PROPOSED REMEDIAL ACTION PLAN

R.Baker & Son Machinery Dismantlers, Inc
State Superfund Project
Staten Island, Richmond County
Site No. 243008
October 2013

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repositories identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repositories:

Todt Hill-Westerleigh Library
2550 Victory Blvd.
Staten Island, NY 10314
Phone: (718) 494-1642

Science, Industry and Business Library

188 Madison Avenue
New York, NY 10016-4314
Phone: (917) 275-6975

A public comment period has been set from:

10/17/2013 to 11/16/2013

A public meeting is scheduled for the following date:

10/23/2013 at 6:00 PM

Public meeting location:

Staten Island Community Board 2
Sea View Hospital
Lou Caravone Community Service Building,
460 Brielle Avenue,
Staten Island, NY

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 11/16/2013 to:

Robert Filkins
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
rhfilkin@gw.dec.state.ny.us

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up

in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The R. Baker and Son Machinery Dismantlers site, also referred to as 250 South Washington Avenue in site reports, is a salvage yard located adjacent to and beneath the Goethals Bridge in the northwestern corner of Staten Island. The site is located at the extreme western end of South Washington Avenue, now known as Goethals Road North. The area is primarily light industrial properties such as trucking companies and the New York Container Terminal. Nearby bodies of water include the tidal estuaries Old Place Creek (located approximately 450 feet south and west of the site)and the Arthur Kill (located approximately 1/3 mile to the northwest).

Site Features: The site consists of approximately 3 acres of filled-in wetlands. Except for the access road to Goethals Road North, the site is bounded entirely by marshland and tidal creeks, including Old Place Creek. The site is home to several small warehouse buildings and trailers not intended for continuous occupancy.

Current Zoning and Land Use: The site has been utilized as a salvage yard since at least the 1970s. The property and surrounding area is zoned manufacturing, which allows manufacturing uses, most commercial uses and some community facility uses.

Past Use of the Site: It is believed the site has been in use as a salvage yard ever since it was reclaimed from the surrounding wetlands by filling. The Department first inspected the property in 1977 and waste disposal reportedly dates back to 1972.

Site Geology and Hydrology: The site is located in a filled in tidal wetland. Depth to groundwater ranges from 2 to 7 feet below ground surface at the site. Fill at the site is comprised of various sand, slit, clay, brick, and wood fragments. Groundwater flow is subject to tidal fluctuation but overall trends to the west.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to industrial use as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site

contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Walter A. Baker & Son All Industrial Services, Inc.

The Department and Walter A. Baker and Son All Industrial Services, Inc. (the PRPs) entered into a Consent Order on August 27, 2009. The Order obligates the PRPs to implement a RI/FS only remedial program. After the remedy is selected, the Department will approach the PRPs to implement the selected remedy. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil
- sediment

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

POLYCHLORINATED BIPHENYLS (PCB)
CHLOROBENZENE
1,4-DICHLOROBENZENE
1,3-DICHLOROBENZENE

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- sediment

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 01, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and extent of Contamination:

Contamination of soil and groundwater with PCBs and evidence of off-site migration of the PCB to sediments in an adjacent wetlands area has been confirmed during the Remedial Investigation and prior investigations. Exceedances of standards, criteria, and guidance include PCBs for soil, surface water and groundwater.

Soil - In shallow soil of up to 1 foot in depth, PCBs were found above the NYSDEC Industrial Soil Cleanup Objective (SCO) of 25 ppm in an approximately 1/2 acre area in the southeast portion of the site, as well as a small area to the northwest. The maximum concentration of PCBs in shallow soil in both areas was approximately 25 ppm. Deeper soils in a small area in the southeast contain PCB at concentrations of up to 226 ppm at a depth of 17 feet. The deepest PCB contamination was 37 ppm at a depth of 25 feet. Those same small areas in the southeast and northwest also exceeded the Protection of Groundwater SCO of 1.8 ppm for 1,4 dichlorobenzene in shallow soils at concentrations up to 130 ppm. The area to the southeast also exceeded the SCO for 1,4 dichlorobenzene of 1.8 ppm with a concentration of 490 ppm.

Groundwater - PCB contamination was found in one of the four monitoring wells. The impacted well is in the southeast portion of the site, near the area of soil contamination at depth. The maximum PCB concentration in groundwater was 4.3 ppb, while the groundwater standard is 0.09 ppb. Turbidity in this well exceeded the prescribed level of 50 NTU in both rounds of groundwater sampling with turbidities of 248 NTU and 318 NTU. Groundwater contamination with various chlorobenzenes was found in a well on the northwestern portion of the site. 1,4 dichlorobenzene, with a groundwater standard of 3 ppb, was found at concentrations up to 490 ppb. Chlorobenzene, with groundwater standard of 5 ppb, was found at concentrations up to 98 ppb. 1,3 dichlorobenzene, with a groundwater standard of 3 ppb, was found at up to 75 ppb. Additionally, the well in the southeast portion of the site contained up to 9.7 ppb of chlorobenzene.

Sediment - Concentrations of PCB were found in sediments from the tidal wetland surrounding the site. 13 of 23 sediment samples exceeded 1 ppm PCB but only 5 samples exceeded 5 ppm. The highest concentrations were found immediately adjacent to the backfilled portions of the site, with concentration dropping off quickly with increased distance. Maximum sediment concentrations were 36 ppm at the southwest limit of the backfill and 29 ppm at the southeast limit.

Special Resources Impacted/Threatened:

Fish and Wildlife Impact Analysis (FWIA) - A FWIA conducted at the site included a shellfish evaluation. Only one of eight shellfish samples contained PCB. This sample contained 173 ppb of PCB. Field observations identified characteristics of a healthy tidal marsh community, including the area with the highest reported PCB concentrations.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Based on the location of the site in an industrial area and under the Goethals bridge, it is unlikely that unauthorized persons could enter the site and come in contact with contaminants present in the soil or in wetland sediments adjacent to the site. However, any bridge related maintenance/construction activities which include excavation would increase the potential for exposure to contaminants present in site soil and sediments. Exposure to site-related contaminants in groundwater is not a concern since the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds (VOCs) in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for exposure to VOCs through soil vapor intrusion for occupants of buildings constructed on or adjacent to this site. However, based on the location of the site under the Goethals bridge and planned construction for a replacement bridge, any future building construction near or at the site is unlikely.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or

impacts from bioaccumulation through the terrestrial food chain.

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: SUMMARY OF THE PROPOSED REMEDY

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the FS report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's proposed remedy is set forth at Exhibit D.

The proposed remedy is referred to as the Excavation and Off-site Soil Disposal with Soil Cover remedy.

The estimated present worth cost to implement the remedy is $551,000. The cost to construct the remedy is estimated to be $528,000 and the estimated average annual cost is $1,500.

