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FEASIBILITY STUDY AND CONCEPTUAL REMEDIAL ACTION PLAN

**Former R. Baker & Son Machinery Dismantler, Inc.
250 South Washington Avenue
Block 1885, Lot 35
Staten Island, New York**

July 2012

1.0 TECHNICAL OVERVIEW

In August 2009, Walter Baker and R. Baker & Son industrial Services, Inc. (Baker) entered into an Order of Consent with the New York State Department of Environmental Conservation (NYSDEC). As set forth in the order, the goal of the order was the development and implement of a Supplemental Investigation Work Plan, and other site activities pursuant to the terms of the order.

The order expressly approved the process for the submission of all plans to investigate the property. Prior to performing the work, Baker would submit a work plan to the NYSDEC for review and approval. Once approval was given by the NYSDEC and accepted by Baker, Baker would direct the work to be implemented. This process has been followed since the 2009 agreement.

In early 2009, Brinkerhoff Environmental Services, Inc. (Brinkerhoff) commenced the investigation at the site identified as 250 South Washington Street in Staten Island, New York. The site was identified by the New York State Department of Environmental Conservation (NYSDEC) as a Class 2 Site in the New York State Registry of Inactive Hazardous Waste Sites (Site No. 130154). Between 2009 and June of 2012, Brinkerhoff conducted multiple investigations and collected soil, sediment and groundwater samples for the purpose of characterizing the nature and extent of suspected contaminants at the site, including poly-chlorinated biphenyls (PCBs). At all times, the sampling and analyses

performed by Brinkerhoff was completed in accordance with approved sampling and analyses work plans expressly approved by the NYSDEC.

The investigations identified PCBs present in the near surface sediments in the uplands portion of the property ranging from 0.01 parts per million (ppm) to 26 ppm. At depth, PCBs were detected at levels ranging from 227 ppm in one (1) sample to non-detect. PCBs were detected in the sediments in the lowland areas of the property, ranging from non-detect concentrations to 36 ppm. Four (4) groundwater monitoring wells were installed in the water table aquifer. PCBs were detected in only one (1) of the four groundwater monitoring wells at a concentration of 4.3 parts per billion (ppb).

The sampling and analyses identified elevated concentrations of other contaminants in the upland area of the property. The contaminants included polynuclear aromatic hydrocarbons (PAHs) and metals including arsenic, cadmium, lead, chromium, nickel and zinc. No volatile organic compounds (VOCs) were detected in the soil. Similar compounds and metals were detected in the sediment samples collected in the lowland area of the parcel. These compounds and metals are related to historic fill found in urban settings, including throughout the five boroughs of New York.

The VOCs chlorobenzene (98 ppb), 1,3 dichlorobenzene (75 ppb) and 1,4 dichlorobenzene (490 ppb) were detected in one (1) groundwater monitoring well and chlorobenzene (7 ppb) was detected in a second monitoring well.

Analyses of the data shows that the contaminants of concern on the property are PCBs. Sampling and analyses have delineated both the horizontal and vertical delineation of PCBs in both the upland and lowland portion of the property. Using the data collected, a conceptual remedial action plan was developed. The goal of this remedial action plan is the protection of human health and the environment and to prevent any further degradation of both the groundwater and wetlands.

2.0 SITE CHARACTERIZATION

2.1 Site and Surrounding Property Use

The site is located at 250 South Washington Avenue in Staten Island. The location of the site is shown on Figure 1. The site is located under the Goethals Bridge in a highly industrial area of Staten Island. Site use is and always has been industrial, used as a storage facility for heavy equipment and materials associated with demolition industry. The site is soil and gravel covered and contains several small out building and trailers. The site has limited access from one roadway entering the parcel in the northeast corner.

A large abandoned pipeline right-of-way intersects the property. The pipeline within this right of way once carried various fuels to one (1) or more of the local airports. It has been documented that the pipeline of the may have been coated with tars containing PCBs for rust control. These abandoned pipelines could be a contributing source of PCBs in the area.

The property is located on a tributary of the Arthur Kill River, with the western end of the property located within 1,000 feet of the main river channel. The Arthur Kill watershed in the area of the property is heavily industrialized and is documented to be highly stressed and contaminated. Spills of hazardous materials, including PCBs, have been documented throughout the Arthur Kill River Watershed.

