4-N4E4-SS	4-N4E5-SS
Sample Date		07/08/09	07/16/09	07/16/09	07/16/09	07/08/09	07/08/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	620 D	--	**2900 D**	--	--	--	17 J
Total PCBs (mg/kg)	**1**	0.62	--	**2.9**	--	--	--	0.017

[Notes provided on Page 43]

TABLE 4 (Page 23 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N4E6	N4E6	N4E6	N4E8	N4E8	N4E9	N4E9
Top Depth (ft)		0	3.5	3.5	0	3.5	0	3.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	4	4	0.125	4	0.125	4
Sample ID		4-N4E6-SS	A4-N4E6-3.5-4	A14-N4E6-3.5-4	4-N4E8-SS	A4-N4E8-3.5-4	4-N4E9-SS	A4-N4E9-3.5-4
Sample Date		07/08/09	07/17/09	07/17/09 DUPLICATE	07/08/09	07/17/09	07/08/09	07/16/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	100	--	--	**250000 D**	9.4 J	920 D	--
Total PCBs (mg/kg)	**1**	0.1	--	--	**250**	0.0094	0.92	--

[Notes provided on Page 43]

TABLE 4 (Page 24 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N4E10	N4E10	N4E11	N4E11	N5E3	N5E4	N5E5
Top Depth (ft)		0	3.5	0	3.5	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	4	0.125	4	0.125	0.125	0.125
Sample ID		4-N4E10-SS	A4-N4E10-3.5-4	4-N4E11-SS	A4-N4E11-3.5-4	4-N5E3-SS	4-N5E4-SS	4-N5E5-SS
Sample Date		07/08/09	07/16/09	07/08/09	07/16/09	07/08/09	07/08/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	150	--	**1600 D**	7.3 J	--	--	--
Total PCBs (mg/kg)	**1**	0.15	--	**1.6**	0.0073	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 25 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N5E6	N5E9	N5E9	N5E10	N5E10	N5E11	N5E11
Top Depth (ft)		0	0	3.5	0	3.5	0	3.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	4	0.125	4	0.125	4
Sample ID		4-N5E6-SS	4-N5E9-SS	A4-N5E9-3.5-4	4-N5E10-SS	A4-N5E10-3.5-4	4-N5E11-SS	A4-N5E11-3.5-4
Sample Date		07/08/09	07/08/09	07/16/09	07/08/09	07/16/09	07/08/09	07/16/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	100	170	110	430	--	--	--
Total PCBs (mg/kg)	**1**	0.1	0.17	0.11	0.43	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 26 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N6E3	N6E4	N6E5	N6E6	N6E6	N6E7	N6E8
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		4-N6E3-SS	4-N6E4-SS	4-N6E5-SS	4-N6E6-SS	14-N6E6-SS	4-N6E7-SS	4-N6E8-SS
Sample Date		07/08/09	07/08/09	07/08/09	07/08/09	07/08/09 DUPLICATE	07/08/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	42	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	14 J	--	--	--	97
Total PCBs (mg/kg)	**1**	--	--	0.014	--	--	--	0.097

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TABLE 4 (Page 27 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N6E9	N6E10	N6E11	N7E6	N7E7	N7E7	N7E8
Top Depth (ft)		0	0	0	0	0	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Sample ID		4-N6E9-SS	4-N6E10-SS	4-N6E11-SS	4-N7E6-SS	4-N7E7-SS	14-N7E7-SS	4-N7E8-SS
Sample Date		07/08/09	07/08/09	07/08/09	07/08/09	07/08/09	07/08/09 DUPLICATE	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	97	310	21 J	--	210	13 J	170
Total PCBs (mg/kg)	**1**	0.097	0.31	0.021	--	0.21	0.013	0.17

[Notes provided on Page 43]

TABLE 4 (Page 28 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N7E9	N7E10	N7E11	N8E6	N8E7	N8E8	N8E8
Top Depth (ft)		0	0	0	0	0	0	7.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	0.125	0.125	8
Sample ID		4-N7E9-SS	4-N7E10-SS	4-N7E11-SS	4-N8E6-SS	4-N8E7-SS	4-N8E8-SS	A4-N8E8-7.5-8
Sample Date		07/08/09	07/08/09	07/08/09	07/08/09	07/08/09	07/08/09	07/13/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	120	24 J	--	--	--	--	--
Total PCBs (mg/kg)	**1**	0.12	0.024	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 29 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N8E9	N9E6	N9E7	N9E8	N9E8	N9E9	N10E6
Top Depth (ft)		0	0	0	0	7.5	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	0.125	0.125	0.125	8	0.125	0.125
Sample ID		4-N8E9-SS	4-N9E6-SS	4-N9E7-SS	4-N9E8-SS	A4-N9E8-7.5-8	4-N9E9-SS	4-N10E6-SS
Sample Date		07/08/09	07/08/09	07/08/09	07/08/09	07/13/09	07/08/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 30 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N10E7	N10E7	N10E8	N10E8	N10E8	N10E9	N10E9
Top Depth (ft)		0	7.5	0	3.5	7.5	0	3.5
Bottom Depth (ft)		0.125	8	0.125	4	8	0.125	4
Sample ID		4-N10E7-SS	A4-N10E7-7.5-8	4-N10E8-SS	A4-N10E8-3.5-4.0	A4-N10E8-7.5-8	4-N10E9-SS	A4-N10E9-3.5-4
Sample Date		07/08/09	07/14/09	07/08/09	07/13/09	07/13/09	07/08/09	07/10/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	190	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	0.19	--

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TABLE 4 (Page 31 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109					
Location ID		N10E9	N10E9	N10E9	N10E9	N10E10	N10E10
Top Depth (ft)	**FEDERAL**	7.5	11.5	15.5	19.5	3.5	7.5
Bottom Depth (ft)	**COMPARISON**	8	12	16	20	4	8
Sample ID	**CRITERION**	A4-N10E9-7.5-8	A4-N10E9-11.5-12	A4-N10E9-15.5-16	A4-N10E9-19.5-20	A4-N10E10-3.5-4.0	A4-N10E10-7.5-8
Sample Date		07/10/09	07/10/09	07/10/09	07/14/09	07/14/09	07/14/09
Polychlorinated Biphenyls (ug/kg)							
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	42 J	**1400 D**
Total PCBs (mg/kg)	**1**	--	--	--	--	0.042	**1.4**

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TABLE 4 (Page 32 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109					
Location ID		N10E10	N10E10	N10E10	N11E6	N11E7	N11E7
Top Depth (ft)		11.5	15.5	19.5	0	0	7.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	12	16	20	0.125	0.125	8
Sample ID		A4-N10E10-11.5-12.0	A4-N10E10-15.5-16	A4-N10E10-19.5-20	4-N11E6-SS	4-N11E7-SS	A4-N11E7-7.5-8
Sample Date		07/14/09	07/14/09	07/14/09	07/08/09	07/08/09	07/14/09
Polychlorinated Biphenyls (ug/kg)							
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	870 D	780 D	17 J	--	--	--
Total PCBs (mg/kg)	**1**	0.87	0.78	0.017	--	--	--

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TABLE 4 (Page 33 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N11E8	N11E8	N11E8	N11E9	N11E9	N11E9	N11E9
Top Depth (ft)		0	3.5	7.5	0	3.5	7.5	7.5
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	4	8	0.125	4	8	8
Sample ID		4-N11E8-SS	A4-N11E8-3.5-4.0	A4-N11E8-7.5-8	4-N11E9-SS	A4-N11E9-3.5-4	A4-N11E9-7.5-8	A14-N11E9-7.5-8
Sample Date		07/08/09	07/13/09	07/13/09	07/08/09	07/10/09	07/10/09	07/10/09 DUPLICATE
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

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TABLE 4 (Page 34 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109					
Location ID		N11E9	N11E9	N11E10	N11E10	N11E10	N11E10
Top Depth (ft)		11.5	16.5	3.5	7.5	11.5	15
Bottom Depth (ft)		12	17	4	8	12	15.5
Sample ID		A4-N11E9-11.5-12	A4-N11E9-16.5-17	A4-N11E10-3.5-4	A4-N11E10-7.5-8	A4-N11E10-11.5-12	A4-N11E10-15-15.5
Sample Date		07/10/09	07/10/09	07/14/09	07/14/09	07/14/09	07/14/09
Polychlorinated Biphenyls (ug/kg)							
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	21	**11000 D**	780 D	**33000 D**
Total PCBs (mg/kg)	**1**	--	--	0.021	**11**	0.78	**33**

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TABLE 4 (Page 35 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N11E10	N12E6	N12E7	N12E7	N12E8	N12E8	N12E8
Top Depth (ft)		19	0	0	7.5	0	3.5	7.5
Bottom Depth (ft)		19.5	0.125	0.125	8	0.125	4	8
Sample ID		A4-N11E10-19-19.5	4-N12E6-SS	4-N12E7-SS	A4-N12E7-7.5-8	4-N12E8-SS	A4-N12E8-3.5-4.0	A4-N12E8-7.5-8
Sample Date		07/14/09	07/08/09	07/08/09	07/14/09	07/08/09	07/13/09	07/13/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	76	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	0.076	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 36 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N12E9	N12E9	N12E9	N12E9	N12E9	N12E10	N12E10
Top Depth (ft)		0	3.5	7.5	11.5	16.5	7.5	7.5
Bottom Depth (ft)		0.125	4	8	12	17	8	8
Sample ID		4-N12E9-SS	A4-N12E9-3.5-4	A4-N12E9-7.5-8	A4-N12E9-11.5-12	A4-N12E9-16.5-17	A4-N12E10-7.5-8	A14-N12E10-7.5-8
Sample Date		07/08/09	07/10/09	07/10/09	07/10/09	07/10/09	07/14/09	07/14/09 DUPLICATE
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	120
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	0.12

[Notes provided on Page 43]

TABLE 4 (Page 37 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4 - Former Building 109 and Between Former Buildings 102 and 109					
Location ID		N12E10	N12E10	N12E10	N13E6	N13E7	N13E7
Top Depth (ft)		11.5	15.5	18.5	0	0	7.5
Bottom Depth (ft)		12	16	19	0.125	0.125	8
Sample ID		A4-N12E10-11.5-12	A4-N12E10-15.5-16	A4-N12E10-18.5-19	4-N13E6-SS	4-N13E7-SS	A4-N13E7-7.5-8
Sample Date		07/14/09	07/14/09	07/14/09	07/08/09	07/08/09	07/14/09
Polychlorinated Biphenyls (ug/kg)							
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 38 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N13E8	N13E8	N13E9	N13E9	N13E10	N14E6	N14E6
Top Depth (ft)		0	7.5	0	7.5	7.5	0	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	8	0.125	8	8	0.125	0.125
Sample ID		4-N13E8-SS	A4-N13E8-7.5-8	4-N13E9-SS	A4-N13E9-7.5-8	A4-N13E10-7.5-8	4-N14E6-SS	14-N14E6-SS
Sample Date		07/08/09	07/13/09	07/08/09	07/10/09	07/14/09	07/08/09	07/08/09 DUPLICATE
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 39 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N14E7	N14E7	N14E7	N14E8	N14E8	N14E8	N14E9
Top Depth (ft)		0	7.5	7.5	0	7.5	7.5	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	0.125	8	8	0.125	8	8	0.125
Sample ID		4-N14E7-SS	A4-N14E7-7.5-8	A14-N14E7-7.5-8	4-N14E8-SS	A4-N14E8-7.5-8	A14-N14E8-7.5-8	4-N14E9-SS
Sample Date		07/08/09	07/14/09	07/14/09 DUPLICATE	07/08/09	07/13/09	07/13/09 DUPLICATE	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	--	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 40 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N14E9	N14E10	N15E6	N15E7	N15E8	N15E8	N15E9
Top Depth (ft)		7.5	7.5	0	0	0	7.5	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	8	8	0.125	0.125	0.125	8	0.125
Sample ID		A4-N14E9-7.5-8	A4-N14E10-7.5-8	4-N15E6-SS	4-N15E7-SS	4-N15E8-SS	A4-N15E8-7.5-8	4-N15E9-SS
Sample Date		07/13/09	07/14/09	07/08/09	07/08/09	07/08/09	07/13/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	690 D	--	--	--	--	--
Total PCBs (mg/kg)	**1**	--	0.69	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 41 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area		Area 4 - Former Building 109 and Between Former Buildings 102 and 109						
Location ID		N15E9	N15E10	N16E6	N16E7	N16E8	N16E8	N16E9
Top Depth (ft)		7.5	7.5	0	0	0	7.5	0
Bottom Depth (ft)	**FEDERAL COMPARISON CRITERION**	8	8	0.125	0.125	0.125	8	0.125
Sample ID		A4-N15E9-7.5-8	A4-N15E10-7.5-8	4-N16E6-SS	4-N16E7-SS	4-N16E8-SS	A4-N16E8-7.5-8	4-N16E9-SS
Sample Date		07/13/09	07/14/09	07/08/09	07/08/09	07/08/09	07/13/09	07/08/09
Polychlorinated Biphenyls (ug/kg)								
Aroclor-1254 (ug/kg)	**1,000** *	--	--	--	--	--	--	--
Aroclor-1260 (ug/kg)	**1,000** *	9.2 J	10 J	--	--	--	--	--
Total PCBs (mg/kg)	**1**	0.0092	0.01	--	--	--	--	--

[Notes provided on Page 43]

TABLE 4 (Page 42 of 43)
Summary of PCB Detections for 2009 Sampling Event

Location Area	**FEDERAL COMPARISON CRITERION**	Area 4	
Location ID		N16E9	N16E10
Top Depth (ft)		7.5	7.5
Bottom Depth (ft)		8	8
Sample ID		A4-N16E9-7.5-8	A4-N16E10-7.5-8
Sample Date		07/13/09	07/14/09
Polychlorinated Biphenyls (ug/kg)			
Aroclor-1254 (ug/kg)	**1,000** *	--	--
Aroclor-1260 (ug/kg)	**1,000** *	--	--
Total PCBs (mg/kg)	**1**	--	--

[Notes provided on Page 43]

TABLE 4 (Page 43 of 43)
Summary of PCB Detections for 2009 Sampling Event

Notes:
* Criteria is for the sum of PCBs.