The elements of the proposed remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

•Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
•Reducing direct and indirect greenhouse gases and other emissions;
•Increasing energy efficiency and minimizing use of non-renewable energy;
•Conserving and efficiently managing resources and materials;
•Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
•Maximizing habitat value and creating habitat when possible;
•Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
•Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation and Off-Site Disposal

All on-site soils in and beneath upland fill areas to depths of up to 20 feet which exceed industrial SCOs for PCB or protection of groundwater SCOs for 1,4 dichlorobenzene or chlorobenzene, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. This includes two areas to be excavated to 1 foot depth and a small area excavated to a depth of 18 feet. The 37 ppm of PCB found at a depth of 25 feet at boring B-2 will be left in place beneath the cover system due to the impracticality of removal. Approximately 240 cubic yards of soil will be removed from the site. Clean fill meeting the SCOs as set forth in 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3. Soil derived from the re-grading may be used to backfill the excavation beneath the cover system.

3. Sediment Excavation

Contaminated wetlands sediment surrounding hot spots identified by
sample C-1 (29.0 ppm) and sample WT-1 (36 ppm) will be excavated for off-site disposal. The horizontal extent of the focused remediation will begin at the sample locations, extending until either the estimated 5 ppm contour, the hydrologic surface at the edge of the base of the upland fill, or a tidal channel is reached. The vertical extent of the sediment remediation will consist of the removal of sediment found within the limits of the tidal channels, from the existing surface to the base of the peat layer. The boundaries will be determined by field/visual observations. Clean fill consisting of sand and meeting the SCOs as set forth in 6 NYCRR Part 375-6.7(d) for protection of ecological resources will be brought in to complete the backfilling of the excavation and establish the design grades at the site.

4. Soil Cover

A site cover will be required to allow for industrial use of the site. The cover will consist either of the structures such as building slabs, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for industrial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d). No soil cover will be placed in the tidal wetlands other than backfill to the original grade in the areas of excavation.

5. Environmental Easement

Imposition of an institutional control in the form of an environmental easement

•requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
•allows the use and development of the controlled property for industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
•restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH and County DOH; and
•requires compliance with the Department approved Site Management Plan.

6. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 4 above.

Engineering Controls:The soil cover discussed in Paragraph 3 above.

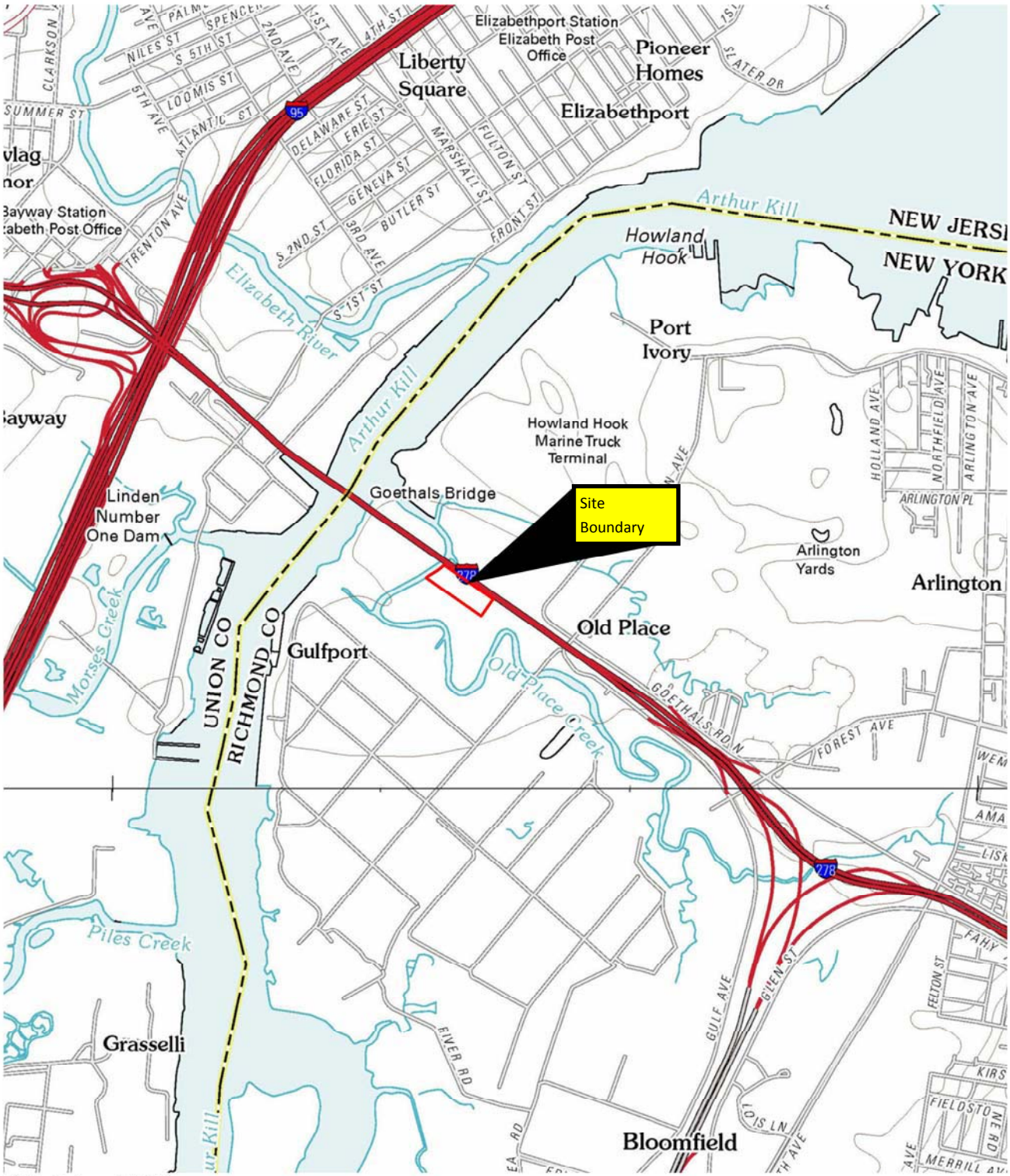
This plan includes, but may not be limited to:

•an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination, including adherence to a Community Air Monitoring Plan;
•descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
•a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

•provisions for the management and inspection of the identified engineering controls;
•maintaining site access controls and Department notification; and
•the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

•monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



0′ 1000′ 2000′

SCALE: 1"=2000′

BRINKERHOFF
ENVIRONMENTAL SERVICES, INC.