The subject property is tidally influenced and, during specific high tides, the entire property, including the uplands portion of the parcel, is flooded with water from the Arthur Kill. This tidal flooding subjects the property to environmental degradation by contaminants associated with the Arthur Kill River.

2.2 Site Geology and Hydrogeology

The site is comprised of an uplands area covering approximately two (2) acres located in the eastern portion of the parcel and wetlands in the western half of the property. The entire parcel is approximately 4.5 acres. The uplands area consists of fill material and rises several feet above the adjacent tidal wetlands. Subsurface sediments consist of brown to black fine to medium sand and fill material to an average depth of 13 feet below grade where a peat layer is present. Fine sand is present to an average depth of 25 feet below grade where a red silt and clay are present. Depth to groundwater averaged four (4) feet below grade. As previously discussed, during specific tides, the entire site is flooded by water from the Arthur Kill River. A geologic log is provided as Figure 2.

3.0 CLEANUP OBJECTIVES

3.1 Overview

In developing cleanup objectives for the site, the primary goal is the protection of human health and the environment. The USEPA's PCB Site Revitalization Guidance under the Toxic Substances Control Act (TSCA) document along with the New York State Department of Environmental Conservation's CP-51-Soil Cleanup Guidance were utilized in developing the objectives. Soil Cleanup Objectives as established by the USEPA and the NYSDEC in Subpart 375-6 were also utilized in the evaluation process. The following are the contaminant levels present at the site.

Soil

PCBs in the soil ranged from non-detectable concentrations to 226 ppm in one (1) sample. The highest concentration of PCBs is located in a sample collected in the east central portion of the property, concentrated in the front of the main building located on the eastern end of the property. Contaminant isopleth maps illustrating PCB concentrations at various depths are provided in Figures 3 through 6.

In this sample area, PCBs increased with depth, with PCB levels of 25 ppm at the surface, 98 ppm at an intermediate depth, and 226 ppm at depth. The vertical extent of PCB impact appears to be isolated to this localized area in front of the main garage building. Additional sampling was completed in March 2011 to further delineate vertically and horizontally PCBs at the site.

Elevated concentrations of PAHs and various metals, including lead, arsenic, nickel and zinc were detected in soil samples analyzed. Based on the distribution and soil type at the site, these contaminants, are related to urban historic fill and not site specific site operations.

Wetland Sediments

Sediment samples were also collected in the wetlands surrounding the uplands portion of the parcel. Elevated concentrations of PCBs were detected, ranging from 0.07 ppm to 36 ppm. Delineation sampling was completed in March and July 2011 and, with the exception of several small areas discussed here, the concentration of PCBs in the sediments within the wetlands has been delineated to 1 ppm (Figure 7).

Groundwater

Four (4) shallow water table groundwater monitoring wells were installed as part of the site investigation (see Figure 7 for well locations). Groundwater sampling and analysis indicates little impact to groundwater from PCBs. PCBs were reported at non-detectable concentrations in three (3) of the four (4) groundwater monitoring wells installed. PCBs were detected in one (1) monitoring well at the concentration of 0.54 ppb. NYSDEC's Ambient Water Quality Standard (AWQS) is 0.09 ppb. The VOCs chlorobenzene (98 ppb), 1,3 dichlorobenzene (75 ppb) and 1,4 dichlorobenzene (490 ppb) were detected in one (1) groundwater monitoring well and chlorobenzene (7 ppb) was detected in a second monitoring well. The SVOC 2,4-dichlorophenol was detected at 0.84 ppb.

3.2 Soil Cleanup Objectives

In developing the soil cleanup goal for the property two (2) cleanup scenarios were evaluated. The first scenario would present a soil cleanup goal of 10 ppm for the surface soil and 25 ppm for soil at depth with the use of both institutional and engineering controls is proposed for the parcel. The 10 ppm surface soil cleanup objective utilizes the USEPA's guideline cleanup standards for low occupancy site (which this site will achieve) of 10 to 25 ppm, with engineering controls. Achieving this objective will require excavation of three (3) specific areas. Placement of an engineering control in the form of a cap will follow.