J indicates estimated value.
-- indicates not detected.

Bright yellow highlighting indicates concentration is greater than comparison criterion. The Federal standard is equal to the residential, restricted-residential, commercial, and protection of ecological resources SCOs for the sum of PCBs listed in NYSDE

FIGURES

USGS 7.5 Minute Topographic Quadrangle:
Mt Vernon, 1977

TETRA TECH EC, INC.

FIGURE 1

SITE LOCATION

OCTOBER 2009

WESTCHESTER COUNTY, NEW YORK

T:\GIS\Davids_Island\Geodata\Spatial\MXD\Soil_Delineation_060909\Site_Location.mxd

T:\GIS\Davids_Island\Geodata\Spatial\MXD\Soil_Delineation_060909\Soil_Delineations_Excavations_Project_Layout.mxd

Legend

- PCB CONTAMINATED AREAS
- CON. EDISON PROPERTY
- FORMER STRUCTURE
- PATH OR ROAD
- ADJACENT AREA
- TIDAL WETLAND BOUNDARY

Feet

0 50 100 200 300 400

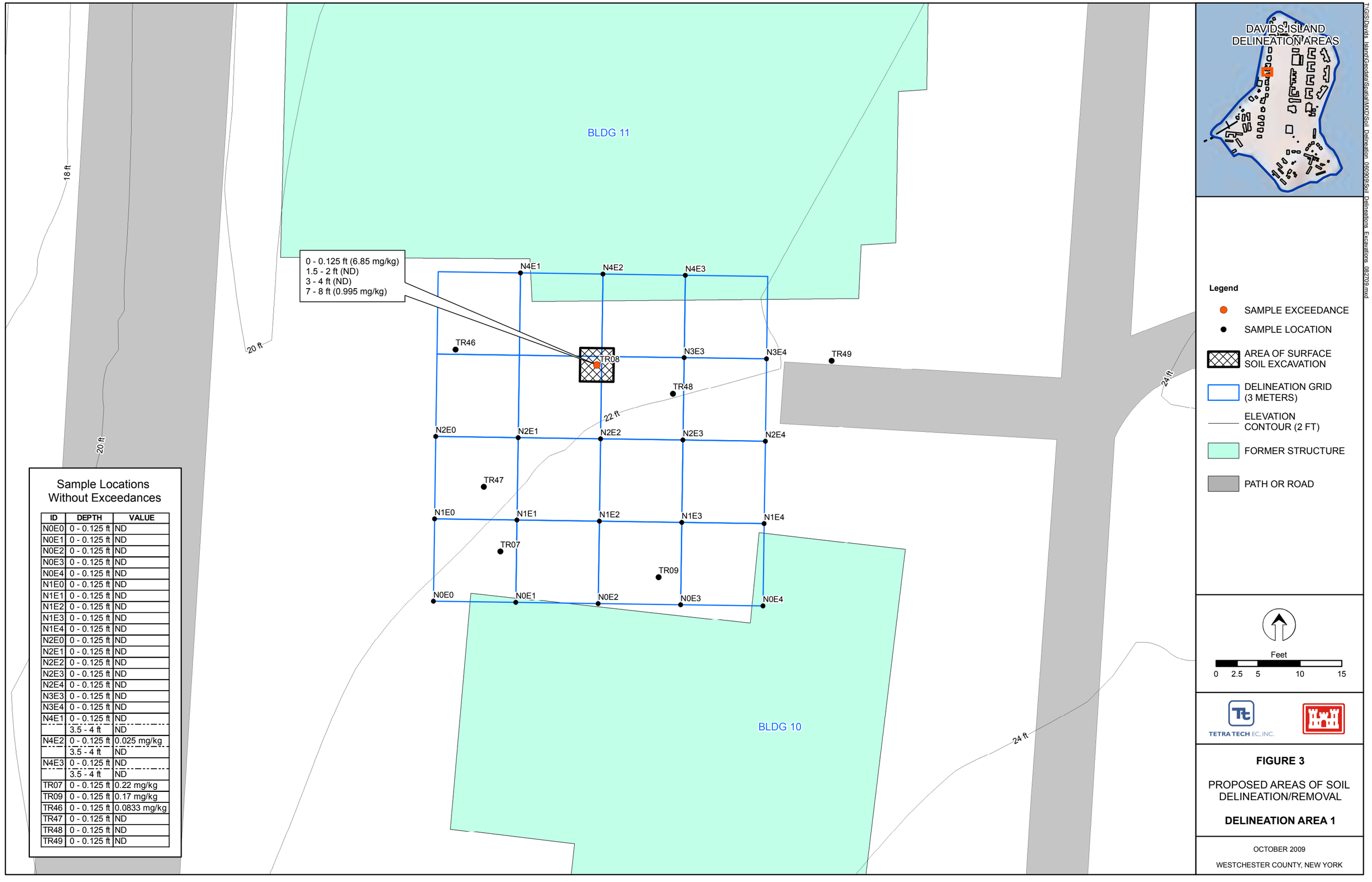
TETRA TECH EC, INC.

FIGURE 2

GENERAL LAYOUT

OCTOBER 2009

WESTCHESTER COUNTY, NEW YORK



Sample Locations Without Exceedances

ID	DEPTH	VALUE
N0E0	0 - 0.125 ft	ND
N0E1	0 - 0.125 ft	ND
N0E2	0 - 0.125 ft	ND
N0E3	0 - 0.125 ft	ND
N0E4	0 - 0.125 ft	ND
N1E0	0 - 0.125 ft	ND
N1E1	0 - 0.125 ft	ND
N1E2	0 - 0.125 ft	ND
N1E3	0 - 0.125 ft	ND
N1E4	0 - 0.125 ft	ND
N2E0	0 - 0.125 ft	ND
N2E1	0 - 0.125 ft	ND
N2E2	0 - 0.125 ft	ND
N2E3	0 - 0.125 ft	ND
N2E4	0 - 0.125 ft	ND
N3E3	0 - 0.125 ft	ND
N3E4	0 - 0.125 ft	ND
N4E1	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
N4E2	0 - 0.125 ft	0.025 mg/kg
	3.5 - 4 ft	ND
N4E3	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
TR07	0 - 0.125 ft	0.22 mg/kg
TR09	0 - 0.125 ft	0.17 mg/kg
TR46	0 - 0.125 ft	0.0833 mg/kg
TR47	0 - 0.125 ft	ND
TR48	0 - 0.125 ft	ND
TR49	0 - 0.125 ft	ND

T:\GIS\Davids_Island\Geodata\Spatial\MXD\Soil Delineation 060909\Soil Delineations_Excavations_082709.mxd

Legend

- SAMPLE EXCEEDANCE
- SAMPLE LOCATION
- AREA OF SURFACE SOIL EXCAVATION
- DELINEATION GRID (3 METERS)
- ELEVATION CONTOUR (2 FT)
- FORMER STRUCTURE
- PATH OR ROAD

Feet

0 2.5 5 10 15

TETRA TECH EC, INC.

