SITE MANAGEMENT PLAN
FOR
GREATER WATERSIDE SITE
700-708 FIRST AVENUE
NEW YORK, NEW YORK

NYSDEC BROWNFIELD CLEANUP PROGRAM
Site Number C231013

Prepared by

TRC Engineers, Inc.
New York, New York

TRC Project No. 180360

September 2011

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

SITE MANAGEMENT PLAN
FOR GREATER WATERSIDE SITE

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SITE MANAGEMENT PLAN
FOR GREATER WATERSIDE SITE

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1.0 INTRODUCTION AND PURPOSE

This document is required as an element of the remedial program at the Greater Waterside Site (hereinafter referred to as the "Site") under the New York State Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with Voluntary Cleanup Orders (VCOs) Index #D2-0001-01-03; Site #V00431-2 and #V00432-2, which was executed on June 27, 2001. This agreement was later superseded by Brownfield Cleanup Agreement (BCA) Index# A2-0515-0405, Site #C231013, which was executed by the NYSDEC on June 16, 2010.

The Greater Waterside Site at 700-708 First Avenue, New York, New York is a comprised of the former Waterside Generating Station site at 700 First Avenue, New York, New York (previously designated as Voluntary Cleanup Program site V-00432-2, or "Waterside") and 708 Office Building site at 708 First Avenue, New York, New York (previously designated as Voluntary Cleanup Program site V-00431-2, or "708 Office Building"), collectively, identified herein as BCP Site C231013, or the "Site." The Site is a 6.4-acre vacant property currently owned by 700 First Realty Company, LLC (Block 970, Lot 1) and 708 First Realty Company, LLC (Block 970, Lot 2). The location of the property is shown on Figure 1. The Site was characterized during several previous investigations and remediation of the Site was completed in accordance with the following New York State Department of Environmental Conservation (NYSDEC)-approved documents: *Supplemental Soil Investigation Final Report and Remediation Work Plan* dated September 2003 (RWP for Waterside), *Supplemental Soil Investigation Final Report and Remediation Work Plan* dated June 2002 (RWP for 708 Office Building), *Final Report for Waterside Generating Station Remediation Work Plan* dated February 2008 (Final Report for Waterside) and *Final Report for 708 Office Building Remediation Work Plan* dated April 2006 (Final Report for 708 Office Building).

This Site Management Plan ("SMP") establishes the procedures for the management of soil and groundwater generated from below Development Depth, if any, during future construction activities associated with Site redevelopment. As presented in the Final Reports and consistent with TRC's contract with the Site Developer, the Development Depth is defined as the depth to the top of competent bedrock or the mean high water table (-0.4 feet in the Manhattan Highway Datum), whichever is higher. A figure showing the Site boundaries to which the SMP applies is provided in Appendix A.

This plan is not intended to serve as a design document for the construction activities related to redevelopment activities. It is the owner's or owner designee's responsibility to prepare a design that incorporates the requirements for cover and soil/groundwater management as set forth in this SMP.

Failure to implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion. Failure to comply with the SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the BCA (Index #A2-0515-0405, Site #C231013) for the Site, and thereby subject to applicable penalties.

1.1 Overview and Objectives

The objective of the SMP is to set guidelines for management of soil and groundwater generated from below Development Depth during any future redevelopment activities, and to identify periodic reporting requirements.

The SMP establishes the procedures for the following activities:

1. Soil disturbance activities below Development Depth
2. Groundwater dewatering, if required,
3. Management of excavated soil and dewatered groundwater,
4. Management of new fill material,
5. Site-specific health and safety requirements during construction,
6. Notification of Change in Use of Property, and
7. Notification and reporting.

The SMP does not require groundwater and other environmental monitoring, public health monitoring, or monitoring to assess the effectiveness of the remedy. However, periodic inspections must be performed to assess the performance and effectiveness of the remedy.

1.2 Site History

The Midtown Manhattan Site is bordered to the north by East 41st Street; the Franklin D. Roosevelt Drive (FDR) and Marginal Street to the east; East 38th Street to the south; and First Avenue to the west. A portion of the Queens Midtown Tunnel passes beneath the northwestern

portion of the Site. The area around the Site contains a mixture of commercial, residential, and industrial establishments.

Sanborn Maps show that the property originally extended to the historical banks of the East River. Construction of the FDR Drive and Marginal Street added fill beyond the former eastern side of the property changing the area to its current dimensions. The 708 portion of the Site was initially operated as a manufactured gas plant (MGP) until circa 1920. The former MGP facility on the property included five aboveground gas holders, two coal houses, two underground naphtha tanks, which were subsequently replaced by two underground oil tanks, and an iron building. On the southern portion of the Site, Waterside 1 was originally a coal yard and a wood mill in 1890. By 1899 it was a storage yard for the Edison Electric Light Company (a predecessor company of Con Edison). The Waterside 2 portion of the property was occupied by a manufactured gas plant (MGP) until circa 1910 and included two aboveground gas holders, a retort house, a purifying house with a lime shed holder, a condenser house, a carbureting house, two carbureting tanks and two underground naphtha tanks.

By 1910, the former MGP structures on the Site had been demolished, and Waterside 1 and 2 had been built on the southern portion of the Site, followed by construction of the Con Edison's 10-story 708 Office Building, circa 1923. The operator of the Waterside Stations was the New York Edison Company (a Con Edison predecessor company). Coal hoists at the east end of the Site indicated that the stations were powered by coal. The 1950 Sanborn Map shows the operator of the Site to be Consolidated Edison Company of New York and depicted a dock area along the East River, located on the east side of the FDR Drive that served the Waterside Generating Stations. Structures associated with the dock included coal conveyors between the dock and the Waterside Generating Stations, ash bins and an ash bunker, steam and coal towers, and a substation building. The 1980 Sanborn Map shows no structures on the dock and no coal conveyors between the dock and the Waterside Stations. The on-site structures were used for the generation of steam and electricity for off-site distribution to Con Edison customers.

Construction of the 708 Office Building required lowering of the grade to below the bedrock surface for much of the building footprint, with unconsolidated soil and fill material remaining on only the eastern one third of the 708 portion of the Site. Other Con Edison structures on the Site were built between 1921 and 1928, and included the Switch House, the Locker Room Building, and the Frequency House. The 708 Office Building was primarily used for vehicle parking and loading of goods and equipment on floors one through three, and as office space for the remaining floors. The Switch House and Frequency House were retired in the 1980s and

were used for maintenance shops and the storage of inactive, electrical equipment. Previously, these buildings had been utilized for the distribution of electricity to the New York City subway stations. The Locker Room Building was utilized as locker rooms for employees, but was used as an instrumental/control shop for calibration of equipment and meters in the 1970s.

2.0 PREVIOUS INVESTIGATIONS

2.1 Chronology

Several environmental investigations were performed at the property since 1998. The following reports present a chronological summary of the significant investigations performed at the Site.

Phase I Environmental Site Assessment, 708 First Avenue, NY, Foster Wheeler Environmental Corporation, December, 1998.

Phase I Environmental Site Assessment, Waterside Generating Station, Manhattan, NY, Foster Wheeler Environmental Corporation, January, 2000.

Phase II Environmental Site Assessment, Waterside No. 1 and No. 2 Generating Stations & 708 First Avenue Properties, Foster Wheeler Environmental Corporation, March 2000.

Supplemental Soil Investigation Final Report and Remediation Work Plan, 708 Office Building Property, New York, New York, TRC Engineers, Inc., June 2002.

Supplemental Soil Investigation Final Report and Remediation Work Plan, Waterside Generating Station, 700 First Avenue, New York, New York, TRC Engineers, Inc., September 2003.

Environmental remediation was completed on the 708 Office Building portion of the Site in March 2004, and on the southern portion of the Site in January 2008, as documented in the following reports:

Final Report for 708 Office Building Remediation Work Plan, TRC Engineers Inc., April 2006.

Final Report for Waterside Generating Station Remediation Work Plan, TRC Engineers Inc., February 2008.

Copies of these reports can be found at NYSDEC's Albany Office and at the BCP document repository at the Science, Industry and Business branch of the New York City Public Library, located at 188 Madison Avenue, Manhattan.

2.2 Nature and Extent of Contamination

The remediation completed at the Site, as reported in the Final Reports, resulted in the removal of all soil above the Development Depth. The Site was partially backfilled above Development Depth with clean sand meeting TAGM 4046 requirements and clean crushed stone. The constituents of potential concern (COPCs) for soil remaining at the Site below Development Depth consist primarily of metals and polycyclic aromatic hydrocarbons (PAHs). Results of groundwater sampling indicate that constituents in the soil below Development Depth have not significantly impacted groundwater quality. However, bedrock and overburden groundwater at the Site contains several volatile organic compounds (VOCs), each at concentrations slightly above NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards.

3.0 CONTEMPLATED USE

The objective of the RWP activities was to ready the Site for development for the Contemplated Use (i.e., residential and commercial development) in accordance with Track 4, restricted residential use with site-specific soil cleanup objectives (see 6 NYCRR Part 375-3.8(e)). During the remediation, all materials above the Development Depth were removed and disposed off site. Activities that will disturb materials below the Development Depth must be conducted in accordance with this SMP and the Site is subject to the institutional controls set forth in the Environmental Easements attached hereto as Appendix G.

The notification requirements of Section 8.0 of this SMP will be triggered by any change of use, including transfer of the title to all or part of the Site, or the erection of structures on the Site.

4.0 SUMMARY OF REMEDY IMPLEMENTED

As presented in the Final Report, the following remedial activities were completed to ready the Site for the Contemplated Use:

- Asbestos abatement, decommissioning and demolition of all buildings and subsurface structures to Development Depth;
- Removal of nine (9) petroleum USTs;
- Excavation and disposal of petroleum - impacted soil;
- Excavation and disposal of all soil above Development Depth;
- Closure of intake and discharge tunnels in accordance with NYSDEC requirements;
- Excavation of VOC – contaminated soil at a depth of 25 to 39 feet below grade surface at the UST area, and backfilling the excavation with suitable on-site soils and imported clean backfill;
- Application of Oxygen Release Compound (ORC®) within the deep UST excavation area to treat residual VOC contamination in groundwater;
- Evaluation of groundwater conditions within the bedrock and shallow aquifer by installation and sampling of four bedrock monitoring wells and ten shallow aquifer monitoring wells;
- Performing a post-remediation soil-gas survey;
- Close-out of all open NYSDEC spill numbers for previously-reported on-site impacts; and,
- Two feet of compacted clean soil meeting TAGM 4046. See Section 5.4 for a description of the future cover system for the Site.