FIGURE 1 - SITE LOCATION MAP
U.S.G.S. TOPOGRAPHIC ARTHUR KILL & ELIZABETH, NJ QUADS
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

DATE: 7/9/13	JOB NO.: 08BR049	SCALE: 1" = 2000′

Figure 2 R. Baker & Son Machinery Dismantlers, Site #243008: Alternative 4 Soil and Sediment Excavation Areas

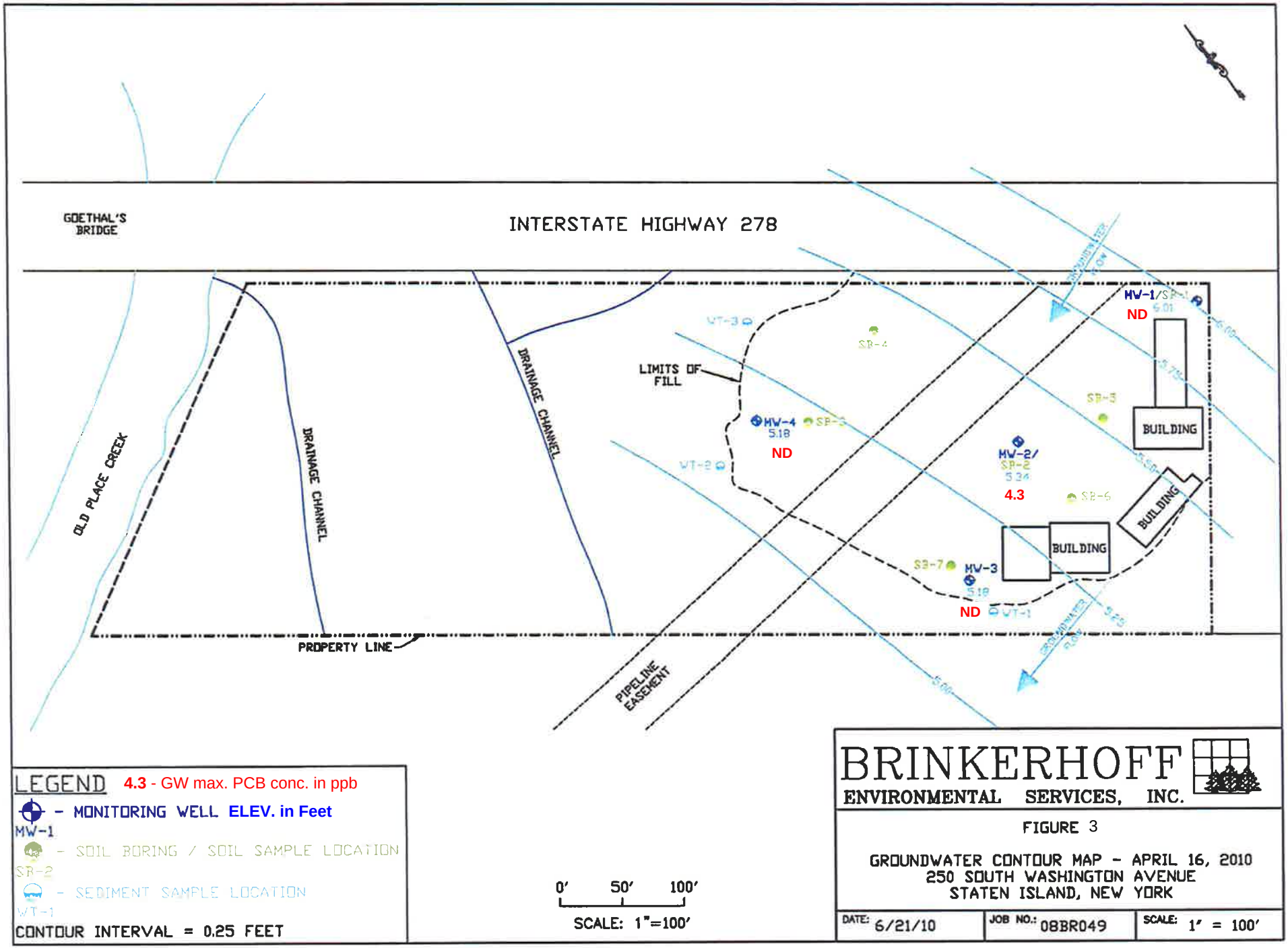
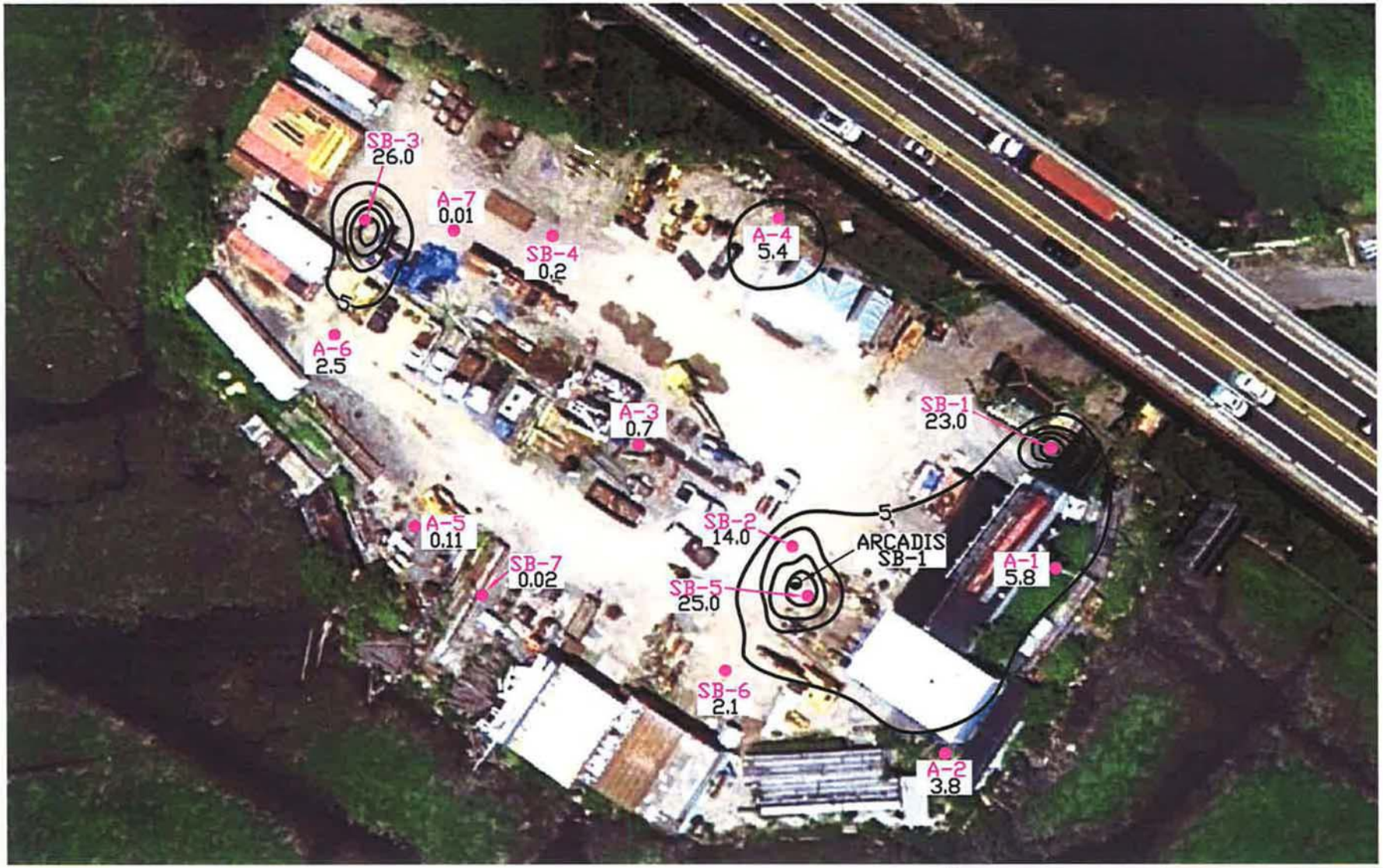