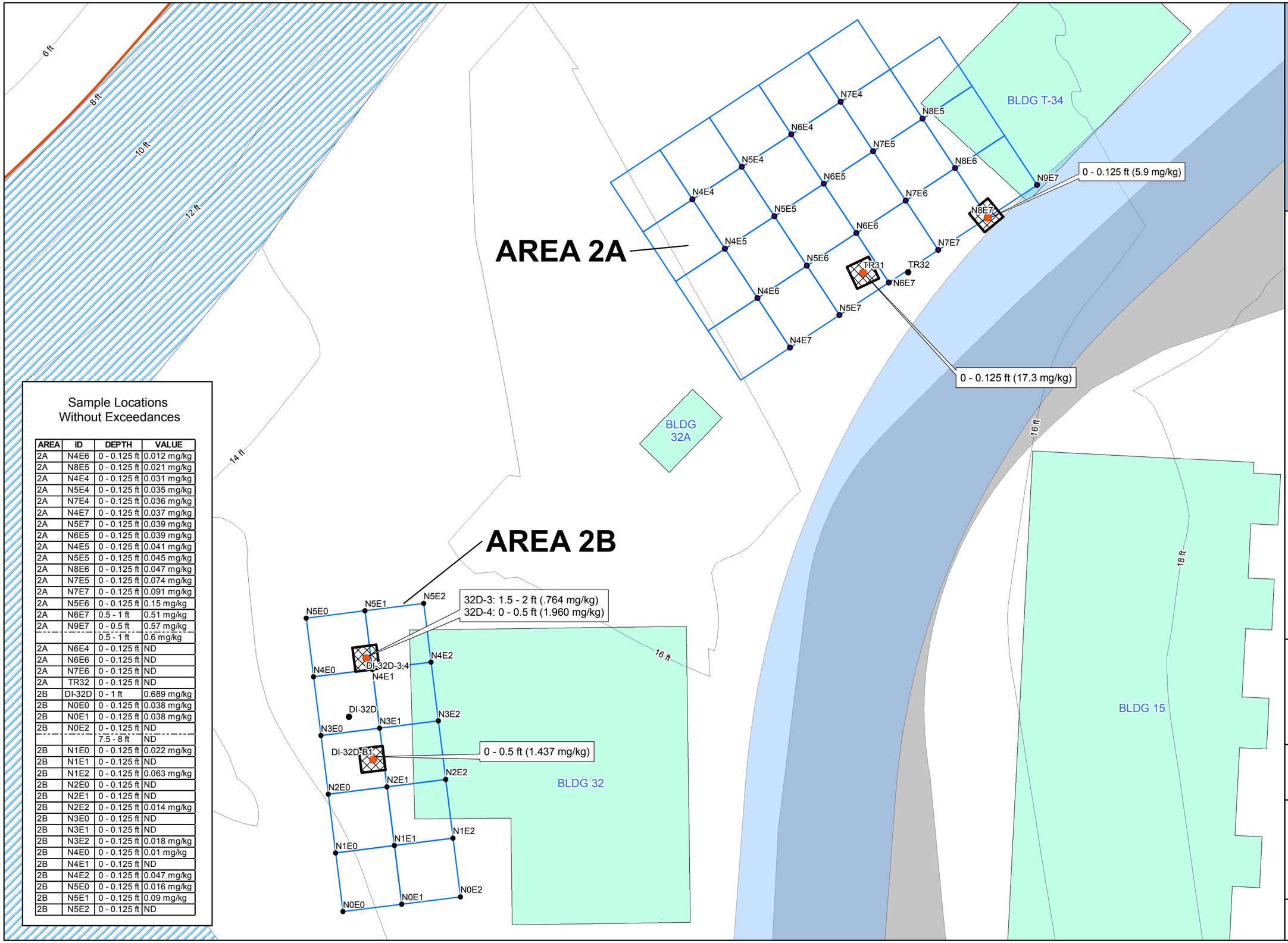
FIGURE 3

PROPOSED AREAS OF SOIL DELINEATION/REMOVAL

DELINEATION AREA 1

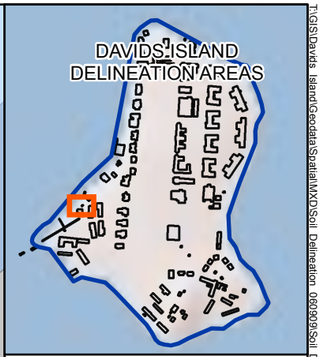
OCTOBER 2009

WESTCHESTER COUNTY, NEW YORK



Sample Locations Without Exceedances

AREA	ID	DEPTH	VALUE
2A	N4E6	0 - 0.125 ft	0.012 mg/kg
2A	N8E5	0 - 0.125 ft	0.021 mg/kg
2A	N4E4	0 - 0.125 ft	0.031 mg/kg
2A	N5E4	0 - 0.125 ft	0.035 mg/kg
2A	N7E4	0 - 0.125 ft	0.036 mg/kg
2A	N4E7	0 - 0.125 ft	0.037 mg/kg
2A	N5E7	0 - 0.125 ft	0.039 mg/kg
2A	N6E5	0 - 0.125 ft	0.039 mg/kg
2A	N4E5	0 - 0.125 ft	0.041 mg/kg
2A	N5E5	0 - 0.125 ft	0.045 mg/kg
2A	N8E6	0 - 0.125 ft	0.047 mg/kg
2A	N7E5	0 - 0.125 ft	0.074 mg/kg
2A	N7E7	0 - 0.125 ft	0.091 mg/kg
2A	N5E6	0 - 0.125 ft	0.15 mg/kg
2A	N6E7	0.5 - 1 ft	0.51 mg/kg
2A	N9E7	0 - 0.5 ft	0.57 mg/kg
		0.5 - 1 ft	0.6 mg/kg
2A	N6E4	0 - 0.125 ft	ND
2A	N6E6	0 - 0.125 ft	ND
2A	N7E6	0 - 0.125 ft	ND
2A	TR32	0 - 0.125 ft	ND
2B	DI-32D	0 - 1 ft	0.689 mg/kg
2B	N0E0	0 - 0.125 ft	0.038 mg/kg
2B	N0E1	0 - 0.125 ft	0.038 mg/kg
2B	N0E2	0 - 0.125 ft	ND
		7.5 - 8 ft	ND
2B	N1E0	0 - 0.125 ft	0.022 mg/kg
2B	N1E1	0 - 0.125 ft	ND
2B	N1E2	0 - 0.125 ft	0.063 mg/kg
2B	N2E0	0 - 0.125 ft	ND
2B	N2E1	0 - 0.125 ft	ND
2B	N2E2	0 - 0.125 ft	0.014 mg/kg
2B	N3E0	0 - 0.125 ft	ND
2B	N3E1	0 - 0.125 ft	ND
2B	N3E2	0 - 0.125 ft	0.018 mg/kg
2B	N4E0	0 - 0.125 ft	0.01 mg/kg
2B	N4E1	0 - 0.125 ft	ND
2B	N4E2	0 - 0.125 ft	0.047 mg/kg
2B	N5E0	0 - 0.125 ft	0.016 mg/kg
2B	N5E1	0 - 0.125 ft	0.09 mg/kg
2B	N5E2	0 - 0.125 ft	ND



Legend

- SAMPLE EXCEEDANCE
- SAMPLE LOCATION
- AREA OF SURFACE SOIL EXCAVATION
- CON. EDISON PROPERTY
- DELINEATION GRID (3 METERS)
- ELEVATION CONTOUR (2 FT)
- FORMER STRUCTURE
- PATH OR ROAD
- ADJACENT AREA

Feet
0 5 10 20

TETRA TECH EC, INC.

FIGURE 4

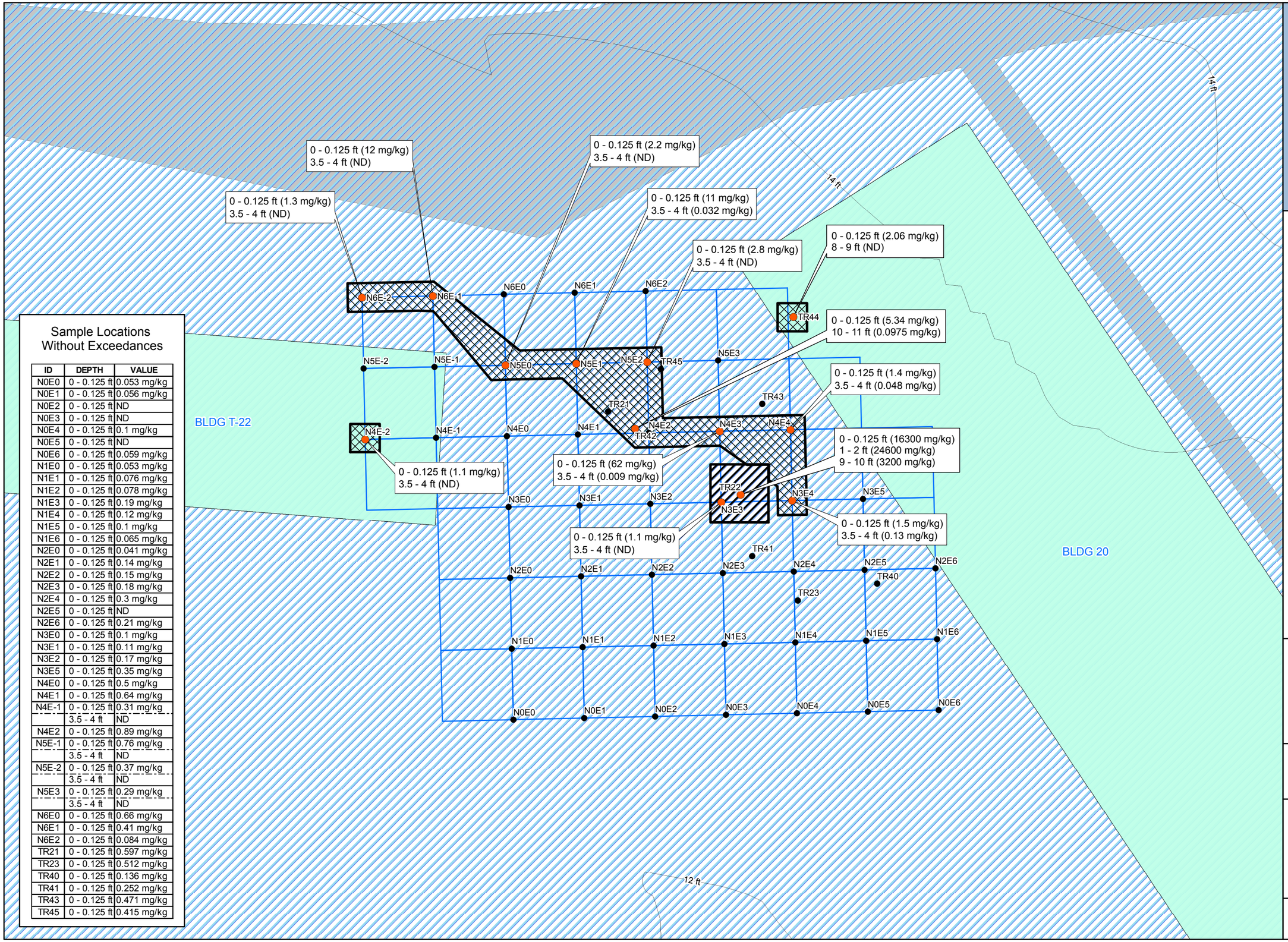
PROPOSED AREAS OF SOIL DELINEATION/REMOVAL

DELINEATION AREA 2A/2B

OCTOBER 2009

WESTCHESTER COUNTY, NEW YORK

T:\GIS\Davids_Island\Geodata\Spatial\MXD\Soil Delineation_060909\Soil Delineations_Excavations_082709.mxd



Sample Locations Without Exceedances

ID	DEPTH	VALUE
N0E0	0 - 0.125 ft	0.053 mg/kg
N0E1	0 - 0.125 ft	0.056 mg/kg
N0E2	0 - 0.125 ft	ND
N0E3	0 - 0.125 ft	ND
N0E4	0 - 0.125 ft	0.1 mg/kg
N0E5	0 - 0.125 ft	ND
N0E6	0 - 0.125 ft	0.059 mg/kg
N1E0	0 - 0.125 ft	0.053 mg/kg
N1E1	0 - 0.125 ft	0.076 mg/kg
N1E2	0 - 0.125 ft	0.078 mg/kg
N1E3	0 - 0.125 ft	0.19 mg/kg
N1E4	0 - 0.125 ft	0.12 mg/kg
N1E5	0 - 0.125 ft	0.1 mg/kg
N1E6	0 - 0.125 ft	0.065 mg/kg
N2E0	0 - 0.125 ft	0.041 mg/kg
N2E1	0 - 0.125 ft	0.14 mg/kg
N2E2	0 - 0.125 ft	0.15 mg/kg
N2E3	0 - 0.125 ft	0.18 mg/kg
N2E4	0 - 0.125 ft	0.3 mg/kg
N2E5	0 - 0.125 ft	ND
N2E6	0 - 0.125 ft	0.21 mg/kg
N3E0	0 - 0.125 ft	0.1 mg/kg
N3E1	0 - 0.125 ft	0.11 mg/kg
N3E2	0 - 0.125 ft	0.17 mg/kg
N3E5	0 - 0.125 ft	0.35 mg/kg
N4E0	0 - 0.125 ft	0.5 mg/kg
N4E1	0 - 0.125 ft	0.64 mg/kg
N4E-1	0 - 0.125 ft	0.31 mg/kg
	3.5 - 4 ft	ND
N4E2	0 - 0.125 ft	0.89 mg/kg
N5E-1	0 - 0.125 ft	0.76 mg/kg
	3.5 - 4 ft	ND
N5E-2	0 - 0.125 ft	0.37 mg/kg
	3.5 - 4 ft	ND
N5E3	0 - 0.125 ft	0.29 mg/kg
	3.5 - 4 ft	ND
N6E0	0 - 0.125 ft	0.66 mg/kg
N6E1	0 - 0.125 ft	0.41 mg/kg
N6E2	0 - 0.125 ft	0.084 mg/kg
TR21	0 - 0.125 ft	0.597 mg/kg
TR23	0 - 0.125 ft	0.512 mg/kg
TR40	0 - 0.125 ft	0.136 mg/kg
TR41	0 - 0.125 ft	0.252 mg/kg
TR43	0 - 0.125 ft	0.471 mg/kg
TR45	0 - 0.125 ft	0.415 mg/kg

Legend

- SAMPLE EXCEEDANCE
- SAMPLE LOCATION
- TEST PIT
- AREA OF SUBSURFACE SOIL EXCAVATION
- AREA OF SURFACE SOIL EXCAVATION
- DELINEATION GRID (3 METERS)
- ELEVATION CONTOUR (2 FT)
- FORMER STRUCTURE
- PATH OR ROAD
- ADJACENT AREA

Feet
0 2.5 5 10 15 20

TETRA TECH EC, INC.