As per the NYSDEC letters dated November 13, 2007 approving Site remediation and the Final Report for the 708 Office Building and May 27, 2008 approving Site remediation and the Final Report for Waterside (Appendix C)**,** the Site meets the standards for development for the Contemplated Use.

In summary, all soils at the Site were removed to Development Depth; therefore, only those activities which will disturb soils and/or groundwater below Development Depth are governed by this SMP.

5.0 REMEDY MANAGEMENT/LONG TERM MAINTENANCE

Site redevelopment may disturb certain areas of the Site below Development Depth. Implementation of the SMP relative to these activities will be the responsibility of the property owner or owner's designee.

5.1 Site Preparation

As part of redevelopment or future intrusive on-site activities, the Site may require grading prior to construction of final Site structures and cover. Soil above Development Depth does not require any special handling for Site preparation activities.

5.2 Erosion and Dust Control

Silt fencing and hay bales will be utilized, as required, to prevent soils from below Development Depth from leaving the Site. Soil from below Development Depth adhered to construction vehicles and equipment will be removed prior to such vehicles and equipment leaving the Site. Brooms, shovels, washing or steam cleaning will be utilized for the removal of such soil from vehicles and equipment. Soil or construction debris from below Development Depth will be removed from vehicles and equipment at a designated area of the Site. Wastewater generated by the decontamination process for materials generated below Development Depth will be collected and analyzed for waste characterization and off-site disposal.

If required, dust suppression measures will be implemented during soil disturbance activities below Development Depth, and will include misting of soil and/or construction debris with water and, if appropriate, applying a dust suppressant, in high vehicle traffic areas. To evaluate the effectiveness of the dust suppression measures, dust particulate levels will be monitored utilizing real-time dust monitoring instrumentation as per the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (gCAMP; Appendix D).

5.3 Excavation Below Development Depth

The property owner or owner's designee will provide NYSDEC with notification of activities that disturb soil below Development Depth or generate dewatering fluids as per the notification requirements presented in Section 8.0 of this SMP. Access to soil/fill on the property will be

controlled until final cover is placed to prevent direct contact with soils below Development Depth.

5.3.1 Management of Soil and Other Potential Solid Waste

The area of the Site where soil exists below the Development Depth is shown in Appendix E. Excavated soil and other potential solid waste (i.e., concrete rubble, remnants of former foundation piles, etc.) from below Development Depth will be stockpiled separately from other construction materials at the Site. Excavated soil will be temporarily stockpiled on plastic and covered with plastic or placed in a covered roll-off in a prepared area of the Site. Excavation below Development Depth will be overseen by a person who will provide the requisite annual certification.

Soil temporarily excavated from below Development Depth may be placed below Development Depth again during redevelopment-related construction. Any excess soil or other solid waste from below Development Depth that will not be placed back below Development Depth during redevelopment-related construction will be disposed off-site in accordance with all relevant federal, state and local regulations. Segregation of contaminated soil for off-site disposal will be based on visual, olfactory and instrument-based soil screening performed by a qualified environmental professional during all development excavations below the Development Depth. Any soils which show obvious signs of significant contamination or free product will be segregated and disposed off-site in accordance with relevant federal, state and local regulations. Based upon the volume of stockpiled soil intended for off-site disposal, a representative number of composite and/or grab samples will be collected for laboratory analysis in accordance with potential disposal vendor requirements to determine waste disposal characterization. The analyses to be performed will depend upon the requirements of the off-site disposal facility selected by the property owner, and may include full toxic characteristic leaching procedure (TCLP) parameters, VOCs, PCBs, PAHs and metals. Based upon the results of the laboratory analyses, the final disposition of these materials will be determined.

Transport of materials will be performed by licensed haulers in accordance with appropriate local, state, and federal regulations, including 6 NYCRR Part 364. Contaminated material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used. In addition, (a) trucks will be prohibited from stopping and idling in the neighborhood outside the project Site; (b) egress points for truck and equipment

transport from the Site will be kept clean of dirt and other materials during Site development; and (c) queuing of trucks will be performed on-site in order to minimize off-site disturbance.

Generally, trucks leaving the Site shall exit the Site onto 35th Street and proceed west to the nearest local City of New York-designated truck routes [i.e., First Avenue (to then travel north) or to Second Avenue (to then travel south)]. Trucks will travel local truck routes to through truck routes leading out of the City. The labeling, packaging, and transportation of the waste shall be in compliance with federal and state rules and regulations, as well as those of the bridge and tunnel operators (i.e. the Port Authority of New York and New Jersey and MTA Bridges and Tunnels). Wastes must travel over or through only those specific bridges or tunnels that are designated for that specific type of waste. Figure 2 depicts the location of the Site and nearby truck transport routes from the Site to locations to the north, east and west.

5.3.2 Management of Construction Water and Groundwater

Water pumped from excavations below Development Depth will be managed properly in accordance with all applicable regulations so as to prevent endangerment of public health, property, or any portion of the construction.

Site development may require the dewatering of groundwater. Dewatered groundwater will be managed using any of the following three methods:

1. Discharge to the New York City sewer system with authorization from the New York City Department of Environmental Protection (NYCDEP),
2. Discharge to surface water pursuant to a SPDES Equivalent permit issued by the NYSDEC; or,
3. Transportation and disposal at an off-site treatment facility.

Discharge to the New York City sewer system is a convenient method for management of dewatering fluids during construction. The NYCDEP regulates discharges to the New York City sewers under NYCDEP's Title 15, Rules of the City of New York (RCNY) Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the dewatering fluids meets New York City's Sewer Use Guidelines. If necessary, the dewatering fluid will be pretreated to meet the New York City effluent discharge criteria.

The contractor may alternatively discharge to surface water (e.g., the East River). The NYSDEC regulates such discharges under 6 NYCRR 750. If the discharge utilizes the NYCDEP sewer system, then NYCDEP authorization will also be required as described above. The contractor may alternatively utilize an outfall to surface water not controlled by NYCDEP. Construction of such an outfall would require NYSDEC and U.S. Army Corps of Engineers permits and approvals.

If discharge to the New York City sewer system is not feasible or is not desirable, the dewatering fluids will be managed by transportation and disposal at an off-site treatment facility, in accordance with all relevant federal, state and local regulations. A representative number of composite or grab samples will be collected for laboratory analysis in accordance with potential disposal vendor requirements to determine waste disposal characterization. Based upon the results of the laboratory analysis, the final disposition of the dewatering fluids will be determined.

5.4 Cover System

Future Site development will constitute the cover system at the Site. Based on the elevation of Development Depth (approximately 9 to 30 feet below sidewalk grade elevation), there will be greater than two feet of cover over the entire Site. The cover system will consist of the building structures, clean fill soil, landscaping, and concrete and asphalt paving, in accordance with the New York City Department of Buildings (NYCDOB)-approved development plan for the Site.

Site redevelopment may, in addition to the new building structures, require the importation of clean fill to restore Site grade above Development Depth. Any soils imported to the Site must meet the backfill and cover soil quality standards established in 6 NYCRR Part 375-6.7(d)(1)(ii)(b) or otherwise approved by the NYSDEC. Appendix E provides a table listing the respective allowable constituent levels applicable to soil material to be placed above and below the Development Depth, respectively.

The NYSDEC previously approved the use of clean fill obtained from Amboy Aggregates, South Amboy, New Jersey for this Site. Additional laboratory testing of fill soil from any site other than Amboy Aggregates will be performed. One representative sample from virgin soils will be obtained and analyzed for TCL VOCs, SVOCs, pesticides, PCBs, and Priority Pollutant metals to document compliance with TAGM RSCOs. Non-virgin soils will be tested via the collection of one composite sample per 500 cubic yards of material from each fill source area. If more that

1000 cubic yards of soil are borrowed from a given non-virgin soil source area and both samples of the first 1000 cubic yards meet TAGM RSCOs, the sample collection frequency will be reduced to one composite sample for every 2500 cubic yards of additional soils from the same source, up to 5000 cubic yards. For borrow sources greater than 5000 cubic yards, sampling frequency will be reduced to one sample per 5000 cubic yards, provided all earlier samples met TAGM RSCOs.

5.5 Institutional Controls

The institutional control for the Site (referred to herein after as the Controlled Property) will consist of a Environmental Easement applying to disturbances of soil below Development Depth and usage of groundwater (Appendix G). Soil or material below Development Depth must be properly handled and disposed, if removed, in accordance with all applicable regulations. Any groundwater that is removed from the Site must be properly treated for disposal purposes.

The Institutional Controls that are applicable to this Site are as follows:

1. Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;

2. All Engineering Controls must be maintained as specified in this SMP;

3. All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP; and,

4. Groundwater, soil vapor and other environmental or public health monitoring are not required to be performed as part of this SMP. However, periodic inspections must be performed to assess the performance and effectiveness of the remedy.

The Site also has a series of Institutional Controls in the form of site restrictions that apply to the Controlled Property as follows:

1. The property may only be used for restricted-residential and commercial use below the Development Depth provided that the long term Engineering and Institutional Controls included in this SMP are employed. No environmental easements, engineering controls,

institutional controls, or any other consents, approvals, or authorizations are required for any activities above the Development Depth.

2. A higher level of use, such as residential use, will not be allowed for activities below the Development Depth without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;

3. All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP; and,

4. The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.

The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable (see Section 8.0).