Figure 3 : R. Baker & Son Machinery Dismantlers (Site# 243008) - Groundwater Sampling Results (April 2010 & March 2011)



LEGEND

Results in ppm of PCB

● – BRINKERHOFF SOIL BORING/SAMPLE LOCATION
SB-1

◒ – ARCADIS SOIL BORING/SAMPLE LOCATION
SB-1

CONTOUR INTERVAL = 5ppm PCBs

0′ 30′ 60′

SCALE: 1"=60′

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FIGURE 4 a
SAMPLE LOCATION MAP
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

DATE: 12/4/12	JOB NO.: 08BR049	SCALE: 1′ = 60′

Figure 4a: R. Baker & Son Machinery Dismantlers (Site# 243008) - Shallow 0.5' to 1.5' PCB Soil Sampling Results

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FIGURE 4h
PCBs IN INTERMEDIATE SOILS 12 - 16 FEET
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

DATE:	JOB NO.:	SCALE:
8/15/11	08BR049	1' = 60'

LEGEND
Results in ppm
⊕ - SOIL BORING/SAMPLE LOCATION
SB-1
ND - NON DETECT
CONTOUR INTERVAL = 5ppm PCBs

0' 30' 60'
SCALE: 1"=60'

Figure 4b: R. Baker & Son Machinery Dismantlers (Site# 243008) - Intermediate 12' to 16' PCB Soil Sampling Results

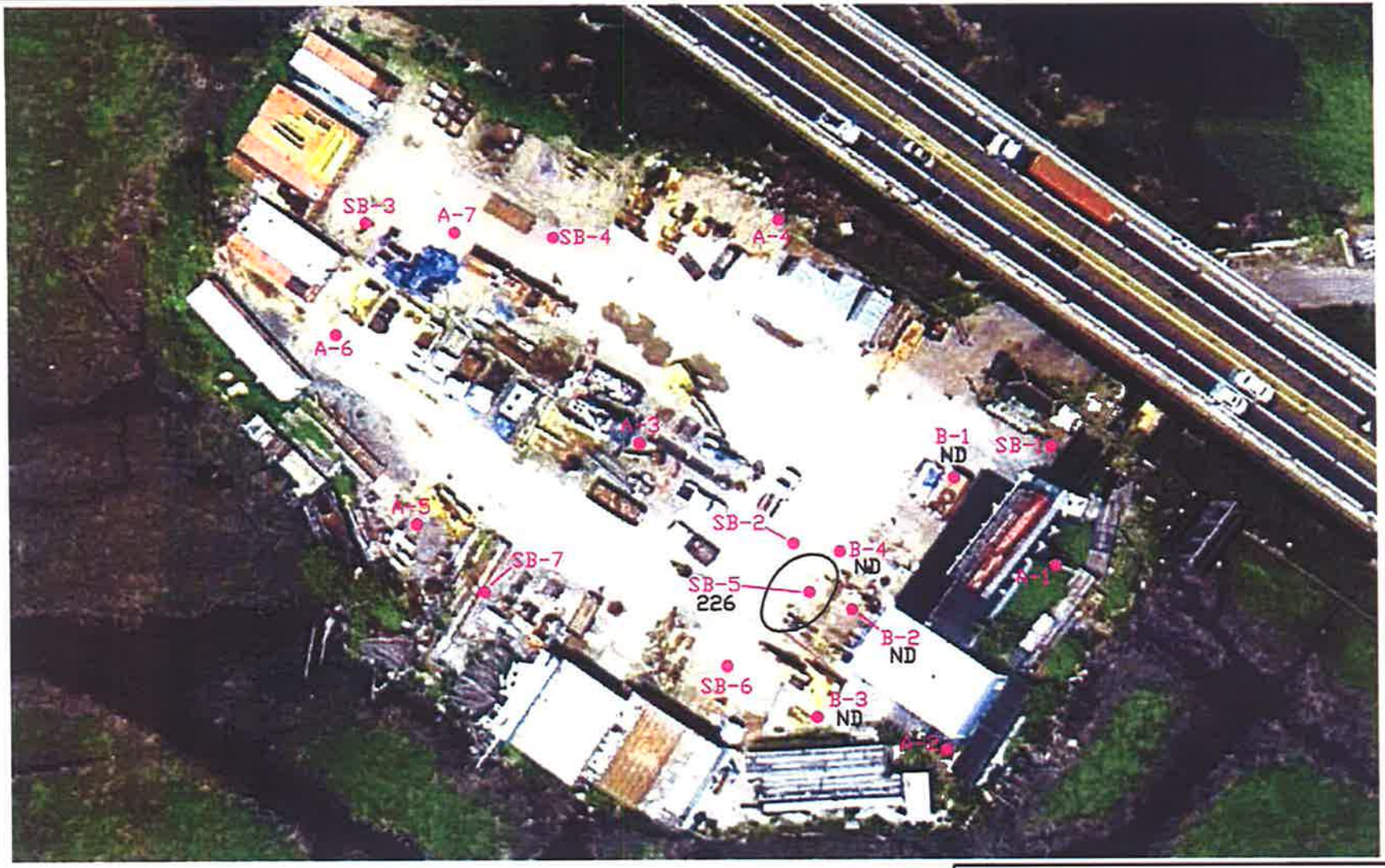

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FIGURE 4c
PCBs IN DEEPER SEDIMENTS 16 - 20 FEET
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

DATE:	JOB NO.:	SCALE:
8/15/11	08BR049	1" = 60'

LEGEND
- SOIL BORING/SAMPLE LOCATION
SB-1
ND - NON DETECT
RESULTS IN ppm

0' 30' 60'
SCALE: 1"=60'

Figure 4c: R. Baker & Son Machinery Dismantlers (Site# 243008) - Deeper 16' to 20' PCB Soil Sampling Results