FIGURE 5

PROPOSED AREAS OF SOIL DELINEATION/REMOVAL

DELINEATION AREA 3

OCTOBER 2009

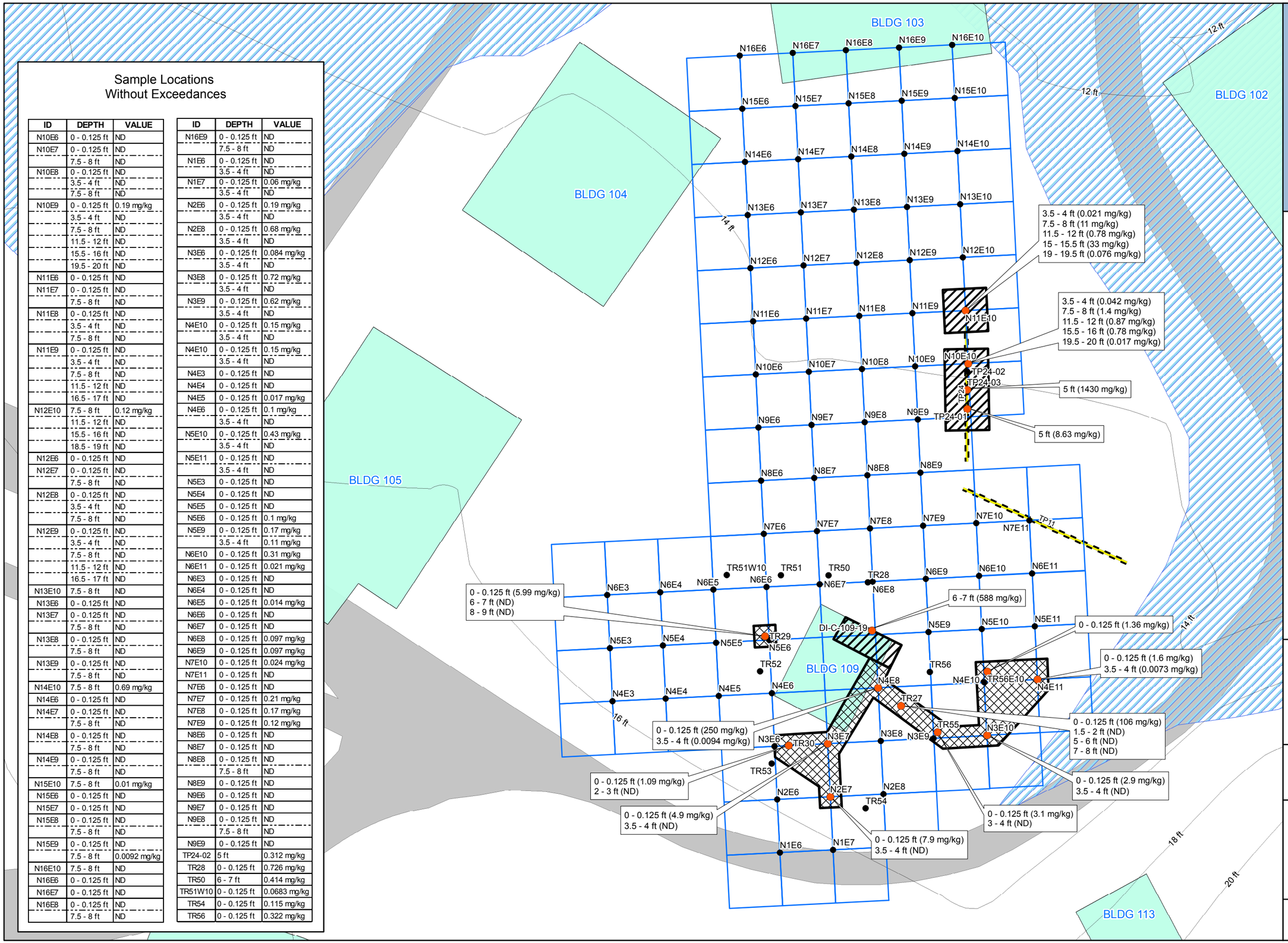
WESTCHESTER COUNTY, NEW YORK

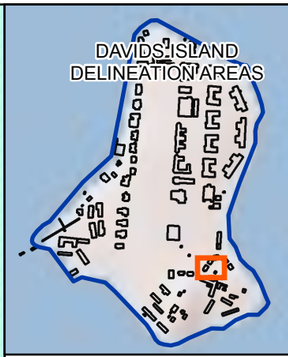
T:\GIS\Davids_Island\GeodatabaseSpatial\MXD\Soil_Delineation_060909\Soil_Delineations_Excavations_082709.mxd

Sample Locations Without Exceedances

ID	DEPTH	VALUE
N10E6	0 - 0.125 ft	ND
N10E7	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N10E8	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
N10E9	0 - 0.125 ft	0.19 mg/kg
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
	11.5 - 12 ft	ND
	15.5 - 16 ft	ND
	19.5 - 20 ft	ND
N11E6	0 - 0.125 ft	ND
N11E7	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N11E8	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
N11E9	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
	11.5 - 12 ft	ND
	16.5 - 17 ft	ND
N12E10	7.5 - 8 ft	0.12 mg/kg
	11.5 - 12 ft	ND
	15.5 - 16 ft	ND
	18.5 - 19 ft	ND
N12E6	0 - 0.125 ft	ND
N12E7	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N12E8	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
N12E9	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
	7.5 - 8 ft	ND
	11.5 - 12 ft	ND
	16.5 - 17 ft	ND
N13E10	7.5 - 8 ft	ND
N13E6	0 - 0.125 ft	ND
N13E7	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N13E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N13E9	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N14E10	7.5 - 8 ft	0.69 mg/kg
N14E6	0 - 0.125 ft	ND
N14E7	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N14E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N14E9	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N15E10	7.5 - 8 ft	0.01 mg/kg
N15E6	0 - 0.125 ft	ND
N15E7	0 - 0.125 ft	ND
N15E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N15E9	0 - 0.125 ft	ND
	7.5 - 8 ft	0.0092 mg/kg
N16E10	7.5 - 8 ft	ND
N16E6	0 - 0.125 ft	ND
N16E7	0 - 0.125 ft	ND
N16E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND

ID	DEPTH	VALUE
N16E9	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N1E6	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
N1E7	0 - 0.125 ft	0.06 mg/kg
	3.5 - 4 ft	ND
N2E6	0 - 0.125 ft	0.19 mg/kg
	3.5 - 4 ft	ND
N2E8	0 - 0.125 ft	0.68 mg/kg
	3.5 - 4 ft	ND
N3E6	0 - 0.125 ft	0.084 mg/kg
	3.5 - 4 ft	ND
N3E8	0 - 0.125 ft	0.72 mg/kg
	3.5 - 4 ft	ND
N3E9	0 - 0.125 ft	0.62 mg/kg
	3.5 - 4 ft	ND
N4E10	0 - 0.125 ft	0.15 mg/kg
	3.5 - 4 ft	ND
N4E10	0 - 0.125 ft	0.15 mg/kg
	3.5 - 4 ft	ND
N4E3	0 - 0.125 ft	ND
N4E4	0 - 0.125 ft	ND
N4E5	0 - 0.125 ft	0.017 mg/kg
N4E6	0 - 0.125 ft	0.1 mg/kg
	3.5 - 4 ft	ND
N5E10	0 - 0.125 ft	0.43 mg/kg
	3.5 - 4 ft	ND
N5E11	0 - 0.125 ft	ND
	3.5 - 4 ft	ND
N5E3	0 - 0.125 ft	ND
N5E4	0 - 0.125 ft	ND
N5E5	0 - 0.125 ft	ND
N5E6	0 - 0.125 ft	0.1 mg/kg
N5E9	0 - 0.125 ft	0.17 mg/kg
	3.5 - 4 ft	0.11 mg/kg
N6E10	0 - 0.125 ft	0.31 mg/kg
N6E11	0 - 0.125 ft	0.021 mg/kg
N6E3	0 - 0.125 ft	ND
N6E4	0 - 0.125 ft	ND
N6E5	0 - 0.125 ft	0.014 mg/kg
N6E6	0 - 0.125 ft	ND
N6E7	0 - 0.125 ft	ND
N6E8	0 - 0.125 ft	0.097 mg/kg
N6E9	0 - 0.125 ft	0.097 mg/kg
N7E10	0 - 0.125 ft	0.024 mg/kg
N7E11	0 - 0.125 ft	ND
N7E6	0 - 0.125 ft	ND
N7E7	0 - 0.125 ft	0.21 mg/kg
N7E8	0 - 0.125 ft	0.17 mg/kg
N7E9	0 - 0.125 ft	0.12 mg/kg
N8E6	0 - 0.125 ft	ND
N8E7	0 - 0.125 ft	ND
N8E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N8E9	0 - 0.125 ft	ND
N9E6	0 - 0.125 ft	ND
N9E7	0 - 0.125 ft	ND
N9E8	0 - 0.125 ft	ND
	7.5 - 8 ft	ND
N9E9	0 - 0.125 ft	ND
TP24-02	5 ft	0.312 mg/kg
TR28	0 - 0.125 ft	0.726 mg/kg
TR50	6 - 7 ft	0.414 mg/kg
TR51W10	0 - 0.125 ft	0.0683 mg/kg
TR54	0 - 0.125 ft	0.115 mg/kg
TR56	0 - 0.125 ft	0.322 mg/kg





Legend

- SAMPLE EXCEEDANCE
- SAMPLE LOCATION
- TEST PIT
- AREA OF SUBSURFACE SOIL EXCAVATION
- AREA OF SURFACE SOIL EXCAVATION
- DELINEATION GRID (3 METERS)
- ELEVATION CONTOUR (2 FT)
- FORMER STRUCTURE
- PATH OR ROAD
- ADJACENT AREA

Feet
0 2.5 5 10 15 20 25

TETRA TECH EC, INC.

FIGURE 6

PROPOSED AREAS OF SOIL DELINEATION/REMOVAL

DELINEATION AREA 4

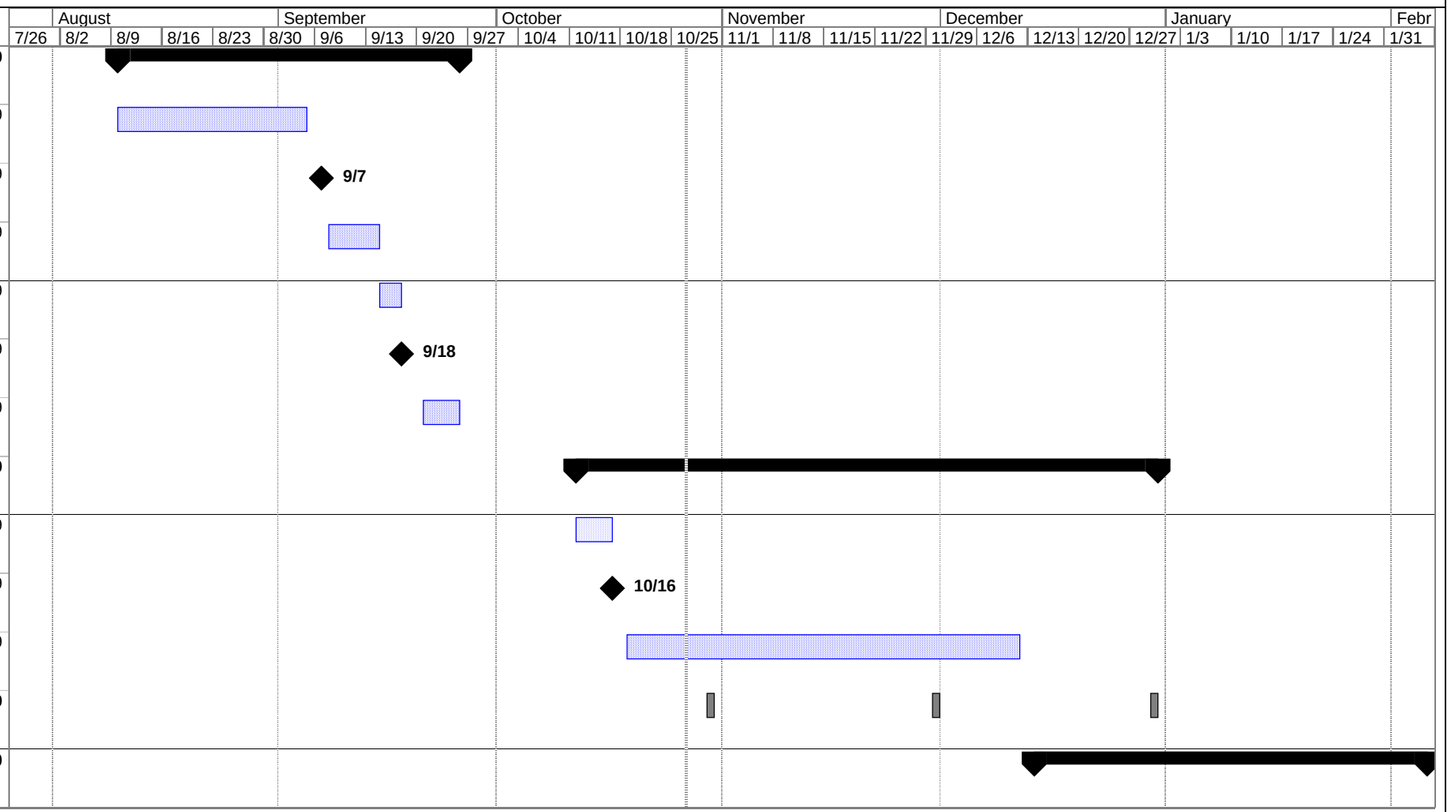
OCTOBER 2009

WESTCHESTER COUNTY, NEW YORK

T:\GIS\Davids_Island\Geodata\Spatial\MXD\Soil Delineation_060909\Soil Delineations_Excavations_082709.mxd