5.6 Maintenance

Maintenance of the remedy is the responsibility of the property owner. Erosion of the soil cover system will be reduced by maintaining the cover system. Cover materials will be inspected annually and repaired as needed. The property owner will implement Site maintenance as part of future construction and normal property operations in accordance with NYCDOB requirements. The owner of the subject property will identify a qualified environmental consultant to provide all services described in this SMP. The responsibility to comply with this SMP will be transferred to any future property owners.

6.0 HEALTH AND SAFETY

The Site is not subject to the HAZWOPER requirements under 29 CFR 1910.120. Other OSHA provisions, specifically Construction Safety and Hazard Communication standards, apply. Soil and groundwater disturbance activities below Development Depth will be performed in accordance with all applicable federal, state and local regulations to protect worker health and safety. All contractors performing such work for the property owner will prepare a site-specific, activity-specific Health and Safety Plan (HASP). The HASP must also include provisions for protection of the community as described in Section 6.2 of this SMP.

6.1 Construction Personnel Protection

Contractors engaged in subsurface construction or maintenance activities will be required to implement appropriate construction health and safety procedures. These procedures will involve, at a minimum, donning adequate personal protective clothing and equipment, performing appropriate air monitoring, and implementing other procedures as necessary to avoid potential ingestion, inhalation and contact with residual constituents in the soil or groundwater below Development Depth. Workers will receive appropriate hazard communication information and training.

6.2 Community Air Monitoring Program

Air monitoring for dust particulates and volatile organic compounds (VOCs) will be performed during Site development activities below Development Depth in accordance with the NYSDOH Generic Community Air Monitoring Plan (gCAMP; Appendix D). All air monitoring readings will be recorded in a logbook or other means and will be available for review by the NYSDEC and NYSDOH.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

7.1 Analytical Data

All waste characterization samples collected during Site redevelopment activities below Development Depth will be analyzed using the most recent NYSDEC Analytical Services Protocol (ASP), consistent with Section 2 of DER-10, the Technical Guidance for Site Investigation and Remediation.

The laboratory proposed to perform the analyses will be certified through the New York State Department of Health Environmental Laboratory Approval Program (ELAP) to perform Contract Laboratory Program (CLP) analysis and Solid Waste and Hazardous Waste Analytical testing on all media to be sampled during Site redevelopment. The laboratory will maintain this certification for the duration of the work.

Procedures for chain of custody, laboratory instrumentation calibration, laboratory analyses, reporting of data, internal quality control, and corrective actions shall be followed as per NYSDEC ASP and as per the laboratory's Quality Assurance Plan. If applicable, trip blanks, field blanks, field duplicates, and matrix spike, matrix spike duplicates will be performed at a rate of 5% (1 per up to 20 samples) and will be used to assess the quality of the data. The laboratory's in-house QA/QC limits will be utilized whenever they are more stringent than those suggested by the EPA methods.

8.0 NOTIFICATION AND REPORTING

8.1 Notifications

Notification to the NYSDEC will be required for transfer of the title to all or part of the Site, Site development (erection of structure) and maintenance activities below Development Depth.

Any change in ownership of the Site or the responsibility for implementing this SMP will include the following notifications: (1) at least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the BCA, and all approved work plans and reports including this SMP; and (2) within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

The following NYSDEC notification requirements apply to the Site:

- Seven (7) - day advance notice of any proposed ground-intrusive activities;

- Notice within 48 hours of any damage or defect to the foundations of structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action taken to mitigate the damage or defect;

- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, with written confirmation within seven (7) days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public; and,

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the Department within 45 days and shall describe and document actions to restore the effectiveness of the Engineering Controls.

The requirements for notification shall cease once the Environmental Easement is removed, as approved by NYSDEC.

Notification contacts are as follows:

NYSDEC
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7011

8.2 Periodic Review Report

The Periodic Review Report (PRR) will be submitted to the Department on an annual basis, beginning 18 months after the Certificate of Completion is issued. The PRR will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of the certification period.

The PRR will include the following:

- Identification, assessment and certification of all Engineering Controls/Institutional Controls required by the remedy for the Site;

- The results of the required annual Site inspection:

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;

- If intrusive work was done below Development Depth during the period covered by that PRR:

    - A certification that all work was performed in conformance with this SMP.

    - Plans showing areas and depth of fill removal and replacement (if applicable).

    - Description of the excavation/dewatering activities performed, quantities of material excavated/pumped, disposal locations for the soil/groundwater, documentation of proper disposal (waste manifests or waybills).

- If backfill material was imported to the Site during the period covered by that PRR:
    - Location of backfill material source.
    - Copy of analytical test results for backfill material, if applicable, documenting compliance with 6 NYCRR Part 375-6.7(d)(1)(ii)(b) or otherwise approved by the NYSDEC.
- A Site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific Remedial Action Work Plan;
    - The overall performance and effectiveness of the remedy.

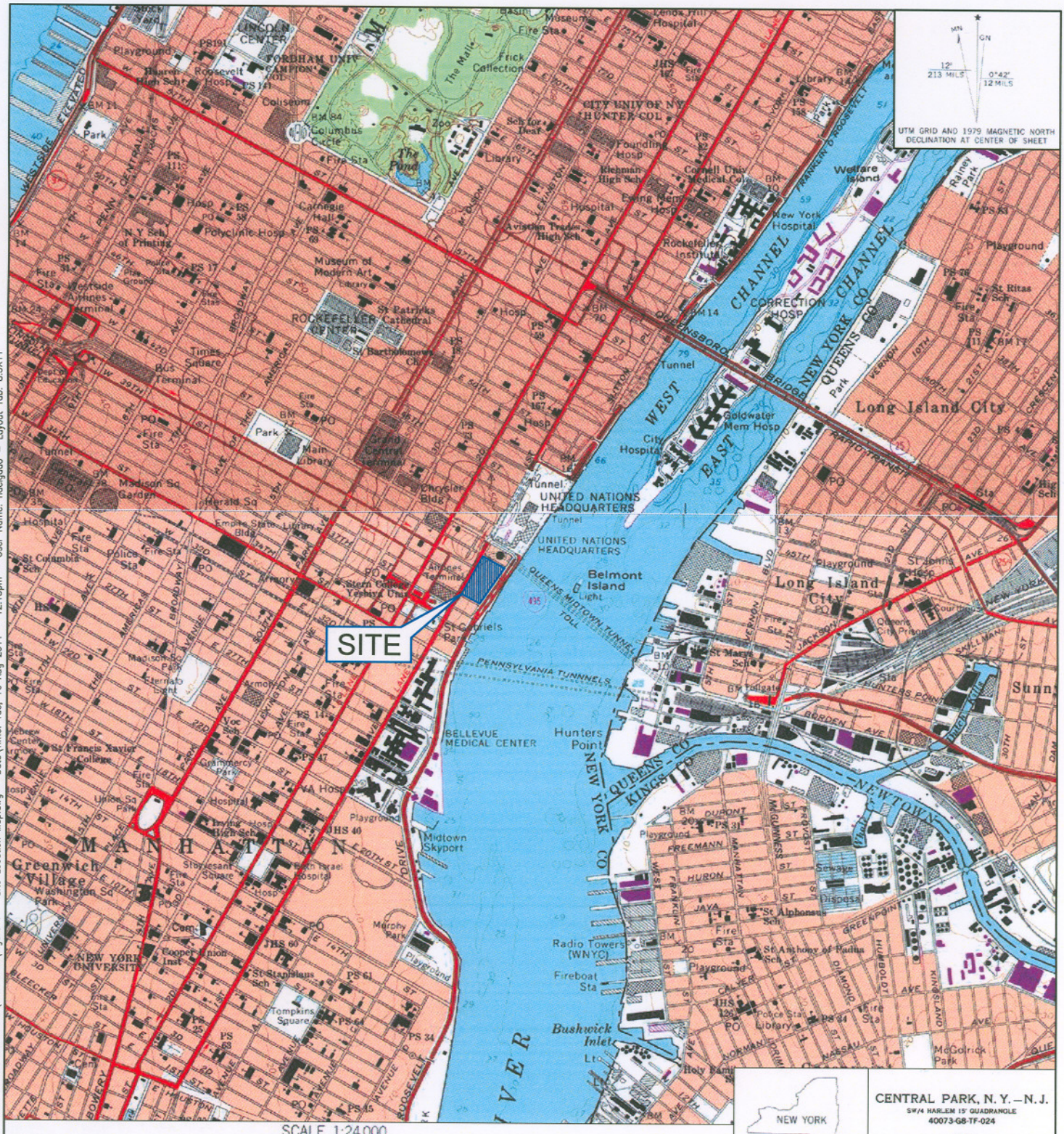
The PRR shall be submitted in electronic format to NYSDEC Central Office and the NYSDOH Bureau of Environmental Exposure Investigation.

The requirement for reporting shall cease once the Environmental Easement is removed, as approved by NYSDEC.

8.3 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measure plan until it is approved by the NYSDEC.