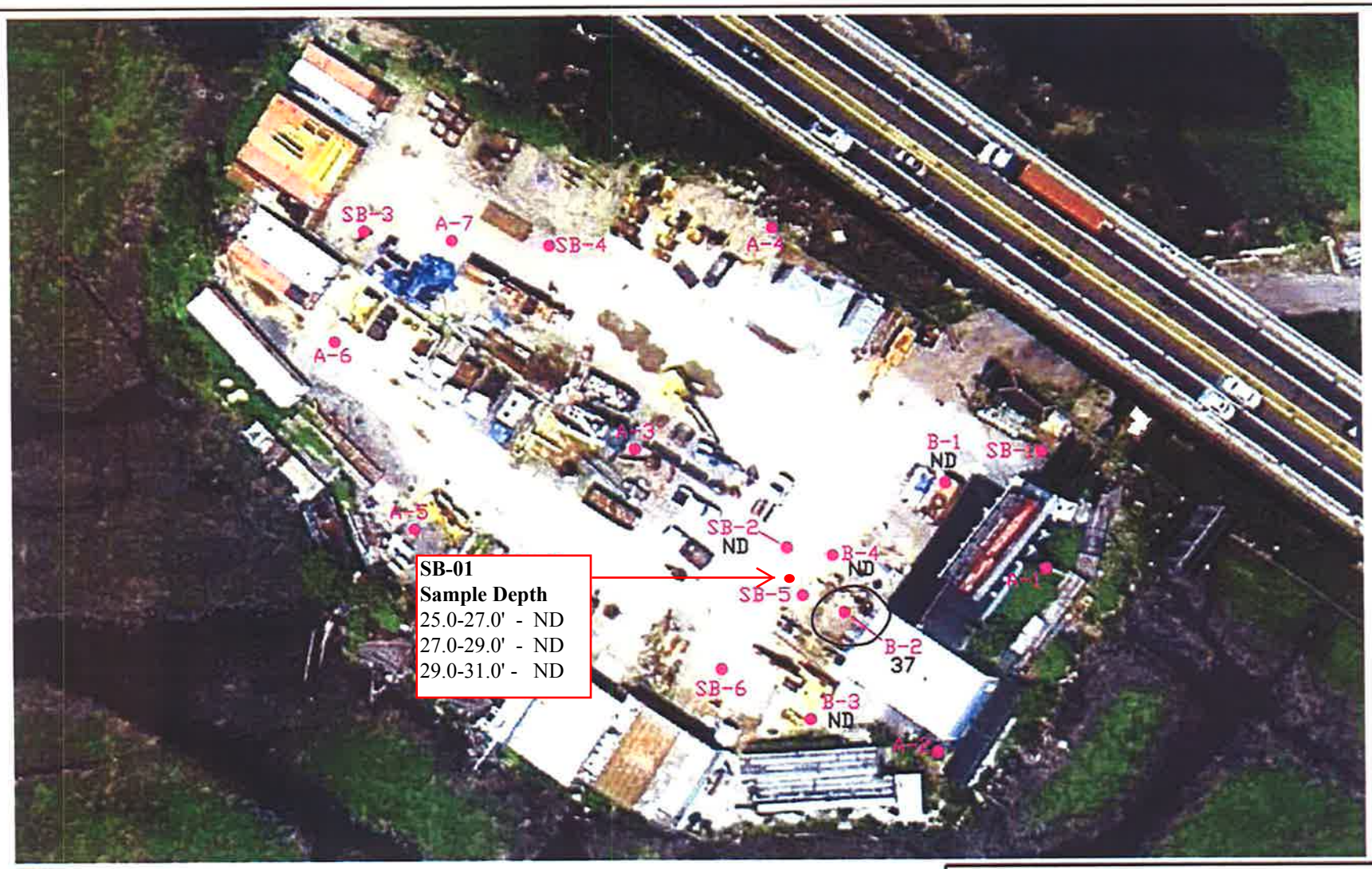

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FIGURE 4d
PCBs IN DEEPER SEDIMENTS BELOW 25 FEET
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

DATE:	JOB NO.:	SCALE:
8/15/11	08BR049	1" = 60'

LEGEND
● - SOIL BORING/SAMPLE LOCATION
SB-1
ND - NON DETECT
RESULTS IN ppm

0' 30' 60'
SCALE: 1"=60'

Figure 4d: R. Baker & Son Machinery Dismantlers (Site# 243008) - Deeper Below 25' PCB Soil Sampling Results

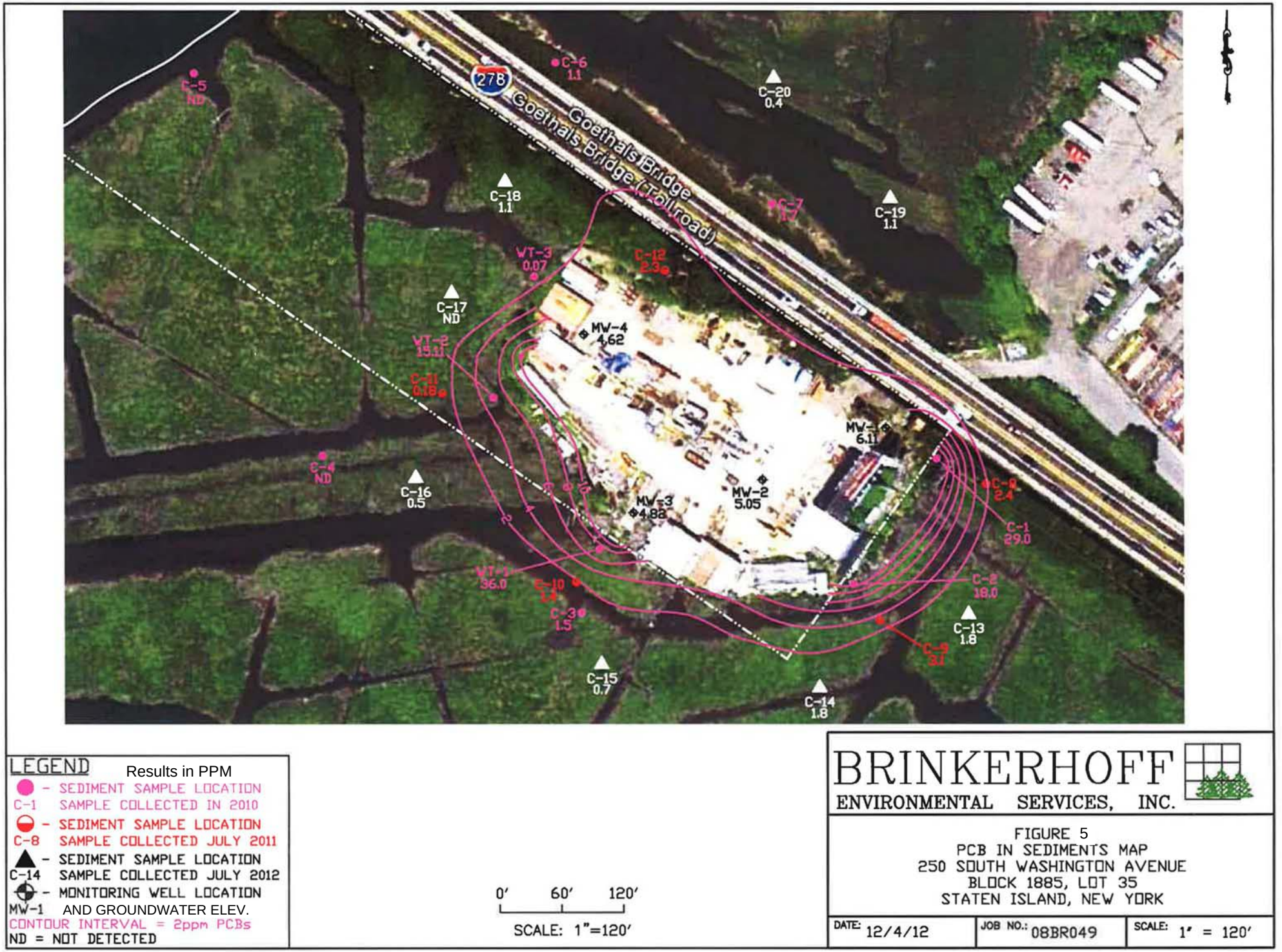

Figure 5 R. Baker & Son Machinery Dismantlers (Site #243008) PCB Results in Wetlands Sediments