Figure 7
Interim Removal Action Work Plan Schedule
Davids Island

ID	Task Name	Start	Finish
1	**Interim Removal Action Work Plan**	**Mon 8/10/09**	**Fri 9/25/09**
2	Draft Interim RA Work Plan	Mon 8/10/09	Fri 9/4/09
3	Submit Draft Interim RA Work Plan to USACE	Mon 9/7/09	Mon 9/7/09
4	USACE Review and Comment	Tue 9/8/09	Mon 9/14/09
5	Prepare Final Interim RA Work Plan	Tue 9/15/09	Thu 9/17/09
6	Submit Draft-Final Interim RA Work Plan to NYSDEC	Fri 9/18/09	Fri 9/18/09
7	NYSDEC Review of Draft-Final Interim RA Work Plan	Mon 9/21/09	Fri 9/25/09
8	**Interim RA Activities**	**Mon 10/12/09**	**Wed 12/30/09**
9	Remediation Planning	Mon 10/12/09	Fri 10/16/09
10	Site Mobilization	Fri 10/16/09	Fri 10/16/09
11	Remedial Construction	Mon 10/19/09	Fri 12/11/09
12	**Progress Reports**	**Fri 10/30/09**	**Wed 12/30/09**
16	**Interim RA Report**	**Mon 12/14/09**	**Fri 2/5/10**



Task Milestone Summary Rollup

Revised: Tue 10/27/09

APPENDIX A

Stormwater Pollution Prevention Plan (SWPPP)

JACOBS - Tetra Tech FW Joint Venture

US Army Corps of Engineers®

Prepared for:
Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

Total Environmental Restoration Contract (TERC)

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE INVESTIGATION, REMEDIAL ACTION, AND RESTORATION OF DAVIDS ISLAND/FORT SLOCUM New Rochelle, New York

July 2005

Contract Number:
DACW33-03-D-0006
Task Order 2

Prepared by:
Tetra Tech EC, Inc.
133 Federal Street
Boston, MA 02110

Submitted by Tetra Tech EC, Inc. on Behalf of:
Jacobs – Tetra Tech FW Joint Venture
2 Center Plaza
Boston, MA 02108-1906

2005-JV02-0075 | 9.01

USACE CONTRACT NO. DACW33-03-D-0006
TASK ORDER NO. 0002
TOTAL ENVIRONMENTAL RESTORATION CONTRACT

STORMWATER POLLUTION PREVENTION PLAN FOR THE INVESTIGATION, REMEDIAL ACTION, AND RESTORATION OF DAVIDS ISLAND/FORT SLOCUM New Rochelle, New York

July 2005

Prepared for:

Department of the Army
New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Prepared by:

Tetra Tech EC, Inc.
133 Federal Street
Boston, MA 02110

Submitted by Tetra Tech EC, Inc. on Behalf of:

Jacobs – Tetra Tech FW Joint Venture
Two Center Plaza
Boston, MA 02108-1906

SGS

Revision	Date	Prepared By	Approved By	Pages Affected
1	7/5/05	M. Lavin	G. Willant	All

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ACRONYMS AND ABBREVIATIONS

AST	aboveground storage tank
BMPs	Best Management Practices
CPESC	Certified Professional in Erosion and Sediment Control
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
FSP	Field Sampling Plan
ft^2	square feet
lbs	pounds
NRHP	National Register of Historic Places
NYSDEC	New York State Department of Environmental Conservation
QAPP	Quality Assurance Project Plan
RCP	Regulatory Compliance Plan
SAP	Sampling and Analysis Plan
SPDES	State Pollutant Discharge Elimination System
SSHP	Site Safety and Health Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Discharge Load
TtEC	Tetra Tech EC
USACE	United States Army Corps of Engineers
USCG	U.S. Coast Guard

1.0 INTRODUCTION

Davids Island is an approximately 80-acre island in the Long Island Sound located less than a mile east of the mainland at New Rochelle, New York. The site is the former location of a military base known as Fort Slocum. The military abandoned the island in the 1960s and the island has remained vacant since. Abandoned buildings and infrastructure still exist but are severely deteriorated due to vandalism, neglect, and arson. In addition, dense vegetation covers much of the island including the former Parade Grounds and roadways. The current owner, the City of New Rochelle, has plans to transfer the island to Westchester County who may redevelop the island. Although exact plans for future use are unknown, the most likely scenario is recreational use. The purpose of this project is to provide restoration of the island to a safe condition for future redevelopment efforts. Restoration activities include clearing of portions of the island, demolition of approximately ninety existing structures, off-site disposal of contaminated debris, and on-site disposal of clean debris within building foundations.

The subject work is to be performed under United States Army Corps of Engineers (USACE) Contract No. DACW33-03-D-0006, a contract held by a joint venture between Jacobs Engineering Group and Tetra Tech EC, Inc. ("Jacobs - Tetra Tech FW Joint Venture"). Work is conducted under the contract by task orders that are executed under the leadership of either Jacobs Engineering or Tetra Tech EC (TtEC). Work under this task order (Task Order No. 2) will be conducted under the direction of TtEC.

1.1 Project Description

The current scope of work includes the following:

- Cultural Resource Assessment to determine the structures' eligibility for listing on the National Register of Historic Places (NRHP);
- Preparation of an Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI) prior to building demolition;
- Preparation of associated planning documents, i.e., Work Plan, Site Safety and Health Plan (SSHP), Sampling and Analysis Plan (SAP) with Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP), Regulatory Compliance Plan (RCP), etc.;
- Field Investigation work associated with building demolition only; and
- Building demolition including asbestos abatement where possible in structurally sound buildings, debris size reduction/sorting and disposal. This also includes the demolition of a 100-feet+ steel water tower.

1.2 Organization of Stormwater Pollution Prevention Plan

This Stormwater Pollution Prevention Plan (SWPPP) has been organized to conform to New York State Department of Environmental Conservation (NYSDEC)'s recommended standards as outlined in the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01) dated January 8, 2003. The minimum requirements detailed in GP-02-01 can be found in the following sections:

- Section 1 – Background Information: site description and project description;
- Section 2 – Pre-Development Conditions: waterbodies, wetlands, and soils;
- Section 3 – Post-Development Conditions: description of post-construction control practices;
- Section 4 – Erosion and Sediment Control Component: description of runoff and sediment controls including implementation sequence;
- Section 5 – Spill Prevention, Containment, and Countermeasure Component: description of wastes generated and materials stored on-site as well as pollution reduction measures;
- Section 6 – Water Quality and Quantity Component: description of any increased volume and peak flow rate of runoff during and after construction;
- Section 7 – Responsibilities: delineation of SWPPP implementation responsibilities; and
- Section 8 – References.

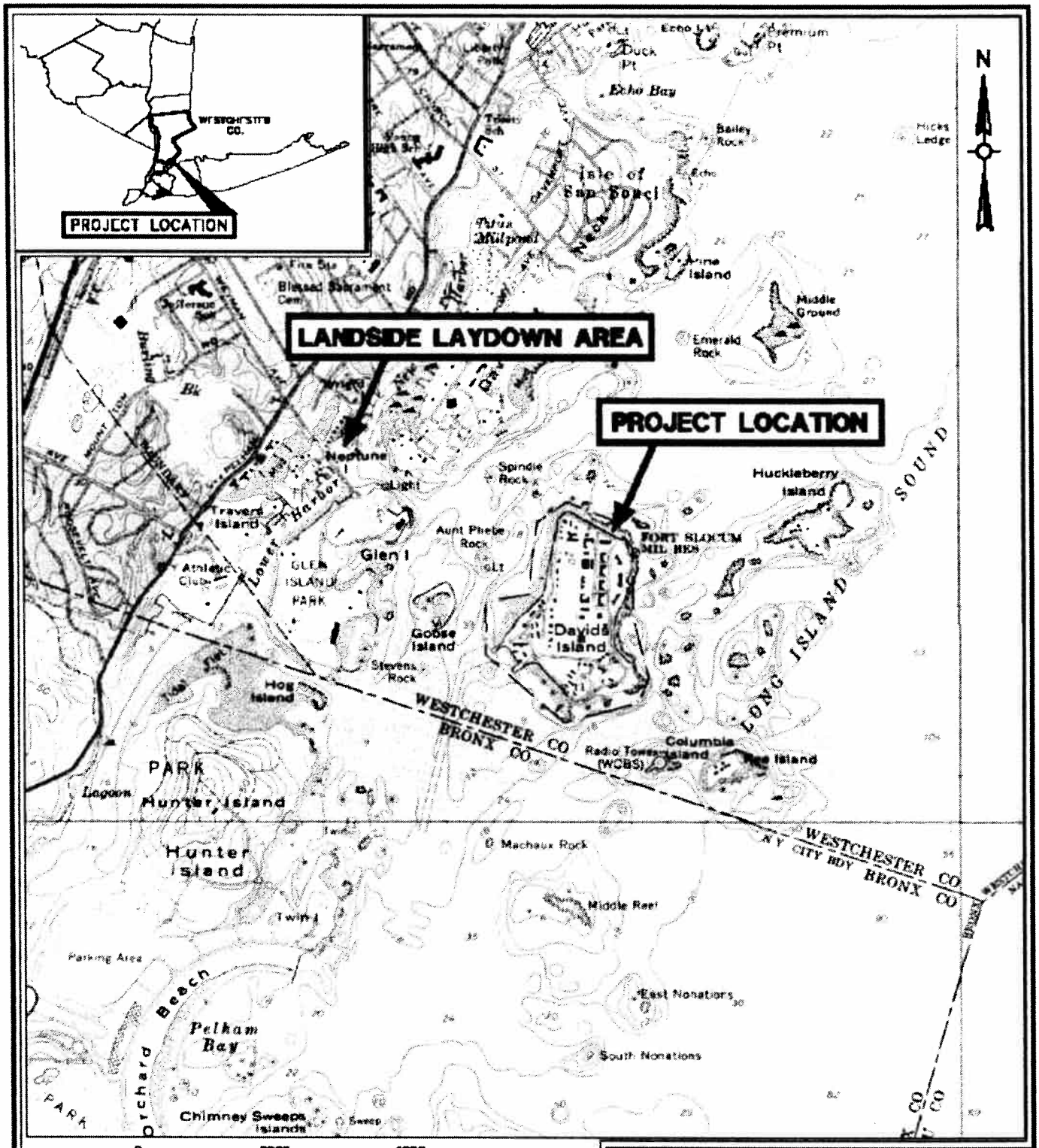
1.3 Project Location

The project location is an approximately 80-acre island in the Long Island Sound (see Figures 1 and 2). It should be noted that although the Long Island Sound is a Total Maximum Discharge Load (TMDL) watershed, it is not subject to additional requirements under GP-02-01; specifically, the TMDL datasets available on NYSDEC's website indicate that this watershed is not subject to Condition A of the general permit.

1.4 Stormwater Management Objectives

Compliance with the NYSDEC SPDES Stormwater Permit for Construction Activities is the goal of the SWPPP. This goal will be met by planning and implementing measures to meet the following objectives:

- Reduction or elimination of erosion and sediment loading to surface waterbodies during construction;
- Control of the impact of stormwater runoff on the water quality of the receiving waters;
- Control of the increased volume and peak flow rate of runoff during and after construction; and
- Maintenance of stormwater controls during and after completion of construction.