Figures



TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY: HD	PROJECT NAME: GREATER WATERSIDE SITE 700-708 FIRST AVENUE NEW YORK, NEW YORK 10017
DRAWN BY: HD	
CHECKED BY: SM	
DATE: AUGUST 2011	DRAWING TITLE: SITE LOCATION MAP
SCALE: AS SHOWN	
PROJECT NUMBER: 180360.0000.0000	

FIGURE 1

Path\Name: I:\Projects\180360 – Con Edison 1st Avenue\Greater Waterside Remediation Docs\Final SMP\Figure 1 – Site Location Map.dwg – Date\Time: Tue, 16 Aug 2011 – 12:13pm – User Name: hdelgado – Layout Tab: 8.5X11

MAP OBTAINED THROUGH USE OF WWW.NYC.GOV/TRUCKS

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018
212-221-7822

DESIGNED BY: TS	PROJECT NAME: SITE MANAGEMENT PLAN GREATER WATERSIDE SITE 700-708 FIRST AVENUE NEW YORK, NEW YORK
DRAWN BY: HD	
CHECKED BY: SM	
DATE: MAY 2011	DRAWING TITLE: TRUCK TRANSPORTATION ROUTES
SCALE: AS SHOWN	FIGURE 2
PROJECT NUMBER: 180360.0000.0000	

Path\Name: i:\Projects\180360 – Con Edison 1st Avenue\Figures\TRC Working Drawings\Truck Transportation Routes\Figure 1 –Truck Transportation Routes.dwg – Date\Time: Wed, 25 May 2011 – 12:10pm – User Name: hdelgado – Layout Tab: FIGURE 2

Appendix A
Site Boundary Map

SITE MANAGEMENT PLAN
NYSDEC BCP SITE NO. C231013
GREATER WATERSIDE SITE - 700-708 FIRST AVENUE
NEW YORK, NEW YORK

TRC
1430 BROADWAY, 10TH FLOOR
NEW YORK, NEW YORK 10018

DESIGNED BY:	DATE:
SDM	NOVEMBER 2010
DRAWN BY:	SCALE:
HD	AS SHOWN
CHECKED BY:	PROJECT NUMBER:
SDM	180360.0000.0000

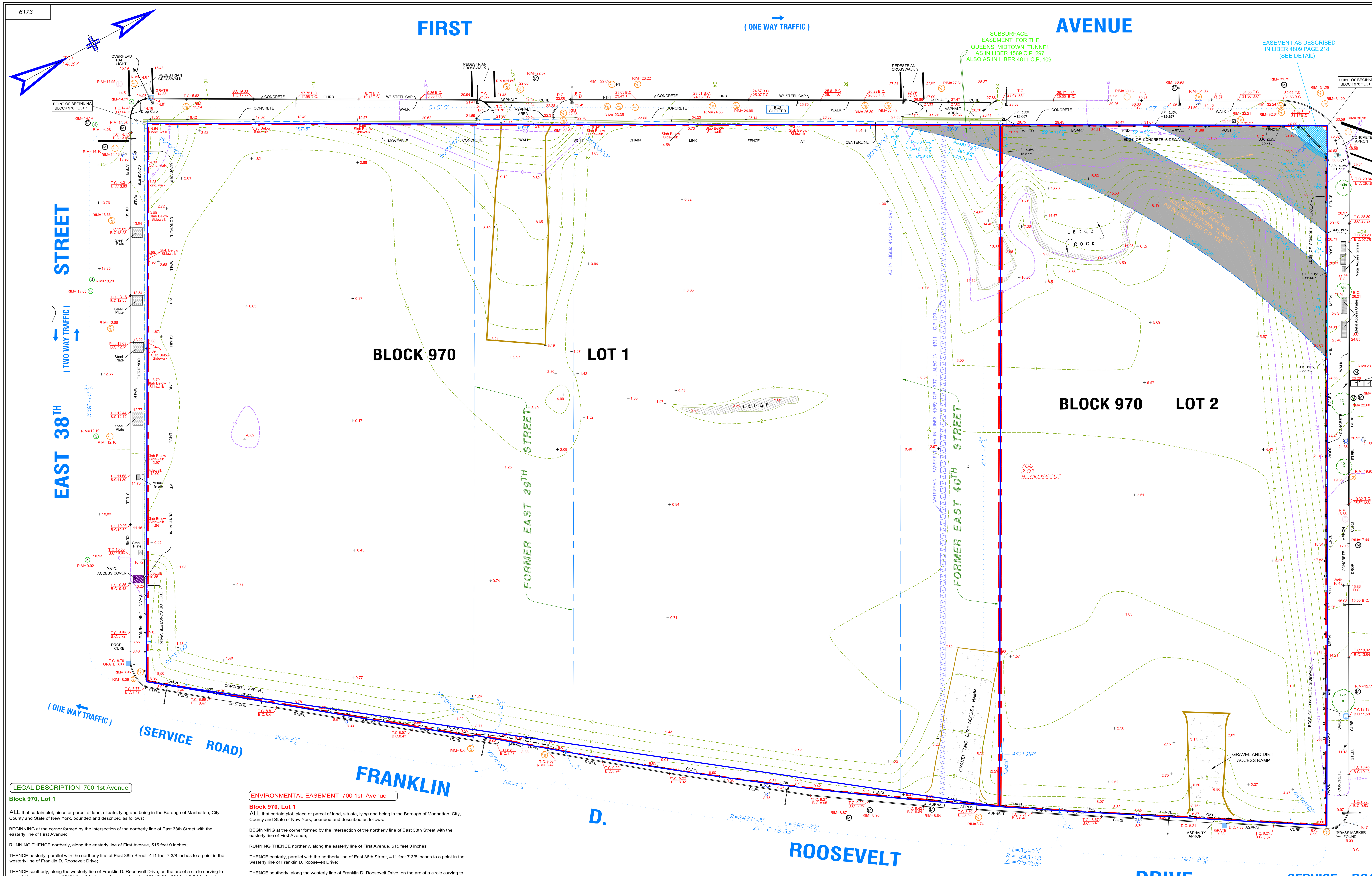
FIGURE 1

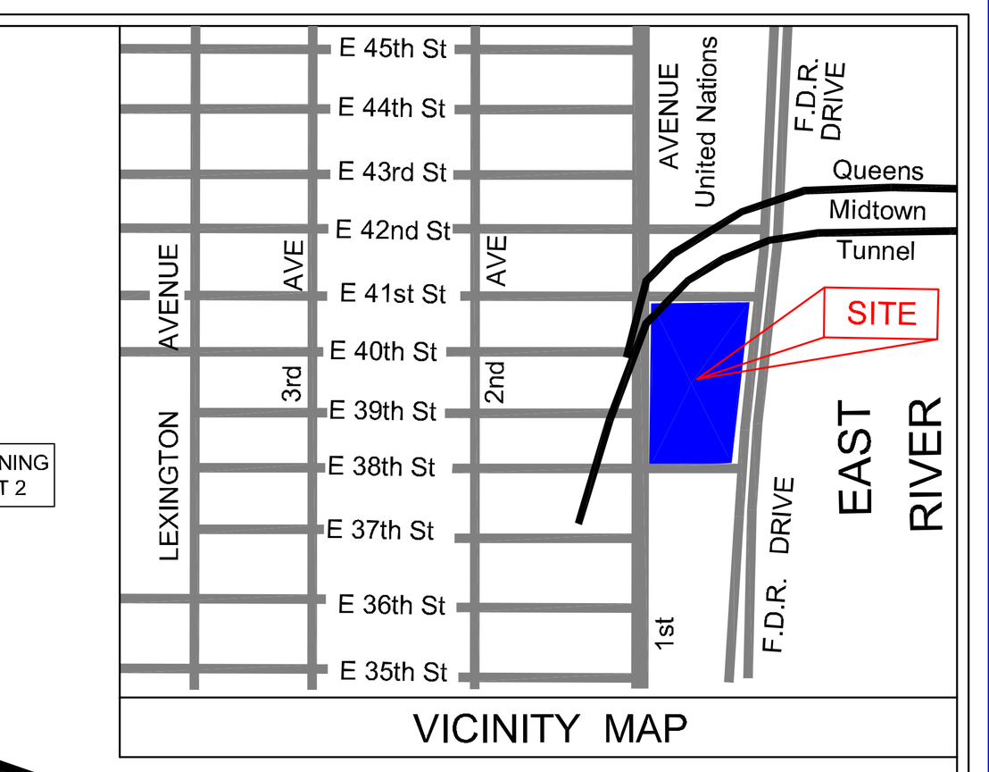
DRAWING TITLE:

SITE BOUNDARY MAP

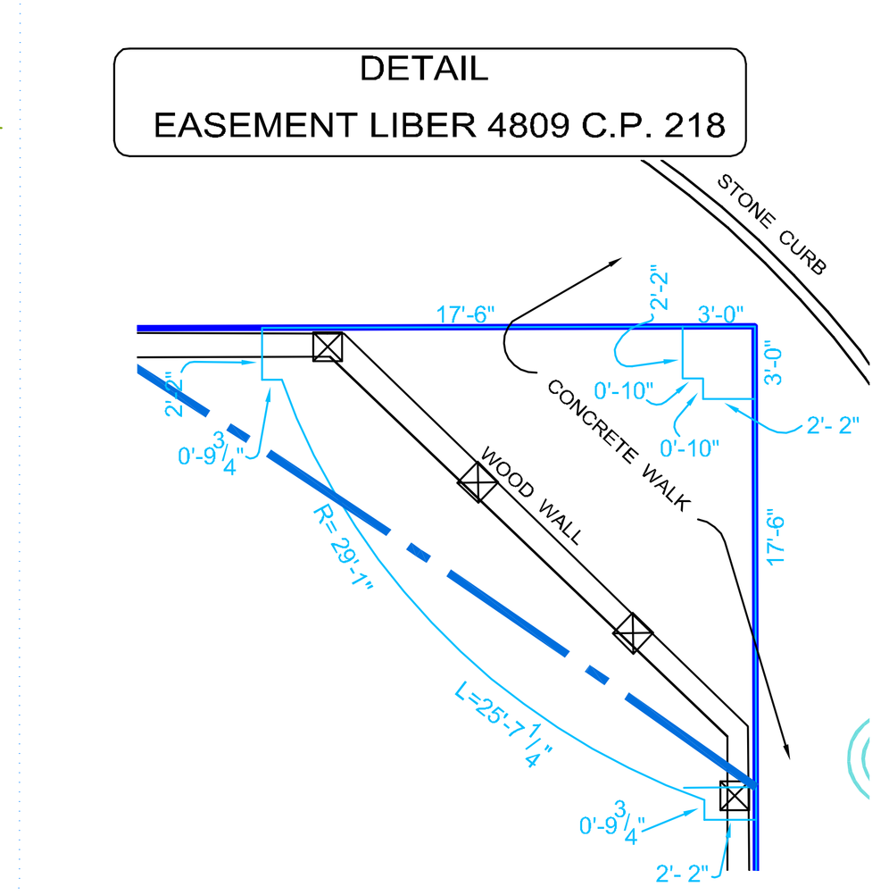
Path\Name: J:\Projects\180360 – Con Edison 1st Avenue\Figures\TRC Working Drawings\Figure 1 – Site Boundary Map.dwg – Date\Time: Thu, 11 Nov 2010 – 2:30pm – User Name: hdelgado – Layout Tab: 24X36