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories; volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/ polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Groundwater

Groundwater samples were collected from four shallow overburden monitoring wells located in the upland fill portion of the site to assess groundwater conditions, as shown in Figure 3. The results indicate that contamination in shallow groundwater at the site exceeds the SCGs for PCBs and volatile organic compounds. Turbidity slightly exceeded prescribed levels in the PCB impacted samples.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
1,4 dichlorobenzene	ND – 490	3	2 of 8
1,3 dichlorobenzene	ND – 75	3	2 of 8
chlorobenzene	ND – 98	5	4 of 8
Pesticides/PCBs			
PCB	ND - 4.3	0.09	2 of 8

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

PCB contamination of groundwater in an area of PCB soil contamination is thought to be due to turbidity in the groundwater sample. Contamination from the three types of chlorobenzene appears to be related to site contamination.

Based on the findings of the RI, the presence of 1,4 dichlorobenzene, chlorobenzene, and 1,3 dichlorobenzene has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary

contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are 1,4 dichlorobenzene, chlorobenzene, and 1,3 dichlorobenzene.

Soil

Soil samples were collected from depths ranging from 6 inches to 31 feet. As shown on Figures 4a through 4d, the results indicate the soils exceed the unrestricted SCG for PCBs, volatiles, semi-volatiles, and metals and the industrial SCG for PCBs, semi-volatiles, and metals.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCO	Restricted Use SCG[c] (ppm)	Frequency Exceeding Industrial SCO
VOCs					
benzene	ND – 8.7	0.06	4 of 11	89	0 of 11
acetone	ND - 0.66	0.5	1 of 11	1000	0 of 11
chlorobenzene	ND – 130	1.1	4 of 11	1000	0 of 11
1,4-dichlorobenzene	ND – 3.5	1.8	1 of 11	560	0 of 11
SVOCs					
benzo(a)anthracene	0.12 - 6	1	4 of 10	11	0 of 10
chrysene	0.12 – 5.4	1	5 of 10	110	0 of 10
benzo(b)fluoranthene	0.24 – 6.4	1	5 of 10	11	0 of 10
benzo(k)fluoranthene	0.17 – 5.5	0.8	5 of 10	110	0 of 10
benzo(a)pyrene	0.21 – 4.9	1	4 of 10	1.1	4 of 10
ideno(1,2,3-cd)pyrene	.07 – 1.2	0.5	2 of 10	11	0 of 10
dibenz(a,h)anthracene	ND – 0.51	0.33	1 of 10	1.1	0 of 10
Inorganics					
arsenic	ND – 48.4	13	1 of 10	16	1 of 10
barium	29.6 - 1900	350	3 of 10	10,000	0 of 10
beryllium	ND – 60.9	7.2	4 of 10	2,700	0 of 10
cadmium	0.57 – 4.9	2.5	4 of 10	60	0 of 10
chromium, trivalent	18.1 - 1120	30	6 of 10	6800	0 of 10
copper	195 - 8830	50	10 of 10	10,000	0 of 10
lead	56.2 - 4360	63	9 of 10	3900	1 of 10

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCO	Restricted Use SCG[c] (ppm)	Frequency Exceeding Industrial SCO
manganese	45.2 - 2890	1600	2 of 10	10,000	0 of 10
mercury	ND – 2.04	0.18	3 of 10	5.7	0 of 10
nickel	7.81 - 3640	30	8 of 10	10,000	0 of 10
selenium	ND – 14.6	3.9	3 of 10	6800	0 of 10
silver	ND – 7.25	2	3 of 10	6800	0 of 10
zinc	27.8 – 20,600	109	8 of 10	10,000	2 of 10
Pesticides/PCBs					
PCB	ND - 226	0.1	30 of 50	25	6 of 50
4,4'-DDE	ND - 0.011	0.0033	3 of 13	120	0 of 13
4,4'-DDD	ND - 0.006	0.0033	2 of 13	180	0 of 13
dieldrin	ND – 0.18	0.005	3 of 13	2.8	0 of 13

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Industrial Use, unless otherwise noted.
d - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater.

The contaminants of concern are PCBs, 1,4 dichlorobenzene and chlorobenzene. Contamination is thought to have resulted from sloppy handling of solvents and salvaged electrical equipment containing PCBs.

SVOC and inorganic contamination is typical of urban fill and generally below industrial use SCGs. Therefore, SVOCs and inorganics are not considered a site specific contaminant of concern.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of soil. The site contaminant identified in soil which is considered to be the primary contaminants of concern, to be addressed by the remedy selection process are PCBs and chlorobenzenes.

Sediments

Sediment samples were collected from the salt water marsh surrounding the upland portion of the site during the RI. The samples were collected to assess the potential for impacts to wetland sediment from the site. The results indicate that sediment in the on-site wetland exceed the Department=s SCGs for sediments for PCB, as well as dichlorobenzenes, several SVOCs, and a number of inorganics.

Table 3 - Sediment

Detected Constituents	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)	Frequency Exceeding SCG
VOCs			
dichlorobenzenes	3.8	0.18 [d]	1 of 1
SVOCs			
benzo(a)anthracene	0.23	0.0021 [c]	1 of 1
benzo(b)flouranthene	0.35	0.0021 [c]	1 of 1
benzo(k)flouranthene	0.29	0.0021 [c]	1 of 1
chrysene	1.0	0.0021 [c]	1 of 1
Inorganics			
antimony	6.9	LEL 2.0	1 of 1
		SEL 25	0 of 1
arsenic	41.6	LEL 6.0	1 of 1
		SEL 33	1 of 1
cadmium	2.56	LEL 0.6	1 of 1
		SEL 9.0	0 of 1
chromium	255	LEL 26	1 of 1
		SEL 110	1 of 1
copper	1160	LEL 16	1 of 1
		SEL 110	1 of 1
iron	98,700	LEL 20,000	1 of 1
		SEL 40,000	1 of 1
lead	601	LEL 31	1 of 1
		SEL 110	1 of 1
manganese	701	LEL 460	1 of 1
		SEL 1100	0 of 1
mercury	2.08	LEL 0.15	1 of 1
		SEL 1.3	1 of 1
nickel	315	LEL 16	1 of 1
		SEL 50	1 of 1
silver	2.72	LEL 1.0	1 of 1
		SEL 2.2	1 of 1
Pesticides/PCBs			
PCB	ND – 36.1	0.00012 [c]	21 of 23

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in sediment;
b - SCG: The Department=s ATechnical Guidance for Screening Contaminated Sediments.@ Based on average Total Organic Carbon content of 15% in 8 samples tested.

c – Value is based on Human Health Bioaccumulation
d - Value is based on Benthic Aquatic Life Chronic Toxicity
LEL = Lowest Effects Level and SEL = Severe Effects Level. A sediment is considered contaminated if either of these criteria is exceeded. If the SEL criteria are exceeded, the sediment is severely impacted. If only the LEL is impacted, the impact is considered moderate.