U.S. ARMY CORPS OF ENGINEERS

Source:
USGS 7.5 Minute Series Topographic Maps: Mount Vernon, NY, 1966, photorevised 1979, Sea Cliff, NY, 1966, photorevised 1979, Mamaroneck, NY-CT, 1967, photoinspected 1975, and Flushing NY, 1956, photorevised 1979

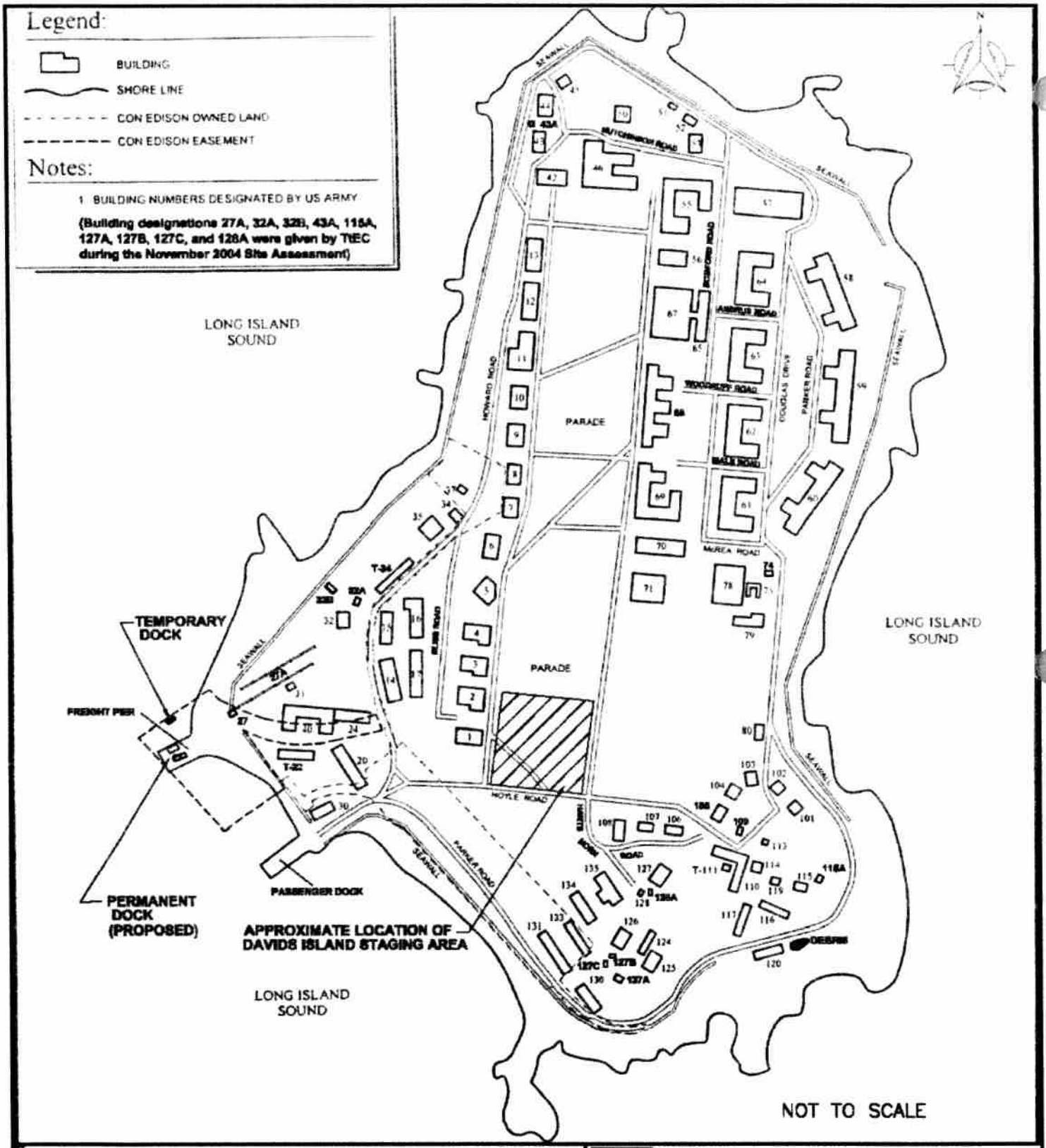
FIGURE 1

DAVIDS ISLAND
NEW ROCHELLE, NEW YORK

PROJECT LOCATION MAP

SCALE: AS SHOWN

CADFILE: 2690-A000.DWG



United States Army Corps of Engineers

Davids Island
New Rochelle, NY

Figure 2
Davids Island/Fort Slocum Site Layout

TETRA TECH EC, INC.

Source: AKRF Report, Figure 2
"Configuration of Fort Slocum" 08/05/02

2.0 PRE-DEVELOPMENT CONDITIONS

2.1 Bodies of Water and Wetlands

Long Island Sound surrounds the entire project site. There are no wetlands or other waterbodies located on the island. The Pelham Bay Park Wetlands is a large wetland complex designated by NYSDEC as a Significant Coastal Fish and Wildlife Habitat. The portion of the wetland complex closest to Davids Island (0.5 miles to the southwest) consists of the marine rocky intertidal zone around Hunter Island in the Borough of Bronx. The large marsh component of the designated wetlands is located along the west side of Pelham Bay approximately two miles southwest of Davids Island.

2.2 Critical and Environmentally Sensitive Areas

The only critical and environmentally sensitive areas known within the project location are relatively steep slopes along the shoreline. One or more of the structures slated for demolition is located within 100 feet of the shoreline along a slight embankment.

2.3 Soils

According to the 1986 Soil Conservation Service Soil Survey for Westchester County, New York, the soils identified in the table below exist within the project area. A description of each soil has been included as Appendix A.

Table 2-1. Soil Types

Soil Name	Hydrologic Soil Group
UpB – Unadilla silt loam, 2-6% slopes	C (45.7%)
Uc – Udorthents, wet substratum	Too Dry to List (12.4%)
Ub – Udorthents, smoothed	Too Wet to List (21.3%)
UpC – Urban land-Paxton complex, 8-15% slope	C (3.3%)
CrC – Charlton-Chatfield complex	B (15.5%
Ra – Raynham silt loam	B (1.7%)

A brief description of the hydrologic soil groups is provided below. As indicated in the table above, the site's soils are predominantly "Paxton B" classification.

Table 2-2. Description of Hydrologic Soil Groups

Hydrologic Soil Group	Description
A	Soils having low runoff potential and high infiltration rates when thoroughly wetted. The soils chiefly consist of deep, well to excessively drained sands or gravels. The soils have a high rate of water transmission.
B	Soils having moderate infiltration rates when thoroughly wetted. The soils consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. The soils have a moderate rate of water transmission.
C	Soils having low infiltration rates when thoroughly wetted. The soils consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. The soils have a low rate of water transmission.
D	Soils having high runoff potential and low infiltration rates when thoroughly wetted. The soils consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. The soils have a very low rate of water transmission.

3.0 POST-DEVELOPMENT CONDITIONS

3.1 Scope of SWPPP

This SWPPP has been developed to ensure water quality is maintained during the implementation of this project. Since this project does not involve the construction of permanent facilities, the post-development conditions should be similar to the pre-development conditions. Construction efforts do not include earthmoving work. The on-site disposal of clean debris will be limited to the building foundations so that the topographic contours and drainage patterns will not be altered.

3.2 Disturbed Areas

The total project area at Davids Island is approximately 80 acres. Of this area, approximately 14.16 acres will be disturbed during demolition activities. It should be noted that this project is a phased project such that the total acreage slated for disturbance is scheduled to occur over an approximately nine year period. The areas surrounding buildings slated for demolition will be the only areas disturbed. The disturbance will be limited to clearing and grubbing of approximately 25 to 50 feet surrounding the foundation. This corresponds to areas ranging from 0.08 to 0.44 acres. A limited number of buildings will be cleared at one time and the total acreage of disturbed areas will not exceed 5 acres at any given time.

3.3 Impervious Surfaces

No impervious surfaces will be created by this project. Approximately 7.15 acres worth of building foundations will be filled with clean debris. However, these areas were previously impervious since they were covered with aboveground structures. There is no net gain of impervious surfaces.

4.0 EROSION AND SEDIMENT CONTROL

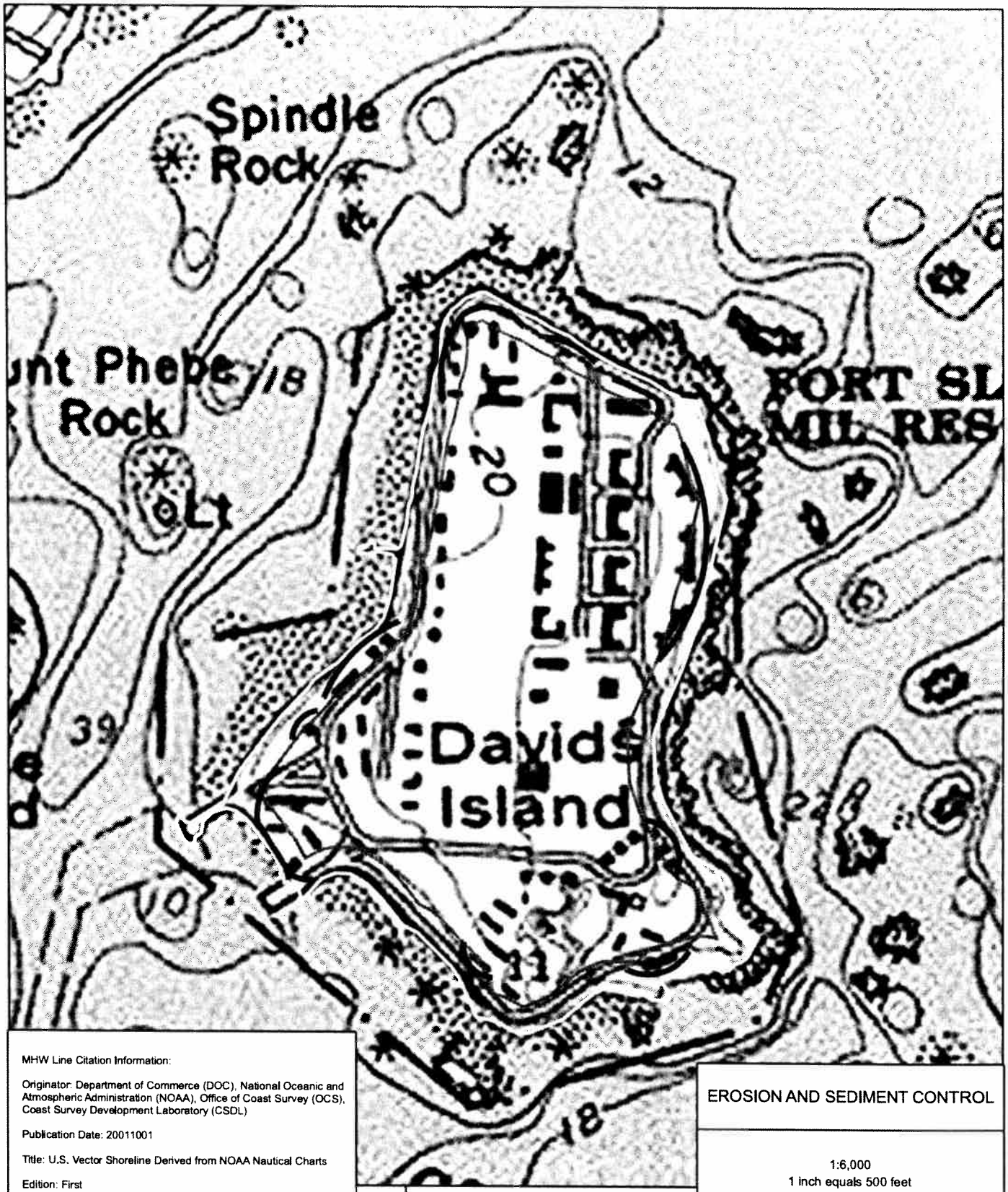
The Erosion and Sediment Control component of this SWPPP details the erosion and sediment control planning for the project.

4.1 Erosion and Sedimentation Control Practices

The control measures to be used during this project are as follows:

- Silt fence: Silt fence will be constructed around stockpiled materials with a potential for runoff and where demolition activities are located within 100 feet of Mean High Tide (approximately the sea wall) (see Figure 3).

- Water truck: The water truck will be used to prevent movement of dust from disturbed soil surfaces and/or building debris that may cause off-site damage and/or health hazards. Water from the truck will be discharged in an atomized state to create a "fog" or "mist" to control dust generated during demolition. If required, a non-hazardous surfactant may be added to the water to enhance dust control by decreasing the surface tension of the water, and ensuring that materials are adequately wet.



MHW Line Citation Information:

Originator: Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), Office of Coast Survey (OCS), Coast Survey Development Laboratory (CSDL)

Publication Date: 20011001

Title: U.S. Vector Shoreline Derived from NOAA Nautical Charts

Edition: First

Geospatial Data Presentation Form: vector digital data

Series Information:
Series Name: Vector Shoreline Series

Publication Information:
Publication Place: Silver Spring, MD
Publisher: NOAA's Ocean Service, Office of Coast Survey (OCS)

N

Legend

- Approximate Location of Silt Fencing
- 100' Inland from Mean High Water
- EVS Mean High Water

EROSION AND SEDIMENT CONTROL

1:6,000
1 inch equals 500 feet

0 100 200 400 600 800 1,000 Feet

TETRA TECH

FIGURE 3

DATE: 6/30/05

4.2 Construction Sequence

Since the project is being incrementally funded, the scope of work has been divided into a base year of work and eight options. The current scope includes the demolition of thirteen "small" structures (Buildings 32B, 43A, 51, 52, 75, 78, 80, 109, 115A, 116, 117, 120, and T22) in the base year (2005) and first option year. The exact number and specific structures may vary based on further site investigations and asbestos surveys. Additional buildings will be addressed in Options 1 (2006) through 8 (2013). Construction activities are planned to occur within the spring, summer, and fall of each of the calendar years with planned shutdowns during the winter months, at a minimum.