Appendix B
Site Survey Map





DETAIL
EASEMENT LIBER 4809 C.P. 218



LEGAL DESCRIPTION 700 1st Avenue

Block 970, Lot 1

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the northerly line of East 38th Street with the easterly line of First Avenue;

RUNNING THENCE northerly, along the easterly line of First Avenue, 515 feet 0 inches;

THENCE easterly, parallel with the northerly line of East 38th Street, 411 feet 7 3/8 inches to a point in the westerly line of Franklin D. Roosevelt Drive;

THENCE southerly, along the westerly line of Franklin D. Roosevelt Drive, on the arc of a circle curving to the right having a radius of 2431 feet 8 inches and a central angle of 6° 13' 33", 264 feet 2 5/8 inches to a point of tangency;

THENCE southerly still along the westerly line of Franklin D. Roosevelt Drive, 56 feet 4 ¼ inches to an angle point therein;

THENCE easterly, still along the westerly line of Franklin D. Roosevelt Drive and parallel with the northerly line of East 38th Street, 1 foot 2 3/8 inches to an angle point therein;

THENCE southerly, still along the westerly line of Franklin D. Roosevelt Drive, 200 feet 3 1/8 inches to the corner formed by the intersection of the northerly line of East 38th Street with the westerly line of Franklin D. Roosevelt Drive;

THENCE westerly, along the northerly line of East 38th Street, 336 feet 10 3/8 inches to a point or place of BEGINNING.

Site Area = 4.4702 Acres = 194,722 Sq. Ft.

LEGAL DESCRIPTION 708 1st Avenue

Block 970, Lot 2

ALL that certain plot, piece or parcel of land, situate, lying and being the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southerly line of East 41st Street with the easterly line of First Avenue;

RUNNING THENCE easterly, along the southerly line of East 41st Street 422 feet 10 inches to the corner formed by the intersection of the southerly line of East 41st Street with the westerly line of Franklin D. Roosevelt Drive;

THENCE southerly, along the westerly line of Franklin D. Roosevelt Drive, 161 feet 9 5/8 inches to a point of curvature therein;

THENCE southerly, still along the westerly line of Franklin D. Roosevelt Drive on the arc of a circle curving to the right having a radius of 2431 feet 8inches and a central angle of 0°-50'55", 36 feet 0 ¼ inches;

THENCE westerly, parallel with the southerly line of East 41st Street, 411 feet 7 3/8 inches to a point in the easterly line of First Avenue;

THENCE northerly, along the easterly line of First Avenue, 197 feet 6 inches to the point or place of BEGINNING.

Site Area = 1.8922 Acres = 82,424 Sq. Ft.

ENVIRONMENTAL EASEMENT 700 1st Avenue

Block 970, Lot 1

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the northerly line of East 38th Street with the easterly line of First Avenue;

RUNNING THENCE northerly, along the easterly line of First Avenue, 515 feet 0 inches;

THENCE easterly, parallel with the northerly line of East 38th Street, 411 feet 7 3/8 inches to a point in the westerly line of Franklin D. Roosevelt Drive;

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THENCE westerly, along the northerly line of East 38th Street, 336 feet 10 3/8 inches to a point or place of BEGINNING.

Site Area = 4.4702 Acres = 194,722 Sq. Ft.

ENVIRONMENTAL EASEMENT 708 1st Avenue

Block 970, Lot 2

ALL that certain plot, piece or parcel of land, situate, lying and being the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southerly line of East 41st Street with the easterly line of First Avenue;

RUNNING THENCE easterly, along the southerly line of East 41st Street 422 feet 10 inches to the corner formed by the intersection of the southerly line of East 41st Street with the westerly line of Franklin D. Roosevelt Drive;

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THENCE northerly, along the easterly line of First Avenue, 197 feet 6 inches to the point or place of BEGINNING.

Site Area = 1.8922 Acres = 82,424 Sq. Ft.

ALTA / ACSM LAND TITLE SURVEY

OF PROPERTY SITUATE IN THE

BOROUGH of MANHATTAN CITY, COUNTY and STATE OF NEW YORK

ENVIRONMENTAL EASEMENT DESCRIPTION

DEC BCP SITE # C231014

PREPARED FOR

700 FIRST REALTY COMPANY LLC
708 FIRST REALTY COMPANY LLC

SURVEYED: NOVEMBER 8,2010
Map Prepared NOVEMBER 10,2010
SCALE 1" = 20'

IN FEET: 20' 0 10' 20' 40' 80'
1 inch = 20 ft
GRAPHIC SCALE
IN METERS: 6.0 m 0 3.0 m 6.0 m 12.0 m 18.0 m 24.0 m 30.0 m
2 cm = 6.0m

- **THE ENGINEERING AND INSTITUTIONAL CONTROLS** FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION. 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@gw.dec.state.ny.us.
- **ENVIRONMENTAL EASEMENT AREA ACCESS** THE DEC OR THEIR AGENT MAY ACCESS THE ENVIRONMENTAL EASEMENT AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS INGRESS / EGRESS POINT.

PROPERTY INFORMATION

- PREMISES ARE KNOWN AS : 700 1st AVENUE
  DESIGNATED ON THE TAX MAPS FOR THE BOROUGH OF MANHATTAN
  BLOCK 970 : LOT 1
  AREA = 4.4702 Acres = 194,722 Sq. Ft.
- PREMISES ARE KNOWN AS : 708 1st AVENUE
  DESIGNATED ON THE TAX MAPS FOR THE BOROUGH OF MANHATTAN
  BLOCK 970 : LOT 2
  AREA = 1.8922 Acres = 82,424 Sq. Ft.

TOTAL PROPERTY AREA : 6.3622 ACRES = 277,146 Sq. Ft.

SURVEYORS NOTES:

- THE PREMISES SHOWN HEREON ARE BEING THE SAME AS DESCRIBED IN THE CITY REGISTER OF THE CITY OF NEW YORK, CITY REGISTER FILE No. 2005000335189 (BLOCK 970 LOT1)and No. 2005000202650 (BLOCK 970 LOT 2)
- THE LEGAL DESCRIPTION OF THE PREMISES SHOWN HEREON FORMS A MATHEMATICALLY CLOSED FIGURE.
- UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAWS.
- ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S SEAL SHALL BE CONSIDERED TO BE TRUE VALID COPIES.
-
- THE ELEVATIONS SHOWN HEREON REFER TO THE DATUM IN USE BY THE BOROUGH OF MANHATTAN DEPARTMENT OF BOROUGH WORKS, WHICH IS 2.75 FEET ABOVE THE U.S.C.& G.S. 1929 SEA LEVEL DATUM AT SANDY HOOK.
- THE SURVEY SHOWN HEREON WAS PREPARED FROM AN ACTUAL FIELD SURVEY CONDUCTED ON THE DATE SHOWN AND THAT SAID SURVEY WAS PERFORMED IN ACCORDANCE WITH THE EXISTING " CODE OF PRACTICE FOR LAND SURVEYS " ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.
- ENCROACHMENTS BELOW GRADE AND/OR SUBSURFACE FEATURES, IF ANY, NOT LOCATED OR SHOWN HEREON.
- THE OFFSETS SHOWN ARE FOR INFORMATIONAL PURPOSE ONLY. THEY ARE NOT INTENDED TO ESTABLISH PROPERTY LINES FOR THE ERECTION OF FENCES, STRUCTURES OR ANY OTHER IMPROVEMENT.

SYMBOLS / ABBREVIATIONS/ LINE TYPES

D.C.	DROP CURB
T.C.	TOP OF CURB
B.C.	BOTTOM OF CURB
U.P. ELEV. -22.067	UPPER PLAIN ELEVATION
	CATCH BASIN
	CONSOLIDATED EDISON MANHOLE
	ELECTRIC MANHOLE
	HYDRANT
	MONITORING WELL ACCESS COVER
	OVERHEAD LIGHT POLE
	TRAFFIC SIGN
	SEWER MANHOLE
	VALVE COVER
	WATER SHUTOFF VALVE
	DRAIN INLET
	WOOD BOARD AND METAL POST FENCE
	CHAIN LINK FENCE
	DEC ENVIRONMENTAL EASEMENTS
	PROPERTY LINE

SURVEYOR'S CERTIFICATION

DATED AS OF: November 10,2010

TO 700 First Realty Company,LLC
708 First Realty Company,LLC
Chicago Title insurance Company
New York State Department of Environmental Conservation

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005 AND INCLUDE ITEMS 2,4,7a,8,9,10,11a,13 and 14 OF TABLE "A" THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN AFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF NEW YORK, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN

Link Land Surveyors P.C.
21 Clark Place Suite 1B
Mahopac N.Y. 10541
Phone 845-628-5857
Fax 845-621-0013

JOSEPH R. LINK
NEW YORK STATE LICENSED LAND SURVEYOR NO. 050456

NEW YORK STATE LICENSED LAND SURVEYOR SEAL

Appendix C
Approval Letters

APPENDIX C

NYSDEC APPROVAL LETTERS

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233-7016
Phone: (518) 402-9768 • FAX: (518) 402-9773
Website: www.dec.state.ny.us

Alexander B. Grannis
Commissioner

November 13, 2007

Mr. Michael Skirka
TRC Environmental Corporation
1200 Wall Street West, 2nd Floor
Lyndhurst, New Jersey 07071

RE: Voluntary Cleanup Project
First Avenue Properties VCP Sites
708 Office Building, VCP # V00431
Final Report and Site Management Plan

Dear Mr. Skirka:

The New York State Department of Environmental Conservation (NYSDEC), along with the New York State Department of Health (NYSDOH), have completed a review of the "Final Report for 708 Office Building Remediation Work Plan" (April 2006), the "Letter Report, Groundwater Sampling Results for March 2006 (May 31, 2006) and the "Site Management Plan for Former Office Building, 708 First Avenue" (October 2007) ("SMP") for the above-referenced site. These documents are consistent with the NYSDEC interim approval letter dated February 21, 2007 and these documents are now final. The Deed Declaration submitted in the SMP should now be filed.