A soil cleanup objective of 25 ppm utilizes the Industrial Soil Cleanup Objectives for Industrial Use, for which this property and surrounding properties conform. In previous conversations, the NYSDEC has stated that the use of the Industrial Soil Cleanup Objectives would be appropriate for this site. Given the industrial nature of the site and surrounding properties, a subsurface soil cleanup objective of 25 ppm would be appropriate for this property.

The second scenario would present a soil cleanup goal of 10 ppm for the surface and subsurface soil, also with the use of both institutional and engineering controls. If a cleanup objective of less than 10 ppm is achieved, the USEPA's guideline cleanup standards for a high occupancy site would apply, allow a wider variety of uses for the site. Placement of an engineering control in the form of a cap will follow.

3.3 Cleanup Objectives for the Wetlands

Biota sampling has been completed as part of the fish and wildlife evaluation. No visible signs of stressed vegetation were observed at or near all of the sample locations. The area was also observed to contain a healthy colony of *Spartina*. No visible soil staining, water sheen or unusual odors were detected during the sampling event. Fiddler crab (*Uca pugnax*) was found to be numerous within the area.

For the purpose of this conceptual plan, and based on field observations, the historic nature of contamination in the Arthur Kill and the possibility that remedial action of the wetlands would be more detrimental to the ecological environment, for the present time, being assumed that no remediation of the adjacent wetlands is necessary.

Sampling within the wetlands has, if data is extrapolated, delineated PCBs to one (1) ppm as illustrated in Figure 7. Additional samples have been collected to confirm this extrapolation and will be incorporated into the existing data set when available.

3.4 Cleanup Objectives for Groundwater

Sampling and analyses shows only one area where groundwater has been impacted by the PCBs. Samples collected from Monitoring Well MW-2 show the presence of PCBs exceeding the NYSDEC's AGWS. The VOC chlorobenzene was also detected over the AGWS in MW-2. The VOCs chlorobenzene, 1,3 dichlorobenzene and 1,4 dichlorobenzene were over AGWS in Well MW-4.

The proposed soil remediation discussed here will be effective in reducing future impact to groundwater in this area. The proposed soil cap will reduce vertical migration of contaminants to the groundwater, thus limiting future impact to groundwater.

4.0 CONCEPTUAL CLEANUP PLAN

4.1 Overview

In developing the conceptual remedial plan, the objective was to protect human health and the environment. The feasibility of achieving this objective was evaluated for the various remedial options available.

Two (2) cleanup objectives are being provided. The first would involve a cleanup to allow low occupancy use and the second would allow for a high occupancy use. The property owner is considering which option would best address future uses for the site.

4.2 Soil Remediation, Low Occupancy

In order to achieve a remedial goal of 10 ppm for surface soil and 25 ppm for soil at depth, shallow soil remediation will be necessary in three locations, which are identified as Areas A, B and C on Figure 8. PCBs were detected at over 26 ppm at the near surface soil in these three (3) locations.

Within Area C, PCBs were detected at depths exceeding 25 ppm. Within Area C, a smaller area, measuring approximately 20 feet by 20 feet will require excavation to a deeper depth of between 20 and 25 feet below grade. This projected area is identified as Area D.

Sheeting would be installed to the appropriate depth to limit groundwater migration into the excavation and to allow soil excavation with only limited dewatering.

Post remedial soil sampling will be completed at each excavation area. One sample will be collected for each 30 feet of sidewall and one bottom sample for each 900 square feet of base. Samples will be analyzed for PCBs by a New York Department of Health certified laboratory.

Soil will be excavated and stockpiled for disposal. Once the soil has been sampled and characterized, the soil will be properly disposed of at an approved off-site facility, likely a Subtitle C facility. Any water generated via dewatering will also be properly disposed of at an approved facility.

4.3 Soil Remediation, High Occupancy

In order to achieve a remedial goal of 10 ppm for both surface soil and subsurface soil, soil remediation will also be necessary in the three (3) previously identified locations. To achieve 10 ppm, excavation in all three (3) locations may have to be expanded. Area D may also have to be expanded both vertically and horizontally, generating additional soil for disposal.

Post remedial sampling and analyses will be conducted to verify the target of 10 ppm has been achieved.