Regardless of the varied scope for each of the years, the general approach will not vary and the procedures outlined in this SWPPP will remain valid. The items below provide a generalized sequence for the control of erosion and sedimentation at each of the structures located within 100 feet of Mean Hide Tide (approximately the sea wall).

- Install silt fence on the downside slope of the disturbed areas;
- Complete clearing and grubbing of 25 to 50 feet around the perimeter of the building to be demolished;
- Demolish existing structure;
- Process debris within the building foundation;
- Segregate material for off-site disposal and transfer to staging area;
- Place clean debris in building foundation; and
- Restore the area to pre-construction conditions.

4.3 Construction Specifications

General specifications for the installation of the erosion and sediment control practices are summarized below.

- Silt fence: Filter fabric fence should be installed at level grade. Both ends of each fence section should be extended at least 8 inches upslope at 45 degrees to the main fence alignment to allow for pooling of water.

  A 6-inch deep trench should be excavated to anchor the silt fence. Care should be taken to minimize the disturbance on the downslope side. The bottom of the trench should be at level grade, with a maximum deviation of 1% not to extend more than 25 feet. The bottom of the fence should be anchored by placing fabric in the bottom of the trench and backfilling and compacting the fill material.

  Support stakes should be driven 18 inches below the existing ground surface at 10 feet (maximum) intervals. Filter fabric should be stretched and fastened to the upslope side of the support stakes. At fabric ends, both ends should be wrapped around the support stake and stapled. If the fabric comes already attached to the stakes, the end stakes should be held together while the fabric is wrapped around the stakes (minimum of one revolution) prior to driving the stakes.

4.4 Vegetative Plan

USACE and/or its site contractor shall initiate stabilization measures in portions of the site where demolition activities have temporarily or permanently ceased. Portions of the site where demolition activities have temporarily or permanently ceased will be stabilized within eight hours and seeded within 72 hours.

4.4.1 Temporary Stabilization

Temporary stabilization will be completed as follows.

- Rough grade the area and ensure the slopes are physically stable;
- Remove large debris and rocks;
- Apply hay or straw mulch at two tons/acre (90 lbs/1,000 ft^2);
- Seed area using any seeding method that will result in relatively good soil to seed contact; and
- Apply seed within 72 hours using the mixture and rate provided in the table below.

Table 4-1. Temporary Stabilization

Seed Mix	Variety	Rate (lbs/acre)	Rate (lbs/1,000 ft^2)
SPRING/SUMMER/EARLY FALL			
Ryegrass	Annual	30	0.7
LATE FALL/EARLY WINTER			
Winter Rye	Certified "Aroostook"	100	2.5

4.4.2 Permanent Stabilization

Permanent stabilization will be completed as follows:

- Any severely compacted areas will be disked to provide an adequate rooting zone;
- Stones and debris greater than 4 inches in diameter, or stones that will be detrimental to maintenance activities, will be removed;
- Any necessary soil amendments will be incorporated into the upper 2 inches of soil (amendments may include ground agricultural limestone, to attain a pH of 6.0 in the upper 2 inches of soil, and/or 600 lbs/acre of 5-10-10 commercial fertilizer);
- Small grain straw (certified weed free) at 2 tons/acre will be applied and anchored with netting or tactifier;
- The area will be seeded within 72 hours using any method (broadcasting or hydroseeding) that provides proper soil to seed contact; and
- Seeding will be in accordance with the applicable mixture and rates provided in the following table.

Table 4-2. Permanent Stabilization

Seed Mix	Rate (lbs/acre)	Rate (lbs/ 1,000 ft^2)
Commercially Available Native Warm Season Grass Mix (or similar)	25	0.57

4.5 Maintenance Plan

All erosion and sediment pollution control devices will be in place at the end of each working day. The control devices will be inspected and maintained as follows:

- All erosion and sediment control measures will be checked for stability and operation following every heavy rainfall (>0.5 inches) and at least once per week. Any needed repairs will be made with 48 hours of discovery in an effort to maintain all measures as designed.
- Sediment accumulations at the silt fence will be removed when the depth of sediment at the fence reaches half of the fabric height or when bulging is observed. Any needed repairs will be made with 48 hours of discovery in an effort to maintain the fence as a barrier.
- All seeded areas will be fertilized, reseeded (if necessary), and mulched according to specifications in the vegetative plan section of this SWPPP to maintain a vigorous, dense vegetative cover.
- Dust suppression measures will be maintained through all demolition activities as well as dry weather periods until all disturbed areas are stabilized.

4.6 Inspections

USACE and/or its site contractor will have a qualified professional conduct an assessment of the site prior to the commencement of demolition activities. In an inspection report, the qualified professional will certify that the appropriate erosion and sediment controls described in this SWPPP and required by the SPDES have been adequately installed or implemented. Following the commencement of demolition activities, site inspections will be conducted by the qualified professional at least every seven calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

Since there are a limited number of professionals registered as Certified Professional in Erosion and Sediment Control (CPESC), the qualified professional will have practical and applied construction knowledge and possess familiarity with Best Management Practices (BMPs) and erosion and sediment control techniques.

4.7 Borrow and Spoil Areas

The use of on-site borrow material is not anticipated for this project. If material is needed to fill the excavated areas, clean gravel and soil will be imported from an off-site source. However, the demolition activities will generate a significant quantity of debris. Clean debris will be returned to building foundations without the need for stockpiling. The contaminated debris, requiring off-site disposal, will be stockpiled within the material handling pad, to be constructed in the Parade Ground (see Figure 1). This stockpile location is at a significant distance from the Long Island Sound; thus reducing the potential for runoff entering this surface waterbody. Contaminated debris will be segregated into stockpiles by material type (i.e., asbestos containing debris, wood, concrete, steel, etc.). Stockpiles with the greatest potential for runoff will be surrounded by silt fence.

5.0 SPILL PREVENTION, CONTAINMENT, AND COUNTERMEASURE

The Spill Prevention, Containment, and Countermeasure component of this SWPPP details the pollution prevention planning for the project as it relates to storage of petroleum products and/or hazardous or controlled substances.

5.1 Petroleum Products and Hazardous or Controlled Substances

The primary petroleum products and/or hazardous or controlled substances anticipated for use during this project is diesel fuel. A 2,000-gallon aboveground storage tank (AST) with secondary containment is planned for the construction support facilities area. This tank will be used to store diesel fuel to power the heavy equipment as well as generators. Small quantities of equipment oils and lubricants will also be used on-site.

5.2 Pollution Prevention

The following sections provide a description of pollution prevention measures that will be used to control litter, construction chemicals, and demolition debris from becoming a pollutant source to stormwater discharges. In addition, storage practices to minimize the exposure of materials to stormwater as well as spill prevention and response measures are detailed in this section.

5.2.1 Material Delivery and Storage

The following guidelines will be followed during material delivery and storage operations:

- Material storage and delivery areas should be located a minimum of 100 feet away from any surface waterbody.
- The inventory should be kept to the minimum quantity necessary to continue required site operations.
- Dry chemicals and bagged materials, if any, should be stored on pallets.
- All flammable products should be stored away from heat and/or ignition sources.
- All liquid material containers should have sufficient secondary containment.
- The designated storage areas should be kept clean and well organized. Weekly inspections will be conducted to check for damaged containers, leaks, etc.
- Storage of hazardous materials should be in compliance with state and local requirements.
- During the wet season, drums and bags of material should be covered (e.g., tarps, bins, structures) to prevent contact with rainwater.
- Chemicals should be kept in their original containers with proper labels.
- Employees and subcontractors should be trained on the proper storage procedures for petroleum products and/or hazardous or controlled substances.

5.2.2 Spill Prevention and Control

The following guidelines will be followed to prevent and control spills:

- Employees and subcontractors should be notified of the location of material to be used to clean up spills.
- Spill cleanup materials should be stored on-site and near potential spill areas (e.g., material storage area and equipment fueling areas).

- Commercially available spill kits for heavy equipment should be kept on-site.
- Absorbent pads, oil booms, mat, or equivalent materials should be kept on-site.
- Washable, reusable rags for cleanup of small lubricant leaks will be kept on-site.
- In the event of a spill, surface waterbodies should be protected and cleanup and proper disposal of spill materials should take place promptly.
- Employees and subcontractors should be trained on proper spill prevention and control methods.
- Responsible individuals should be designated for spill control.

5.2.3 Solid Waste Management

The following guidelines will be followed during solid waste management operations:

- Sufficient number of waste bins should be provided to keep the site clean of litter and waste.
- Trash should be collected on a daily basis.
- Waste materials (e.g., paints, solvents, used oil) should be segregated and recycled.
- Waste container storage area(s) should be located at a minimum distance of 100 feet from surface waterbodies.
- Secondary containment should be provided for hazardous liquid waste containers, if required.
- Storage activities should be conducted in compliance with all local and state solid waste disposal and nuisance requirements.
- Employees and subcontractors should be trained to use proper solid waste management practices.

5.2.4 Vehicle/Equipment Maintenance

The following guidelines will be followed during vehicle/equipment maintenance:

- Vehicle/machinery wash waters or solvents should not be discharged to surface waterbodies.
- Fueling and maintenance areas should be located at a minimum distance of 100 feet from surface waterbodies.
- Vehicle/equipment maintenance activities should be conducted in a manner to prevent spills and leaks.
- Vehicles should regularly be inspected and maintained to minimize leaks and drips.
- Drip pans or absorbent materials should be placed under any leak prone machinery while idle.
- Vehicle/equipment maintenance activities should be conducted in compliance with federal, state, and local requirements for fuel storage tanks.

5.2.5 Sanitary Waste Management

The following guidelines will be followed during sanitary/septic waste management operations:

- Sanitary facilities should be located at a minimum distance of 100 feet from surface waterbodies.
- Untreated raw wastewater should not be discharged to land, the storm drain system, or to surface waterbodies.
- Sanitary facilities should be maintained in good working order by a licensed service.
- Regular waste collection should be scheduled with a licensed hauler to prevent overflow.

- If washing out of the interior of portable toilets is needed, the wash water should not be discharged to the storm drain system or surface waterbodies.

6.0 WATER QUALITY AND WATER QUANTITY

The Water Quality and Quantity Component of this SWPPP details water quality and water quantity planning for this project.

6.1 Project Components

There will be no net increase of gravel or impervious surfaces. The post-construction gravel surfaces will be limited to areas previously covered by buildings. There will be a temporary increase in gravel surfaces while the staging area is in use. This increase will be approximately 1.5 acres. The gravel will be removed from the staging area upon completion of the project.

6.2 Water Quality and Water Quantity

The Water Quality and Water Quantity objectives of the SWPPP are the following:

- Control the impact of stormwater runoff on the water quality of the receiving waters; and
- Control of the increased volume and peak rate of runoff during and after construction.

The project will not result in the construction of wide-scale contiguous impervious surfaces. Based on the fact that the post-construction gravel surfaces will be limited to areas that were already impervious areas due to the presence of aboveground structures, post-construction stormwater quality is not expected to be impaired or altered. In addition, increases in volume and peak rate of flow of runoff will not likely occur. Since the project is not expected to impair water quality and/or increase the volume and peak flow of runoff, permanent stormwater management facilities are not being proposed for inclusion in this project.

7.0 RESPONSIBILITIES

As operator of the Davids Island project, USACE has the ultimate responsibility for implementing the measures outlined in this SWPPP. Under Contract No. DACW33-03-D-0006, TtEC has been delegated authority for the investigation, remedial action, and restoration of Davids Island/Fort Slocum, including development and implementation of this SWPPP.

8.0 LIST OF REFERENCES

New York State Department of Environmental Conservation, 1997. *Guidelines for Urban Erosion and Sediment Control.* http://www.dec.state.ny.us/website/dow/toolbox/bluebook/bluebook.html

New York State Department of Environmental Conservation, 2003. *SPDES General Permit for Stormwater Discharges from Construction Activity, Permit GP-02-01.* http://www.dec.state.ny.us/website/dow/toolbox/gen_constr.pdf

New York State Department of Environmental Conservation, 2004. *Instruction Manual for Stormwater Conservation Permit.* http://www.dec.state.ny.us/website/dow/toolbox/instr_man.pdf

New York State Department of Environmental Conservation, 2004. *Draft New York Standards and Specifications for Erosion and Sediment Control.* http://www.dec.state.ny.us/website/dow/toolbox/escstandards/

New York State Coastal Zone Management Program, 2005. *CZM Consistency Determination.*

Tetra Tech EC, Inc., 2005. *Draft Work Plan for the Investigation, Remedial Action, and Restoration of Davids Island/Fort Slocum.*

Tetra Tech EC, Inc., 2005. *Final Environmental Assessment.*

APPENDIX A
Soil Descriptions

Source: U.S. Coast Guard (USCG), 1989. Final Environmental Impact/4(F) Statement, Davids Island Project, New Rochelle, NY, December 1989.