All required remedial activities at the Site have been completed and the SMP activities approved in the final October 2007 SMP should be implemented. The site is now ready for unrestricted and unencumbered use down to the development depth, as described in Section 1.1 of the "Final Report for 708 Office Building Remediation Work Plan" dated April 2006. Development may begin at any time, without restriction above development depth.

Sincerely,

Thomas Gibbons
Project Manager
Remedial Bureau B, Section D
Division of Environmental Remediation

cc: S. Dewes/File
T. Gibbons
C. Bethoney (DOH)

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233-7016
Phone: (518) 402-9768 • FAX: (518) 402-9773
Website: www.dec.state.ny.us

Alexander B. Grannis
Commissioner

May 27, 2008

Mr. Michael Skirka
TRC Environmental Corporation
1200 Wall Street West, 2nd Floor
Lyndhurst, New Jersey 07071

RE: Voluntary Cleanup Project
First Avenue Properties VCP Sites
Waterside Generating Station, 700 First Avenue
VCP # V00432
Final Report and Site Management Plan

Dear Mr. Skirka:

The New York State Department of Environmental Conservation (NYSDEC), along with the New York State Department of Health (NYSDOH), have completed a review of the "Final Report for Waterside Generating Station Remediation Work Plan, 700 First Avenue" ("Final Report") dated April 2008, and the "Site Management Plan for Former Waterside Generating Station, 700 First Avenue" ("SMP"), dated April 2008, for the above-referenced site. These documents are hereby fully approved and are now final. The Deed Declaration submitted in the SMP should now be filed.

All required remedial activities at the site have been completed and the SMP activities approved in the April 2008 SMP should be implemented. The site is now ready for unrestricted and unencumbered use down to the development depth, as described in Section 1.1 of the Final Report dated April 2008. Development may begin at any time, without restriction above development depth.

If you have any questions, don't hesitate to call me at (518) 402-9768.

Sincerely,

Thomas Gibbons
Project Manager
Remedial Bureau B, Section D
Division of Environmental Remediation

cc: S, Dewes/File
T. Gibbons
C. Bethoney (DOH)

Appendix D
NYSDOH
Generic Community Air Monitoring Plan

APPENDIX D

NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should 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 must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should 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 airborne dust is observed leaving the work area, then dust suppression techniques must be employed. 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 must be stopped and a re-evaluation of activities initiated. Work can 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 must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

H:\Southern\gCAMPr1.doc

Appendix E
Soil Below Development Depth Map

WS-BOT-67 / WS-BOT-671

Parameter	WS-BOT-67	WS-BOT-671
Volatile Organics (ug/kg)		
Carbon Disulfide	2.1 J	1.9 J
Methyl Acetate	7.6	11.2
Toluene	< 1.4	1.4
Xylenes (total)	0.84 J	0.82 J
PAH (ug/kg)		
Acenaphthene	502	791
Acenaphthylene	370	363
Anthracene	859 J	1,440 J
Benzo(a)anthracene	1,680 (224 or MDL)	2,150 (224 or MDL)
Benzo(a)pyrene	1,740 (61 or MDL)	2,140 (61 or MDL)
Benzo(b)fluoranthene	2,210 JN (1,100)	2,370 J (1,100)
Benzo(g,h,I)perylene	949 J	1,090
Benzo(k)fluoranthene	510 JN	942 JN
Chrysene	1,640 (400)	2,140 (400)
Dibenzo(a,h)anthracene	336 J (14.3 or MDL)	386 (14.3 or MDL)
Fluoranthene	3,380	4,080
Fluorene	446 J	851 J
Indeno(1,2,3-cd)pyrene	854 J	958
2-Methylnaphthalene	123	296
Naphthalene	258 J	642 J
Phenanthrene	2,560 J	5,080 J
Pyrene	2,370	3,320
Total PAH concentration	20,787	29,039
Concentration in Terms of BAP Equivalents	2,572	3,105
Metals (mg/kg)		
Arsenic	13.4 J (12)	7.9 J
Beryllium	0.44	< 0.35
Cadmium	0.86	0.79
Chromium	40.6 (40)	31.4
Copper	101 (50)	97.7 (50)
Lead	201	232
Mercury	3.4 (0.1)	4 (0.1)
Nickel	51.7 (25)	46 (25)
Zinc	133 (50)	133 (50)

WS-BOT-66

Parameter	WS-BOT-66
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1,720
Acenaphthylene	194
Anthracene	3,320
Benzo(a)anthracene	5,010 (224 or MDL)
Benzo(a)pyrene	4,210 (61 or MDL)
Benzo(b)fluoranthene	3,160 (1,100)
Benzo(g,h,I)perylene	2,280
Benzo(k)fluoranthene	3,520 (1,100)
Chrysene	5,010 (400)
Dibenzo(a,h)anthracene	983 (14.3 or MDL)
Fluoranthene	10,700
Fluorene	1,790
Indeno(1,2,3-cd)pyrene	2,250
2-Methylnaphthalene	777
Naphthalene	1,860
Phenanthrene	13,100
Pyrene	10,100
Total PAH concentration	69,984
Concentration in Terms of BAP Equivalents	6,320
Metals (mg/kg)	
Arsenic	9.8
Beryllium	0.72 J
Cadmium	0.6 R
Chromium	25.9 J
Copper	65.2 J (50)
Lead	254 J
Mercury	1.6 (0.1)
Nickel	111 J (25)
Zinc	165 J (50)

WS-BOT-65

Parameter	WS-BOT-65
Volatile Organics (ug/kg)	
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2.4 J
Methyl Acetate	68.5
PAH (ug/kg)	
Acenaphthene	1,220
Acenaphthylene	1,040
Anthracene	2,470
Benzo(a)anthracene	4,860 (224 or MDL)
Benzo(a)pyrene	4,600 J (61 or MDL)
Benzo(b)fluoranthene	6,180 (1,100)
Benzo(g,h,I)perylene	1,070 J
Benzo(k)fluoranthene	2,990 (1,100)
Chrysene	4,040 (400)
Dibenzo(a,h)anthracene	419 J (14.3 or MDL)
Fluoranthene	13,300
Fluorene	1,080
Indeno(1,2,3-cd)pyrene	852 J
2-Methylnaphthalene	317
Naphthalene	995
Phenanthrene	6,240
Pyrene	8,090
Total PAH concentration	59,763
Concentration in Terms of BAP Equivalents	6,279
Metals (mg/kg)	
Arsenic	13.2 (12)
Beryllium	1.4 J
Cadmium	1.2 J (1)
Chromium	83.8 J (40)
Copper	194 J (50)
Lead	527 J (500)
Mercury	1.6 (0.1)
Nickel	139 J (25)
Zinc	293 J (50)

WS-BOT-64

Parameter	WS-BOT-64
Volatile Organics (ug/kg)	
Methyl Acetate	18.9
PAH (ug/kg)	
Acenaphthene	1,530
Acenaphthylene	1,510
Anthracene	2,640
Benzo(a)anthracene	5,730 (224 or MDL)
Benzo(a)pyrene	6,430 (61 or MDL)
Benzo(b)fluoranthene	9,580 (1,100)
Benzo(g,h,I)perylene	1,710 J
Chrysene	4,270 (400)
Dibenzo(a,h)anthracene	435 J (14.3 or MDL)
Fluoranthene	15,700
Fluorene	1,050
Indeno(1,2,3-cd)pyrene	1,030 J
2-Methylnaphthalene	177
Naphthalene	596
Phenanthrene	7,540
Pyrene	9,490
Total PAH concentration	69,428
Concentration in Terms of BAP Equivalents	8,543
Metals (mg/kg)	
Arsenic	8
Beryllium	0.81 J
Chromium	35.2 J
Copper	101 J (50)
Lead	378 J
Mercury	1.7 (0.1)
Nickel	57.4 J (25)
Zinc	150 J (50)

WS-SW-21

Parameter	WS-SW-21
Volatile Organics (ug/kg)	
Carbon Disulfide	2.2 J
Toluene	1.1 J
Xylenes (total)	0.79 J
PAH (ug/kg)	
Acenaphthene	874
Acenaphthylene	432
Anthracene	1,540
Benzo(a)anthracene	2,620 (224 or MDL)
Benzo(a)pyrene	2,690 (61 or MDL)
Benzo(b)fluoranthene	2,780 JN (1,100)
Benzo(g,h,I)perylene	1,220
Benzo(k)fluoranthene	1,290 JN (1,100)
Chrysene	2,560 (400)
Dibenzo(a,h)anthracene	386 (14.3 or MDL)
Fluoranthene	5,080
Fluorene	799
Indeno(1,2,3-cd)pyrene	1,070
2-Methylnaphthalene	247
Naphthalene	921
Phenanthrene	5,070
Pyrene	3,830
Total PAH concentration	33,602
Concentration in Terms of BAP Equivalents	3,748
Metals (mg/kg)	
Arsenic	8.2
Cadmium	0.78
Chromium	38.7
Copper	110 (50)
Lead	188
Mercury	3.3 (0.1)
Nickel	51.3
Zinc	138 (50)

WS-BOT-58

Parameter	WS-BOT-58
Volatile Organics (ug/kg)	
Methyl Acetate	15.5
Toluene	0.79 J
PAH (ug/kg)	
Acenaphthene	847
Acenaphthylene	436
Anthracene	1,570
Benzo(a)anthracene	3,030 (224 or MDL)
Benzo(a)pyrene	2,980 (61 or MDL)
Benzo(b)fluoranthene	3,380 JN (1,100)
Benzo(g,h,I)perylene	1,400
Benzo(k)fluoranthene	1,180 JN (1,100)
Chrysene	3,000 (400)
Dibenzo(a,h)anthracene	467 (14.3 or MDL)
Fluoranthene	5,390
Fluorene	795
Indeno(1,2,3-cd)pyrene	1,220
2-Methylnaphthalene	225
Naphthalene	636
Phenanthrene	5,270
Pyrene	4,840
Total PAH concentration	36,718
Concentration in Terms of BAP Equivalents	4,121
Metals (mg/kg)	
Arsenic	6.4
Beryllium	0.39
Cadmium	0.75
Chromium	29.2
Copper	84.7 (50)
Lead	187
Mercury	3.9 (0.1)
Nickel	41.7 (25)
Zinc	157 (50)