4.4 Engineering and Institutional Controls

The engineering control would involve placement of one foot of compacted clean fill over the entire uplands portion of the parcel. The cap will reduce the potential exposure to human health and also eliminate any further degradation via surface run off of PCBs to the adjacent wetlands. The engineering control will also eliminate exposure to the other contaminants detected at the site, which are associated with the urban historic fill present.

5.0 SUMMARY

The property is located at 250 South Washington Avenue in Staten Island in a highly industrial area of Staten Island. Site use is and always has been industrial.

The property is located in the Arthur Kill watershed and in a heavily industrialize area, which is documented to be highly environmentally stressed and contaminated. The subject property is tidally influenced and, during specific high tides, the entire property, including the uplands portion of the parcel, is flooded.

In developing a conceptual remedial plan for the site, the most important factors were the protection of human health and the environment. Two (2) cleanup objectives are being provided. The first would involve a cleanup to allow low occupancy use and the second would allow for a high occupancy use. The property owner is considering which option would best address future uses for the site.

With Option One, Given the industrial nature of the site and surrounding properties and discussions with the NYSDEC, Restricted Use Industrial Standards of 25 ppm would be appropriate for soil at depth. A 10 ppm soil cleanup objective for surface soil, which is the USEPA's soil cleanup standards for industrial sites, would also be an appropriate cleanup objective for this site, with the use of an engineering control such as a cap.

Option Two would achieve a cleanup objective of 10 ppm for both surface and subsurface soil. This would require excavation and disposal of additional soil to achieve the cleanup goal, but would not limit the use to low occupancy. Engineering and institutional controls would also be utilized.

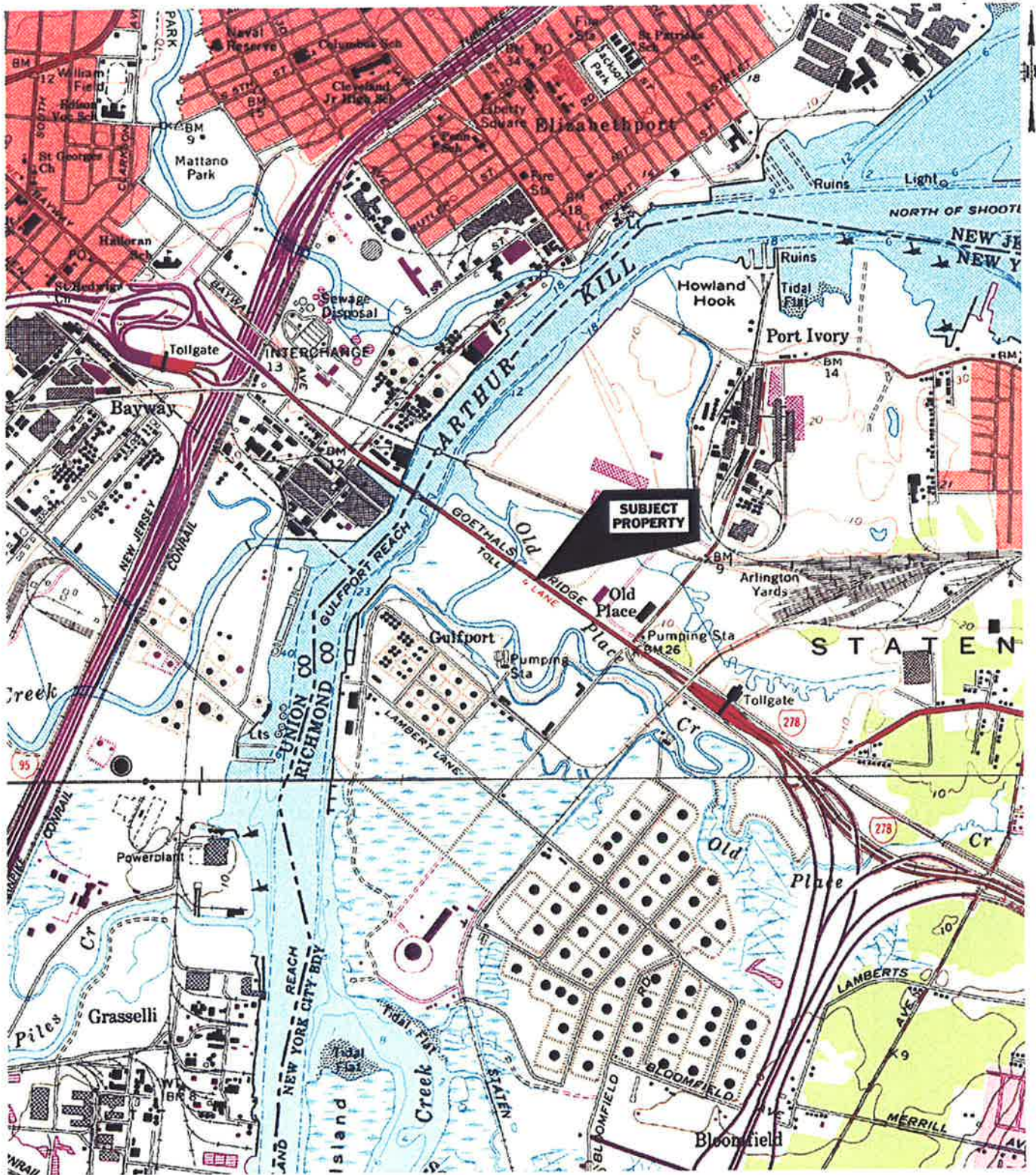
The use of a cap would provide protection to human health and environment. Further, the cap would prevent any further degradation of the adjacent wetlands and provide a barrier to human contact. Since the site is of an industrial nature, low occupancy use can be achieved, which will also be a measure for the protection of human health.