3.2.3 Soils

Overlaying the bedrock are six soil types according to the US Soil Conservation Service's Westchester County soil map of Davids Island (see Figure 3.3, Soils). Much of the Island is covered with an urbanized Paxton fine sandy loam. This soil has been highly disturbed by various site preparation and construction activities over the years; however, disrupted as it is, the soil would have the same characteristics as the undisturbed soil type. The six soil types are:

- Beaches
- Charlton-Chatfield complex, rolling, very rocky
- Paxton fine sandy loam
- Raynham silt loam
- Undorthents (cut and fill), wet substratum
- Undorthents (cut and fill), dry substratum

Beaches are more a land type than a soil, although identified as a soil type by the Soil Conservation Service. They typically are nearly level or gently sloping, occupying intertidal areas. The beach area on Davids Island is located on the northeast, south and east side of the Island.

The Charlton-Chatfield complex consists of deep to shallow well-drained, medium-texture and moderately coarse-textured soils formed in gravelly and stony glacial till deposits. Rock exposures are roughly 30 feet to 100 feet apart and cover about 10 to 25 percent of the surface. Areas of these soils have a complex pattern of deep to shallow soils that are individually too small to delineate on the soils map. Bedrock is from four to six feet below the surface but there are areas in which the bedrock is deeper. This soil type is found on the knobby southern section of Davids Island, including one knob at 43 feet above MSL, the highest point on the Island.

The Paxton fine sandy loam consist of very deep, well drained soils on uplands. They formed in glacial till derived mainly from schist, gneiss and granite. These soils have a dark brown fine sandy loam surface layer eight inches thick. The subsoil from eight inches to 26 inches is dark yellowish brown and olive brown fine sandy loam. The substratum from 26 inches to 60 inches is olive. Very firm and brittle gravely fine sandy loam slopes ranges from 0 to 36 percent. Bedrock is typically deeper than five feet and the seasonal high water table is from a depth of 1.5 feet to 2.5 feet and perched. The Paxton soil covers most of the Island and has been extensively disturbed by construction.

Under the U.S. Department of Agriculture's Farmland Protection Policy Act, Paxton fine sandy loam soils with slopes of 2% to 8% are considered Prime Farmland except where such soils have a density of 30 structures or more per 40 acres. Davids Island is excluded from the provisions of this Act since there are 132 structures on the approximately 80 upland acres of Davids Island. The U.S. Department of Agriculture has concurred with this finding.

The Raynham silt loam consists of deep, poorly-drained soils on marine plains. They formed in sediments consisting of silt loam and very fine sand. Typically these soils have a dark grayish-brown silt loam surface layer six inches thick. The subsoil between six inches and 22 inches is light olive brown, olive gray, and olive brown mottled silt loam. The substratum from 22 inches to 72 inches is olive gray and dark grayish-brown mottled silt loam; slopes range from 0 to 12 percent. Bedrock is typicall deeper than five feet and the seasonal high water table is 0.5 feet to two feet. The Raynham soil is found in a small area towards the west center of the Island, surrounded by the Paxton series.

Undorthents are cut and fill areas and include both dry substratum and wet substratum. The cut and fill areas are typically level or nearly level. They occupy upland areas that were shallow or deep and have been extensively cut and graded. These areas are generall square or oblong in shape. Also included are narrow perimeter area with steep or very steep slopes. In general, the exposed minera material can be described as loose or firm glacial till or bedro Some areas were mined for sand and gravel and then refilled with soil material which may or may not contain rock rubble. The dry substratum (smoothed) is located along the east center of the Island. It is a levelled area and appears to be the old parade ground. The wet substratum is located along the west and south shoreline. Table 3-2 presents the properties of the soils.

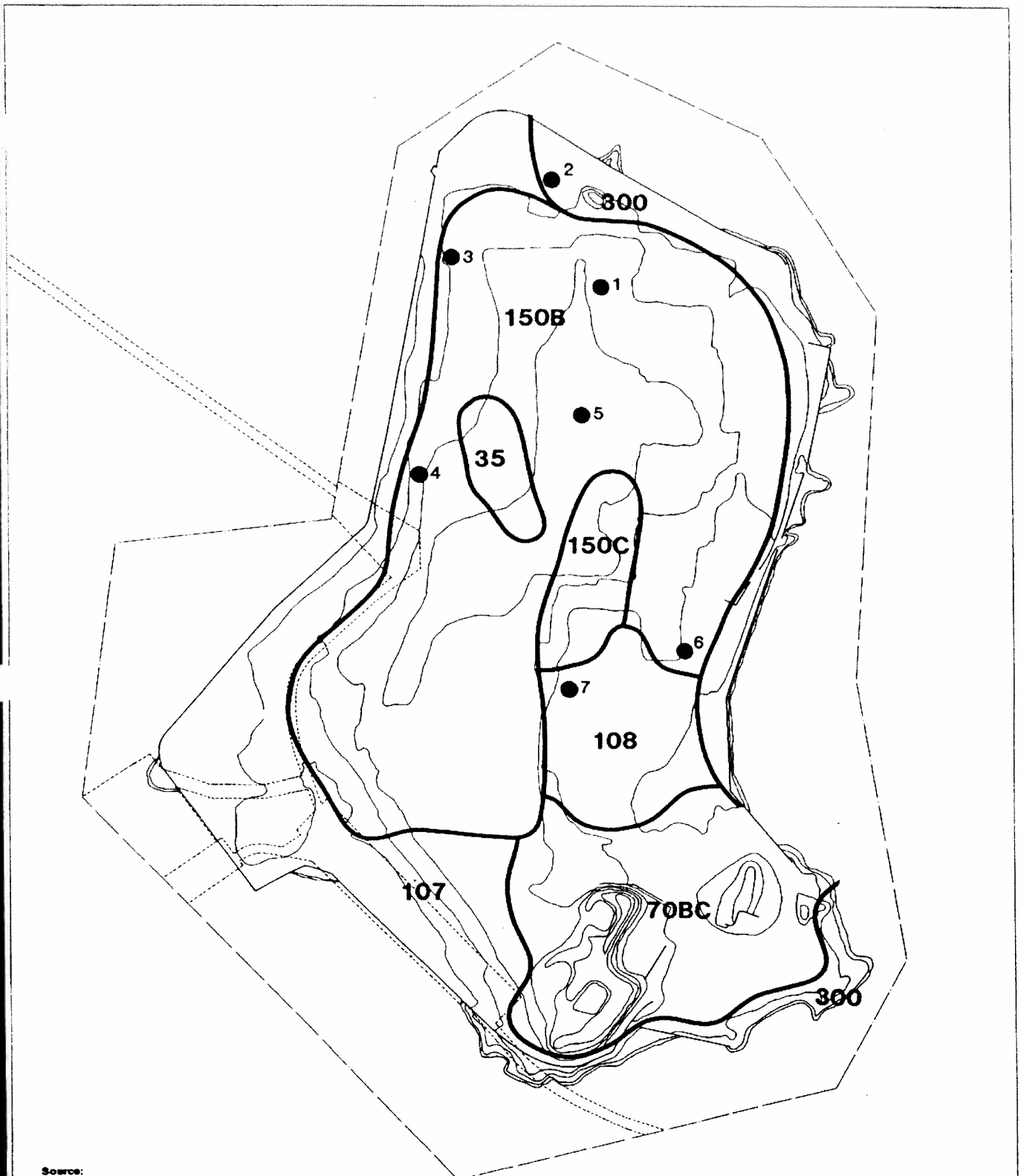
A soil chemistry sampling program was conducted on the Island by Energy & Environmental Analysts (E&EA) in October 1984. The purpose of the sampling program was to determine the presence or absence of 25 potentially hazardous organic compounds, including pesticides and PCBs. The location of the seven borings from the soil sampling program is presented in Figure 3.3, Soils.

All of the organic compounds were non-detectable with the exception of DDT and its derivatives, DDE and DDD. Sampling stations 1, 2, 3, 6, and 7 were found to have detectable levels of DDT and/or DDE and DDD. The DDT found in the soil on the Island is most probably a result of the chemical being used as a pesticide when th Island was inhabited by military personnel. DDT was applied quite readily during the 40's, 50's and 60's to eradicate disease spreading insects. DDT was banned for use in the U.S. in 1969. Th most significant quantity of DDT detected on Davids Island was found at Station 2 at a concentration of 1.106 ppm. The EPA Off of Emergency Response (1984), publishes only a detection limit a

Table 3-2
Soil Properties
Davids Island
New Rochelle, New York

Map Unit	Soil Name and Slope (%)	Parent Materials	Erodability: Surface	Erodability: Subsoil	Erodability: Substratum	Hydrologic Group	Runoff Potential: W/cover	Runoff Potential: W/O cover
35	RAYNHAM SILT loam 0 - 3%	glacial till	high	high	high	B	high	high
70BC	CHARLTON-CHATFIELD Rock outcrop 3 - 15%	glacial till	low	high	high	B	med	very high
107	CUT AND FILL Dry Substratum	TOO VARIABLE TO CLASSIFY						
108	CUT AND FILL Wet Substratum	TOO VARIABLE TO CLASSIFY						
150BC	PAXTON fine sandy 0 - 3%	glacial till	low	med loam	low	C	low	high
300	BEACHES	TOO VARIABLE TO CLASSIFY						

Source: U.S. Soil Conservation Service, Westchester County Soil Survey, undated.



Source:
Soil Conservation Service for and in Cooperation with Westchester County Soil and Water Conservation District and Westchester County

Soils

35 Raynham silt loam
70 BC Charlton-Chatfield complex
107 Undorthents (wet substratum)
108 Undorthents (dry substratum)
150 B & C Paxton fine sandy loam
300 Beach

●[1] Soil Chemistry Sampling Station

Davids Island

New Rochelle
New York

Xanadu Properties Associates
Dresdner, Robin & Associates
Sidney M. Johnson & Associates
Wilbur Smith & Associates
1988

0 100 200

APPENDIX B

Beneficial Reuse Letter

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **Fax:** (518) 402-9679
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

October 8, 2009

Mr. Gregory J. Goepfert
Project Manager
U.S. Army Corps of Engineers, New York District
26 Federal Plaza
Room 1811 – CENAN-PP-E
New York, New York 10278

RE: Beneficial Reuse of Construction and Demolition Debris
Former Fort Slocum/Davids Island
Davids Island Environmental Restoration Project
Site#: E-360077-3
City of New Rochelle, Westchester County, New York

Dear Mr. Goepfert,

The New York State Department of Environmental Conservation (Department) understands that the Army Corp of Engineers has completed the demolition and asbestos/lead/PCB abatement project at the subject site. All contaminated concrete was disposed of properly off-site; the remaining demolition debris was crushed; after removing wood, shingles, wiring, wallboard, tile, etc.; the crushed material was then backfilled into the existing foundations; and covered with mulch from clearing/grubbing.

The Department is overseeing the investigation of the Site soils and groundwater under the Environmental Restoration Program based on a State Assistance Contract with the City of New Rochelle/Westchester County. The consultant, TetraTech, for the Army Corp of Engineers and the City of New Rochelle/Westchester County had asked if any further testing of this crushed material is needed, and/or beneath these foundations. This waste, as verified during several site visits by Department staff is exempt C&D debris, as referenced in Department regulations, 6 NYCRR Part 360-7.1(b)(1)(i). Accordingly, the Department will not require any further investigation (e.g., soil borings) within or beneath these foundations.

It is the Department's understanding that these materials were managed in accordance with 6 NYCRR Part 360, and other applicable regulations. It is also further understood that the disposition of all material originating from this site will be properly tracked, recorded and documented in the Final Engineering Report.

If you have any questions regarding this matter, please contact Mr. Matthew Hubicki at (518) 402-9662.

Sincerely,

Matthew Hubicki
Project Manager
Remedial Bureau C
Environmental Remediation

ec:

J. Coleman, New Rochelle
K. Orszulik, New Rochelle
G. D'Agrosa, Westchester County
G. Willant, TetraTech
L. Haymon, TetraTech
S. Parisio
E. Moore
M. Ryan
M. Hubicki
K. Kulow