WS-BOT-57

Parameter	WS-BOT-57
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	814
Acenaphthylene	917
Anthracene	1,700
Benzo(a)anthracene	3,100 (224 or MDL)
Benzo(a)pyrene	4,230 (61 or MDL)
Benzo(b)fluoranthene	3,230 (1,100)
Benzo(g,h,I)perylene	3,170
Benzo(k)fluoranthene	2,730 (1,100)
Chrysene	3,170 (400)
Dibenzo(a,h)anthracene	908 (14.3 or MDL)
Fluoranthene	6,450
Fluorene	658
Indeno(1,2,3-cd)pyrene	2,520
2-Methylnaphthalene	188
Naphthalene	602
Phenanthrene	4,730
Pyrene	7,400
Total PAH concentration	46,517
Concentration in Terms of BAP Equivalents	6,082
Metals (mg/kg)	
Arsenic	8.8
Beryllium	0.99 J
Cadmium	0.78 J
Chromium	57 J (40)
Copper	104 J (50)
Lead	310 J
Mercury	1.6 (0.1)
Nickel	94.9 J (25)
Zinc	165 J (50)

WS-BOT-56

Parameter	WS-BOT-56
Volatile Organics (ug/kg)	
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2.3 J
Methyl Acetate	32.3
PAH (ug/kg)	
Acenaphthene	1,160
Acenaphthylene	1,530
Anthracene	2,570
Benzo(a)anthracene	4,670 (224 or MDL)
Benzo(a)pyrene	6,700 (61 or MDL)
Benzo(b)fluoranthene	5,350 (1,100)
Benzo(g,h,I)perylene	4,950
Benzo(k)fluoranthene	4,720 (1,100)
Chrysene	4,730 (400)
Dibenzo(a,h)anthracene	1,510 (14.3 or MDL)
Fluoranthene	10,500
Fluorene	964
Indeno(1,2,3-cd)pyrene	4,450 (3,200)
2-Methylnaphthalene	274
Naphthalene	937
Phenanthrene	6,630
Pyrene	9,790
Total PAH concentration	71,435
Concentration in Terms of BAP Equivalents	9,752
Metals (mg/kg)	
Antimony	6.9 J
Arsenic	11.9
Beryllium	1.2 J
Cadmium	1.1 J (1)
Chromium	64.3 J (40)
Copper	142 J (50)
Lead	323 J
Mercury	2.2 (0.1)
Nickel	103 J (25)
Zinc	227 J (50)

WS-BOT-55

Parameter	WS-BOT-55
Volatile Organics (ug/kg)	
Methyl Acetate	13.7
PAH (ug/kg)	
Acenaphthene	1,180
Acenaphthylene	898
Anthracene	1,940
Benzo(a)anthracene	5,050 (224 or MDL)
Benzo(a)pyrene	3,580 J (61 or MDL)
Benzo(b)fluoranthene	8,460 (1,100)
Benzo(g,h,I)perylene	994 J
Chrysene	2,890 (400)
Dibenzo(a,h)anthracene	381 J (14.3 or MDL)
Fluoranthene	12,200
Fluorene	962
Indeno(1,2,3-cd)pyrene	771 J
Naphthalene	845
Phenanthrene	6,330
Pyrene	7,090
Total PAH concentration	53,571
Concentration in Terms of BAP Equivalents	5,418
Metals (mg/kg)	
Arsenic	8.5
Beryllium	0.98 J
Cadmium	0.88 J
Chromium	41.7 J (40)
Copper	123 J (50)
Lead	222 J
Mercury	2.6 (0.1)
Nickel	68.1 J (25)
Zinc	190 J (50)

WS-SW-20

Parameter	WS-SW-20
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	336
Acenaphthylene	96.6 J
Anthracene	582
Benzo(a)anthracene	2,230 (224 or MSL)
Benzo(a)pyrene	2,030 (61 or MDL)
Benzo(b)fluoranthene	2,040 (1,100)
Benzo(g,h,I)perylene	1,450
Benzo(k)fluoranthene	1,530 (1,100)
Chrysene	1,870 (400)
Dibenzo(a,h)anthracene	449 (14.3 or MDL)
Fluoranthene	4,600
Fluorene	201
Indeno(1,2,3-cd)pyrene	1,100
Naphthalene	49.2 J
Phenanthrene	3,270
Pyrene	4,850
Total PAH concentration	26,683.8
Concentration in Terms of BAP Equivalents	3,050
Metals (mg/kg)	
Arsenic	8.9
Beryllium	1.1
Cadmium	0.75
Chromium	82.2 (40)
Copper	51.1 (50)
Lead	115
Mercury	0.3 (0.1)
Nickel	19.3
Zinc	236 (50)

WS-BOT-49 / WS-BOT-49

Parameter	WS-BOT-49	WS-BOT-49
All Polychlorinated Biphenyls (ug/kg)	--	ND
All Volatile Organics (ug/kg)	ND	--
PAH (ug/kg)		
Acenaphthene	87.8 J	--
Acenaphthylene	331	--
Anthracene	576	--
Benzo(a)anthracene	2,960 (224 or MDL)	--
Benzo(a)pyrene	2,470 (61 or MDL)	--
Benzo(b)fluoranthene	2,350 (1,100)	--
Benzo(g,h,I)perylene	1,880	--
Benzo(k)fluoranthene	1,720 (1,100)	--
Chrysene	2,830 (400)	--
Dibenzo(a,h)anthracene	776 (14.3 or MDL)	--
Fluoranthene	4,410	--
Indeno(1,2,3-cd)pyrene	1,640	--
Phenanthrene	1,450	--
Pyrene	4,710	--
Total PAH concentration	28,190.8	--
Concentration in Terms of BAP Equivalents	3,987	--
Metals (mg/kg)		
Arsenic	18.2 (12)	--
Beryllium	0.99	--
Cadmium	0.68	--
Chromium	73.5 (40)	--
Copper	40.2	--
Lead	89.3	--
Mercury	0.22 (0.1)	--
Nickel	15.3	--
Zinc	233 (50)	--

WS-BOT-48

Parameter	WS-BOT-48
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthylene	18.2 J
Anthracene	78.8
Benzo(a)anthracene	242 (224 or MDL)
Benzo(a)pyrene	241 (61 or MDL)
Benzo(b)fluoranthene	145
Benzo(g,h,I)perylene	180
Benzo(k)fluoranthene	259
Chrysene	270
Dibenzo(a,h)anthracene	77.1 (14.3 or MDL)
Fluoranthene	392
Indeno(1,2,3-cd)pyrene	138
Phenanthrene	181
Pyrene	477
Total PAH concentration	2,699.1
Concentration in Terms of BAP Equivalents	376
Metals (mg/kg)	
Arsenic	3.3
Beryllium	0.35
Cadmium	0.61
Chromium	19.4
Copper	50.3 (50)
Lead	198
Mercury	0.3 (0.1)
Nickel	25.4 (25)
Zinc	145 (50)

WS-BOT-47 / WS-BOT-47T

Parameter	WS-BOT-47	WS-BOT-47T
Polychlorinated Biphenyls (ug/kg)		
Aroclor 1242	--	48.2
Aroclor 1254	--	94.1
Aroclor 1260	--	53.5
All Volatile Organics (ug/kg)	ND	--
PAH (ug/kg)		
Acenaphthene	453	--
Acenaphthylene	58.6 J	--
Anthracene	1,120	--
Benzo(a)anthracene	2,630 (224 or MDL)	--
Benzo(a)pyrene	1,890 (61 or MDL)	--
Benzo(b)fluoranthene	1,360 (1,100)	--
Benzo(g,h,I)perylene	934	--
Benzo(k)fluoranthene	1,380 (1,100)	--
Chrysene	2,640 (400)	--
Dibenzo(a,h)anthracene	418 (14.3 or MDL)	--
Fluoranthene	5,960	--
Fluorene	309	--
Indeno(1,2,3-cd)pyrene	816	--
2-Methylnaphthalene	129	--
Naphthalene	39.6 J	--
Phenanthrene	6,420	--
Pyrene	7,870	--
Total PAH concentration	34,607.2	--
Concentration in Terms of BAP Equivalents	2,831	--
Metals (mg/kg)		
Arsenic	3.1	--
Beryllium	0.36	--
Chromium	16.4	--
Copper	58.2 (50)	--
Lead	55.6	--
Mercury	0.14 (0.1)	--
Nickel	16.7	--
Zinc	62 (50)	--

WS-BOT-46

Parameter	WS-BOT-46
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	59.5 J
Acenaphthylene	36.8 J
Anthracene	179
Benzo(a)anthracene	967 (224 or MDL)
Benzo(a)pyrene	916 (61 or MDL)
Benzo(b)fluoranthene	696
Benzo(g,h,I)perylene	441
Benzo(k)fluoranthene	751
Chrysene	911 (400)
Dibenzo(a,h)anthracene	199 (14.3 or MDL)
Fluoranthene	2,360
Indeno(1,2,3-cd)pyrene	492
Phenanthrene	835
Pyrene	1,410
Total PAH concentration	10,253.3
Concentration in Terms of BAP Equivalents	1,347
Metals (mg/kg)	
Arsenic	3.1
Beryllium	0.5
Chromium	28
Copper	22.5
Lead	40.6
Mercury	0.063
Nickel	17.8
Zinc	61.2 (50)