The sediment contaminants of primary concern are PCBs. As shown on Figure 5, PCB concentrations are highest immediately adjacent to the upland fill portion of the site and drop of rapidly further from the fill. The Fish and Wildlife Impact Analysis indicated the wetlands portion of the site, including those areas with the highest PCB contamination, appeared generally healthy. Additionally, sampling of shellfish (rib mussels) in the vicinity of the site showed only 1 of 5 samples with a detection of PCBs at 173 ppb. Finally, there is little or no opportunity of the public coming in contact with these sediments from recreational use. Therefore a remedial action requiring extensive wetland excavation is considered counter-productive. Instead, sediment remedial efforts will be focused on the limited areas with the highest PCB concentrations.

Based on the findings of the Remedial Investigation, the presence of PCB has resulted in the contamination of sediment. The site contaminants that are considered to be the primary contaminant of concern which will drive the remediation of sediment to be addressed by the remedy selection process is PCBs.

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

Alternative 2: Site Management

The Site Management Alternative requires only institutional controls for the site. This alternative includes institutional controls, in the form of an environmental easement and a site management plan, necessary to protect public health and the environment from any contamination identified at the site. The easement requires the remedial party or site owner to complete a periodic certification that institutional and engineering controls remain in place, allows industrial use of the property subject to local zoning laws, restricts the use of groundwater as a source of potable or process water, and requires compliance with the Department approved Site Management Plan. The Site Management Plan requires a provision for evaluating the potential for soil vapor intrusion for any buildings developed on the site, as well as a monitoring plan to monitor for soil vapor intrusion in such buildings.

Alternative 3: Excavation and Off-site Soil Disposal with Soil Cover and Hot Spot Sediment Excavation with Off-site Disposal

To the extent feasible all on-site soils in and beneath upland fill areas at depths of up to 20 feet which exceed industrial SCOs for PCB or protection of groundwater SCOs for 1,4 dichlorobenzene or chlorobenzene, as defined by 6 NYCRR Part 375-6.8, will be excavated. Excavated soils will be transported off-site for disposal. As shown in Figure 2 this includes two areas excavated to 1 foot depth and a small area excavated to a depth of 18 feet. The 37 ppm of PCB found at a depth of 25 feet at boring B-2 would be left in place beneath the cover system due to its impracticality of removal. Approximately 240 cubic yards of soil will be removed from the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. The upland fill portion of the site will be re-graded to accommodate installation of a cover system as described in remedy element 3. Soil derived from the re-grading may be used to backfill the excavation beneath the cover system.

A site cover will be required to allow for industrial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for industrial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

Contaminated wetlands sediment surrounding hot spots identified by sample C-1 (29.0 ppm) and sample WT-1 (36 ppm) will be excavated for off-site disposal. The horizontal extent of the focused remediation would begin at the sample location, extending until either the estimated 5 ppm contour, the hydrologic surface at the edge of the base of the upland fill, or the edge of a tidal channel is reached. The vertical extent of the sediment remediation would consist of the removal of sediment found within the limits formed by the tidal channels and the upland fill, from the existing surface to the base of the peat layer. The boundaries would be determined by field/visual observations. Approximately 240 cubic yards of sediment will be removed from the site. Clean fill consisting of sand and meeting the SCOs as set forth in 6 NYCRR Part 375-6.7(d) for protection of ecological resources will be brought in to complete the backfilling of the excavation and establish the design grades at the site.

No action is contemplated for groundwater under this alternative.

This alternative includes institutional controls, in the form of an environmental easement and a site management plan, necessary to protect public health and the environment from any contamination identified at the site. The easement requires the remedial party or site owner to complete a periodic certification that institutional and engineering controls remain in place, allows industrial use of the property subject to local zoning laws, restricts the use of groundwater as a source of potable or process water, and requires compliance with the Department approved Site Management Plan. The Site Management Plan requires a provision for evaluating the potential for soil vapor intrusion for any buildings developed on the site, as well as a monitoring plan to monitor for soil vapor intrusion in such buildings.

Present Worth: *$551,000*
Capital Cost: *$528,000*
Annual Costs: *$1500*

Alternative 4: Excavation and Off-site Soil Disposal with Soil Cover and Sediment Excavation to 5 ppm with Off-site Disposal

This alternative is similar to Alternative 3, with the exception that all sediments within the 5ppm PCB contour line will be excavated and disposed of off-site. To the extent feasible all on-site soils in and beneath upland fill areas at depths of up to 20 feet which exceed industrial SCOs for PCB or protection of groundwater SCOs for 1,4 dichlorobenzene or chlorobenzene, as defined by 6 NYCRR Part 375-6.8, will be excavated. Excavated soils will be transported off-site for disposal. As shown in Figure 2 this includes two areas excavated to 1 foot depth and a small area excavated to a depth of 18 feet. The 37 ppm of PCB found at a depth of 25 feet at boring B-2 would be left in place beneath the cover system due to its impracticality of removal. Approximately 240 cubic yards of soil will be removed from the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element 3. Soil derived from the re-grading may be used to backfill the excavation beneath the cover system.

A site cover will be required to allow for industrial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for industrial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

Contaminated wetlands sediment exceeding 5 ppm, as defined by the 5ppm contour line in Figure 2, will be excavated for off-site disposal. The vertical extent of the sediment remediation would consist of the removal of sediment from the existing surface to the base of the peat layer. Approximately 2400 cubic yards of sediment will be removed from the site. Clean fill with similar quality as the removed sediments will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

No action is contemplated for groundwater under this alternative.

This alternative includes institutional controls, in the form of an environmental easement and a site management plan, necessary to protect public health and the environment from any contamination identified at the site. The easement requires the remedial party or site owner to complete a periodic certification that institutional and engineering controls remain in place, allows industrial use of the property subject to local zoning laws, restricts the use of groundwater as a source of potable or process water, and requires compliance with the Department approved Site Management Plan. The Site Management Plan requires a provision for evaluating the potential for soil vapor intrusion for any buildings developed on the site, as well as a monitoring plan to monitor for soil vapor intrusion in such buildings.