Respectfully submitted,
BRINKERHOFF ENVIRONMENTAL SERVICES, INC.

A handwritten signature in blue ink, appearing to read 'D. HARM', enclosed within a large, loopy blue oval. The signature is somewhat stylized and overlaps itself.

DOUG HARM, P.G.
Vice President, Technical Services

FIGURES



Scale: 1 : 24,000

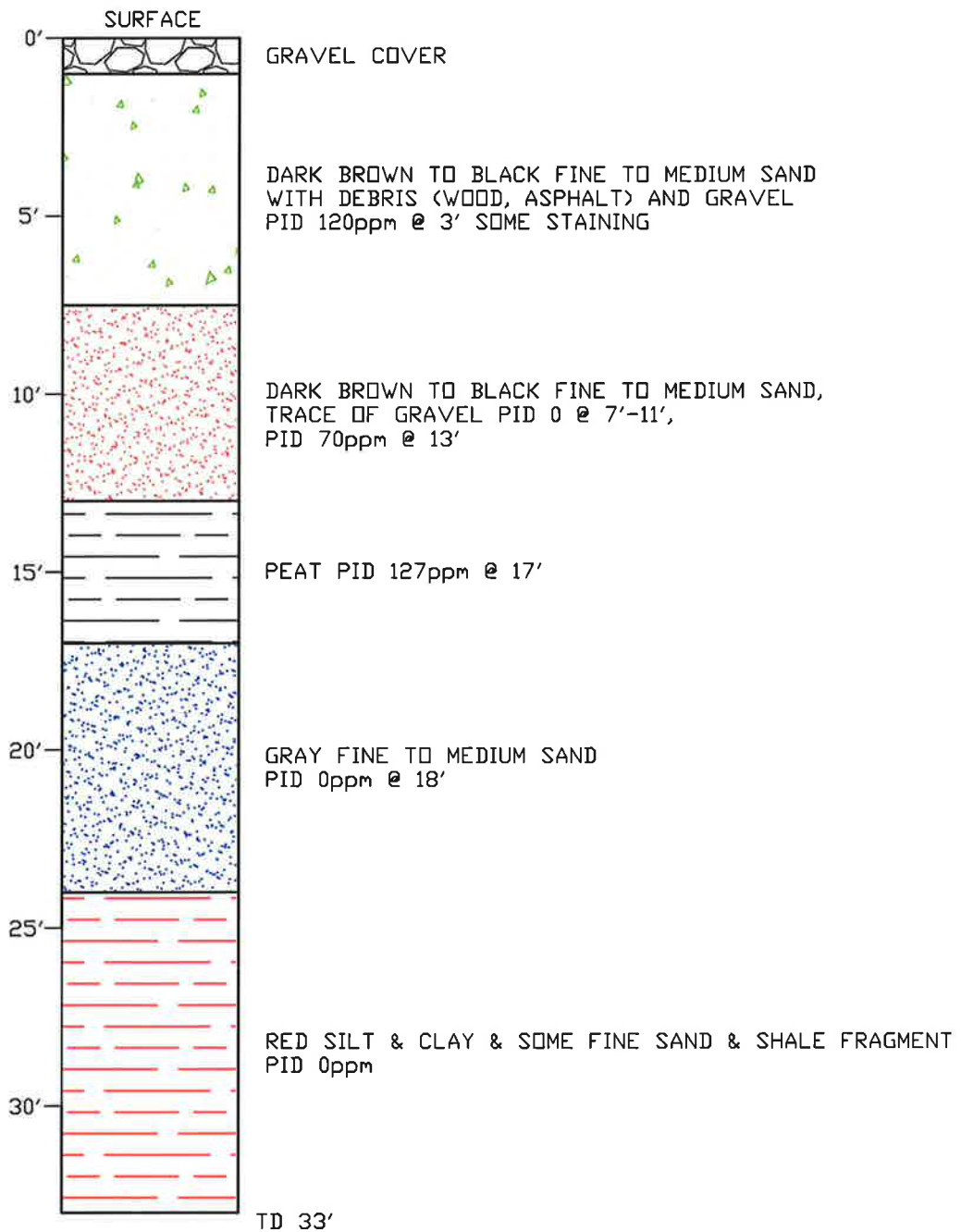
BRINKERHOFF

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Figure 1 - Site Location Map
U.S.G.S. Topographic Elizabeth, NJ Quad

250 South Washington Avenue
Staten Island, New York



GEOLOGIC LOG
AREA OF B-2 AND SB-5

0' 2.5' 5'
SCALE: 1"=5'

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FIGURE 2
GEOLOGIC LOG AREA OF B-2 & SB-5
250 SOUTH WASHINGTON AVENUE
BLOCK 1885, LOT 35
STATEN ISLAND, NEW YORK

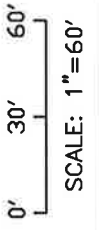
DATE: 7/16/12	JOB NO.: 08BR049	SCALE: 1" = 5'
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FIGURE 3
 PCBs IN SHALLOW SEDIMENTS 0.5 - 1.0 FEET
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 7/11/12 JOB NO.: 08BR049 SCALE: 1" = 60'



LEGEND
 ● - SOIL BORING/SAMPLE LOCATION
 SB-1
 CONTOUR INTERVAL = 5ppm PCBs



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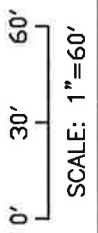
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FIGURE 4
 PCBs IN INTERMEDIATE SEDIMENTS 12 - 16 FEET
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 7/11/12 JOB NO.: 08BR049 SCALE: 1" = 60'

LEGEND

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

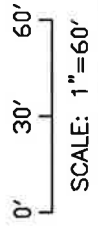




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FIGURE 5
 PCBs IN DEEPER SEDIMENTS 16 - 20 FEET
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 7/11/12 JOB NO.: 08BR049 SCALE: 1" = 60'



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



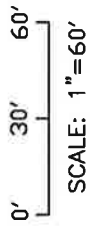
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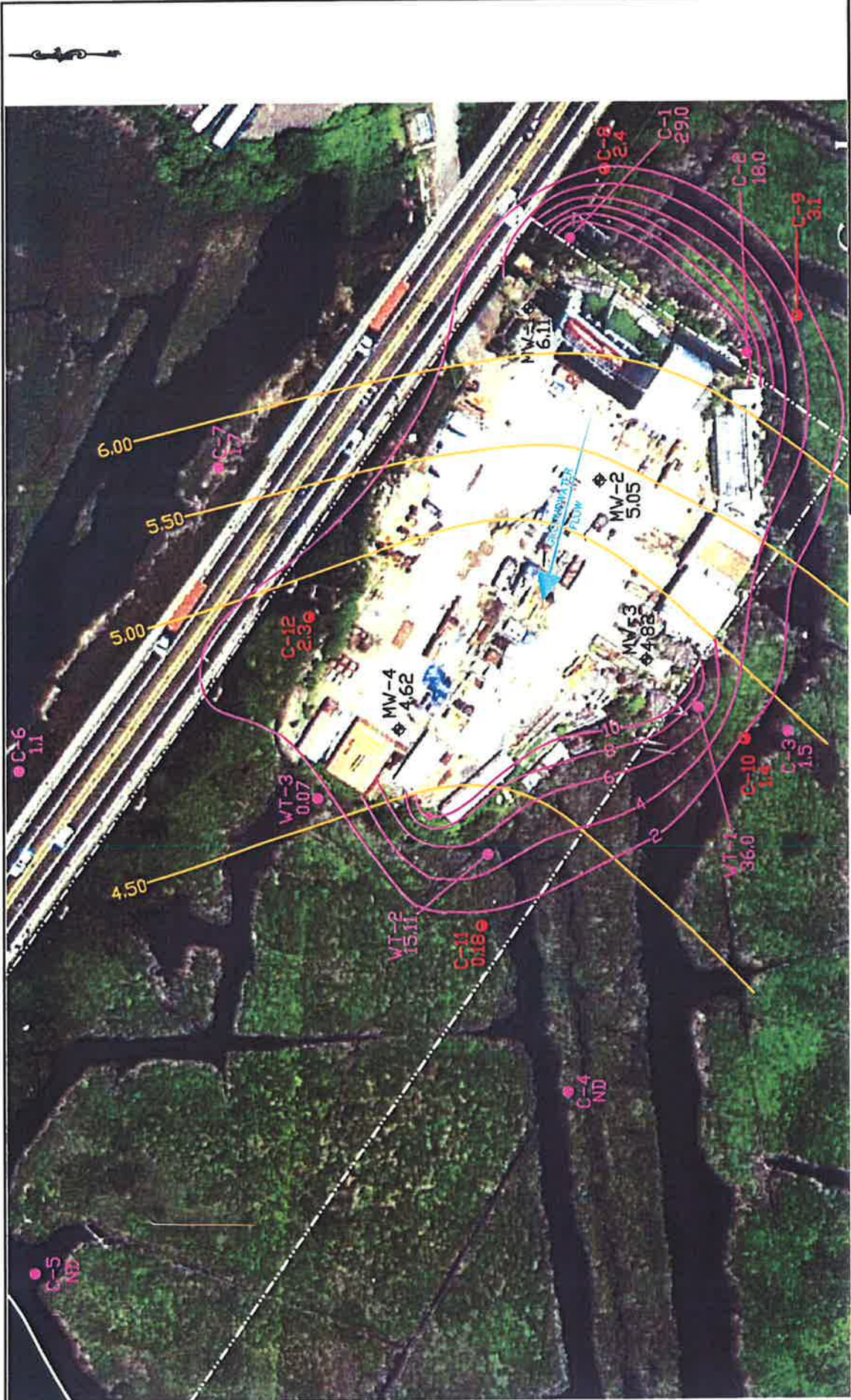


FIGURE 6
 PCBs IN DEEPER SEDIMENTS BELOW 25 FEET
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 7/11/12 JOB NO.: 08BR049 SCALE: 1" = 60'

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





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FIGURE 7 - PCB IN SEDIMENTS /
 GROUNDWATER CONTOUR MAP - 3/30/11
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 8/15/11 JOB NO.: 08BR049 SCALE: 1" = 100'

- LEGEND**
- - SEDIMENT SAMPLE LOCATION
 - C-1 - SAMPLE COLLECTED IN 2010
 - - SEDIMENT SAMPLE LOCATION
 - C-8 - SAMPLE COLLECTED JULY 2011
 - ⊙ - MONITORING WELL LOCATION
 - MW-1
 - CONTOUR INTERVAL = 2ppm PCBs
 - CONTOUR INTERVAL = 0.50 FEET





LEGEND

- A - EXCAVATION 0-1'
- B - EXCAVATION 0-1'
- C - EXCAVATION 0-1'
- D - EXCAVATION 1'-25'



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FIGURE 8
 PROPOSED SOIL REMEDIATION AREA MAP
 250 SOUTH WASHINGTON AVENUE
 BLOCK 1885, LOT 35
 STATEN ISLAND, NEW YORK

DATE: 7/12/12

JOB NO.: 08BR049

SCALE: 1" = 60'