Present Worth: *$1,560,000*
Capital Cost: *$1,540,000*
Annual Costs: *$1500*

Alternative 5: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A. This alternative would include: Groundwater extraction and treatment to address all contaminants above SCGs in groundwater. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to cover the areal and vertical extent of the area of concern. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the extraction wells within the plume area. Groundwater will be extracted from the subsurface over an approximately 400-square foot area located in the western portion of the upland segment of the site where VOCs elevated in groundwater, and another approximately 400-square foot area in the east center portion of the upland site where both VOCs and PCBs were found above SCGs. Further details of the extraction system will be determined during the remedial design.

The extracted groundwater will be treated with liquid phase absorption using activated granular activated carbon (GAC). GAC will be used to remove dissolved contaminants from extracted groundwater by adsorption. The GAC system will consist of one or more vessels filled with carbon connected in series and/or parallel.

The entire upland fill portion of the site of approximately 28,000 c.y. will be excavated back to the original wetlands elevation and transported off-site for disposal.

Wetland sediments would also be excavated and disposed of off-site. The volume of wetlands sediment which would have to be excavated is unknown, since the investigation did not delineate PCB contamination in sediments down to the PCB sediment SCG of 0.000012 ppm. It is likely background PCB concentrations in a major metropolitan area with a long history of industrial activity such as New York City may exceed the sediment SCG, so defining the limits of contamination exceeding this SCG would be problematic. At a minimum, sediment volumes are expected to be at least 50,000 c.y. under this alternative.

Present Worth: ..... *In excess of $25,000,000*
Capital Cost: ..... *In excess of $25,000,000*
Annual Costs: *$0*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual Costs	Total Present Worth
1. No Action	$0	$0	$0
2. Site Management	$0	$0	$0
3. Excavation and Off-site Soil Disposal with Soil Cover, Hot Spot Sediment Removal	$528,000	$1500	$551,000
4. Excavation and Off-site Soil Disposal with Soil Cover, 5 ppm Sediment Removal	$1,540,000	$1500	$1,560,000
5. Restoration to Pre-Disposal or Unrestricted Conditions	>$25,000,000	$0	>$25,000,000

Exhibit D

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative No. 3, Excavation and Off-site Soil Disposal with Soil Cover and Hot Spot Sediment Excavation with Off-site Disposal as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by removing 240 c.y. of contaminated soils from the site, replacing with clean fill and a 1 foot soil cover, and removal of an additional 240 c.y. of contaminated sediments and restoring to original grade with clean fill of similar quality as the removed sediments. The elements of this remedy are described in Section 7. The proposed remedy is depicted in Figure 2.

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The proposed remedy, Alternative 3 would satisfy this criterion by removing the soil containing PCB in excess of industrial SCGs for soils at depth of up to 20 feet and covering any remaining lesser contaminated soils not covered by a building slab, pavement, or asphalt with a one foot soil cover. The most significant threat to the environment is presented by PCB contamination in tidal wetlands. As the Fish and Wildlife Impact Analysis identified a healthy tidal salt marsh with no PCB impacts to ribbed mussels above EPA tolerance levels, only excavation and removal of the highest concentration “hot spots’ is proposed to minimize disturbance to the wetlands while reducing the chance of future impacts. Alternative 1 (No Action) does not provide any additional protection to public health and the environment and will not be evaluated further. Alternative 2 is protective of human health and the environment through the implementation of Institutional and Engineering Controls. Alternatives 3 and 4 are protective of human health and the environment through the removal of the greatest concentrations of soil and sediment contamination, a one foot soil cover over upland portions of the site, and implementation of Institutional and Engineering Controls. Alternative 5 would be protective of human health and the environment without Institutional and Engineering Controls by restoring the site to pre-disposal conditions.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternative 3 complies with SCGs to the extent practicable. It addresses source areas of contamination and complies with the restricted use soil cleanup objectives at the surface through construction of a cover system. Alternatives 2 also complies with this criterion, but to a lesser degree or with lower certainty. Alternatives 4 and 5 also satisfy the threshold criteria. Therefore, the remaining criteria are particularly important in selecting a final remedy for the site.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Long-term effectiveness is best accomplished by those alternatives involving excavation of the contaminated overburden soils (Alternatives 3, 4, and 5). Since most of the contamination is in the western yard and the upper six feet of the east yard, Alternative 3 results in removal of almost all of the PCB contamination exceeding the SCG for the intended industrial future use and is therefore effective in the long-term and permanent. Alternative 4 removes even more of the contaminated sediments and Alternative 5 removes both more contaminated soils and more contaminated sediments, so both alternatives are effective in the long term and permanent. For Alternative 2, site management remains effective, but it will not be as desirable in the long term. Alternative 5 is the only alternative which would not require a groundwater use restriction, though the groundwater at this site is not a significant resource.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 2 would control potential exposures with institutional controls only and will not reduce the toxicity, mobility or volume of contaminants remaining. Alternatives 3, 4, and 5 which each include excavation and off-site disposal, reduce the toxicity and mobility of on-site waste by transferring the material to an approved off-site location. However, depending on the disposal facility, the volume of the material would not be reduced.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative 2 has no additional short term impacts. Alternatives 3 and 4 have short-term impacts, however, Alternative 3 would have the lesser impact. These short term impacts will be minimized by use of engineering controls. Alternative 5 would have a major short-term impact due to the large area of salt march which would need to be excavated. Under Alternatives 3, 4, and 5, the amount of time required for the excavated areas in the salt marsh to naturally return to their current healthy state could be extensive. The area of the marsh disturbed would be smallest under Alternative 3, considerably greater under Alternative 4, and vastly greater under Alternative 5. The time needed to achieve the remediation goals is the shortest for Alternative 2 and longest for Alternative 5.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternatives 2 and 3 are favorable in that they are readily implementable. Alternative 4 is also implementable, but the volume of soil excavated under this alternative makes it slightly more difficult. Due to the large area of sediments to be removed under Alternative 5, implementation would be very difficult.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

Alternative 2 has low cost, but the contaminated soil would not be addressed other than by institutional controls. Alternatives 3 and 4 both meet threshold criteria but Alternative 4 costs roughly three times as much due to its greater volume of wetlands sediment to be removed, making it less cost-effective. With its exceptionally large volume of soil and sediment to be removed, Alternative 5 would have the highest present work cost by a wide margin.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

Since the anticipated use of the site is industrial, Alternative 2 would be less desirable because shallow soils with PCB contamination above industrial SCGs would remain on the property. Alternative 3, 4, and 5 would remove contaminated soil permanently. However, the residual contamination would remain with Alternative 3 and 4 and would be controlled by a soil cover which would be inspected annually under a Site Management Plan. With Alternative 5 all contaminated soils and sediments would be removed and restrictions on the site use would not be necessary.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative No. 3 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.