WS-SW-19

Parameter	WS-SW-19
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	67.6 J
Acenaphthylene	94.7 J
Anthracene	217 J
Benzo(a)anthracene	979 (224 or MDL)
Benzo(a)pyrene	815 (61 or MDL)
Benzo(b)fluoranthene	660
Benzo(g,h,I)perylene	781
Benzo(k)fluoranthene	810
Chrysene	895 (400)
Dibenzo(a,h)anthracene	276 (14.3 or MDL)
Fluoranthene	1,560
Indeno(1,2,3-cd)pyrene	495
Phenanthrene	756
Pyrene	1,910
Total PAH concentration	10,316.3
Concentration in Terms of BAP Equivalents	1,321
Metals (mg/kg)	
Arsenic	9.8
Beryllium	0.85
Cadmium	0.87
Chromium	56.1 (40)
Copper	365 (50)
Lead	141
Mercury	0.46 (0.1)
Nickel	20.7
Zinc	210 (50)

WS-SW-18

Parameter	WS-SW-18
Volatile Organics (ug/kg)	
Methyl Acetate	8.9
PAH (ug/kg)	
Acenaphthene	376
Acenaphthylene	42.5 J
Anthracene	1,490
Benzo(a)anthracene	2,560 (224 or MDL)
Benzo(a)pyrene	2,140 (61 or MDL)
Benzo(b)fluoranthene	1,690 (1,100)
Benzo(g,h,I)perylene	1,250
Benzo(k)fluoranthene	1,960 (1,100)
Chrysene	2,520 (400)
Dibenzo(a,h)anthracene	543 (14.3 or MDL)
Fluoranthene	7,030
Fluorene	333
Indeno(1,2,3-cd)pyrene	1,170
2-Methylnaphthalene	84 J
Naphthalene	143
Phenanthrene	4,960
Pyrene	6,240
Total PAH concentration	34,531.5
Concentration in Terms of BAP Equivalents	3,270
Metals (mg/kg)	
Arsenic	4.6
Beryllium	0.46
Cadmium	0.74
Chromium	25.7
Copper	32.7
Lead	178
Mercury	0.22 (0.1)
Nickel	26.3 (25)
Zinc	96.3 (50)

WS-SW-17

Parameter	WS-SW-17
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	28.6 J
Acenaphthylene	17.5 J
Anthracene	87.8
Benzo(a)anthracene	299 (224 or MDL)
Benzo(a)pyrene	314 (61 or MDL)
Benzo(b)fluoranthene	221
Benzo(g,h,I)perylene	208
Benzo(k)fluoranthene	306
Chrysene	343
Dibenzo(a,h)anthracene	92.4 (14.3 or MDL)
Fluoranthene	520
Fluorene	18.3 J
Indeno(1,2,3-cd)pyrene	171
Phenanthrene	235
Pyrene	616
Total PAH concentration	3,477.6
Concentration in Terms of BAP Equivalents	482
Metals (mg/kg)	
Arsenic	2.8
Beryllium	0.41
Chromium	19.8
Copper	22.4
Lead	54.6
Mercury	0.12 (0.1)
Nickel	18
Zinc	60.4 (50)

WS-SW-16

Parameter	WS-SW-16
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Anthracene	1150
Benzo(a)anthracene	3,480 (224 or MDL)
Benzo(a)pyrene	4,090 (61 or MDL)
Benzo(b)fluoranthene	3,160 (1,100)
Benzo(g,h,I)perylene	1,670
Benzo(k)fluoranthene	2,630 (1,100)
Chrysene	3,730 (400)
Dibenzo(a,h)anthracene	772 (14.3 or MDL)
Fluoranthene	8,960
Fluorene	218 J
Indeno(1,2,3-cd)pyrene	1,850
Phenanthrene	3,510
Pyrene	5,540
Total PAH concentration	40,760
Concentration in Terms of BAP Equivalents	5,775
Metals (mg/kg)	
Arsenic	4.7
Beryllium	0.5
Chromium	27
Copper	26.3
Lead	56.7
Mercury	0.16 (0.1)
Nickel	18.1
Zinc	73.2 (50)

WS-BOT-81

Parameter	WS-BOT-81
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	863
Acenaphthylene	1,020
Anthracene	1,620
Benzo(a)anthracene	2,780 (224 or MDL)
Benzo(a)pyrene	4,030 (61 or MDL)
Benzo(b)fluoranthene	3,440 (1,100)
Benzo(g,h,I)perylene	3,170
Benzo(k)fluoranthene	2,270 (1,100)
Chrysene	2,990 (400)
Dibenzo(a,h)anthracene	865 (14.3 or MDL)
Fluoranthene	5,550
Fluorene	508
Indeno(1,2,3-cd)pyrene	2,520
2-Methylnaphthalene	142
Naphthalene	467
Phenanthrene	3,130
Pyrene	6,020
Total PAH concentration	41,385
Concentration in Terms of BAP Equivalents	5,822
Metals (mg/kg)	
Arsenic	9
Beryllium	0.85 J
Cadmium	0.86 J
Chromium	46.4 J (40)
Copper	117 J (50)
Lead	251 J
Mercury	1.3 (0.1)
Nickel	70.7 J (25)
Zinc	187 J (50)

WS-BOT-80

Parameter	WS-BOT-80
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	891
Acenaphthylene	1,160
Anthracene	1,530
Benzo(a)anthracene	2,990 (224 or MDL)
Benzo(a)pyrene	4,310 (61 or MDL)
Benzo(b)fluoranthene	3,060 (1,100)
Benzo(g,h,I)perylene	3,340
Benzo(k)fluoranthene	2,690 (1,100)
Chrysene	3,120 (400)
Dibenzo(a,h)anthracene	863 (14.3 or MDL)
Fluoranthene	6,080
Fluorene	453
Indeno(1,2,3-cd)pyrene	2,570
2-Methylnaphthalene	168
Naphthalene	458
Phenanthrene	2,970
Pyrene	6,990
Total PAH concentration	43,643
Concentration in Terms of BAP Equivalents	6,093
Metals (mg/kg)	
Arsenic	10
Beryllium	0.8 J
Cadmium	0.82 J
Chromium	55.2 J (40)
Copper	115 (50)
Lead	208 J
Mercury	1.5 (0.1)
Nickel	62.2 J (25)
Zinc	176 J (50)

WS-BOT-79

Parameter	WS-BOT-79
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	515
Acenaphthylene	1,120
Anthracene	1,180
Benzo(a)anthracene	2,330 (224 or MDL)
Benzo(a)pyrene	3,440 (61 or MDL)
Benzo(b)fluoranthene	2,710 (1,100)
Benzo(g,h,I)perylene	3,030
Benzo(k)fluoranthene	1,180 (1,100)
Chrysene	2,410 (400)
Dibenzo(a,h)anthracene	755 (14.3 or MDL)
Fluoranthene	4,620
Fluorene	260
Indeno(1,2,3-cd)pyrene	2,260
2-Methylnaphthalene	77.2
Naphthalene	266
Phenanthrene	1,950
Pyrene	5,510
Total PAH concentration	33,613.2
Concentration in Terms of BAP Equivalents	4,961
Metals (mg/kg)	
Arsenic	9.3
Beryllium	0.82 J
Cadmium	1 J
Chromium	36.3 J
Copper	114 J (50)
Lead	208 J
Mercury	1.7 (0.1)
Nickel	62.7 J (25)
Zinc	236 J (50)

WS-BOT-78 / WS-BOT-781

Parameter	WS-BOT-78	WS-BOT-781
Volatile Organics (ug/kg)		
Isopropylbenzene	< 5.4	0.62 J
PAH (ug/kg)		
Acenaphthene	976	786
Acenaphthylene	889	695
Anthracene	1,630	1,330
Benzo(a)anthracene	3,130 (224 or MDL)	3,080 (224 or MDL)
Benzo(a)pyrene	3,910 (61 or MDL)	3,100 J (61 or MDL)
Benzo(b)fluoranthene	3,890 (1,100)	3,180 J (1,100)
Benzo(g,h,I)perylene	894 J	571 J
Benzo(k)fluoranthene	2,300 (1,100)	2,650 J (1,100)
Chrysene	3,100 (400)	2,600 (400)
Dibenzo(a,h)anthracene	205 J (14.3 or MDL)	141 J (14.3 or MDL)
Fluoranthene	6,110	4,710
Fluorene	682	531
Indeno(1,2,3-cd)pyrene	749 J	540 J
2-Methylnaphthalene	171	145
Naphthalene	629	439
Phenanthrene	3,870	3,420
Pyrene	6,710	5,290
Total PAH concentration	39,045	33,208
Concentration in Terms of BAP Equivalents	4,866	3,974
Metals (mg/kg)		
Arsenic	10	10.2
Beryllium	0.88 J	0.84 J
Cadmium	0.91 J	0.84 J
Chromium	39.8 J	49.7 J (40)
Copper	108 J (50)	104 J (50)
Lead	218 J	245 J
Mercury	1.6 (0.1)	1.5 (0.1)
Nickel	63.9 J (25)	67.9 J (25)
Zinc	173 J (50)	233 J (50)

WS-BOT-40

Parameter	WS-BOT-40
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1770
Acenaphthylene	1120
Anthracene	2430
Benzo(a)anthracene	4400 (224 or MDL)
Benzo(a)pyrene	5180 (61 or MDL)
Benzo(b)fluoranthene	4150 (1100)
Benzo(g,h,I)perylene	927 J
Benzo(k)fluoranthene	3040 (1100)
Chrysene	4590 (400)
Dibenzo(a,h)anthracene	183 J (14.3 or MDL)
Fluoranthene	9040
Fluorene	1150
Indeno(1,2,3-cd)pyrene	758 J
2-Methylnaphthalene	473
Naphthalene	1560
Phenanthrene	7760
Pyrene	9320
Total PAH concentration	57851
Concentration in Terms of BAP Equivalents	6370
Metals (mg/kg)	
Arsenic	10.5
Beryllium	0.95 J
Cadmium	0.79 J
Chromium	40.6 J (40)
Copper	131 J (50)
Lead	248 J
Mercury	1.6 (0.1)
Nickel	73.2 J (25)
Zinc	201 J (50)

WS-BOT-39

Parameter	WS-BOT-39
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	608
Acenaphthylene	858
Anthracene	1,070
Benzo(a)anthracene	2,680 (224 or MDL)
Benzo(a)pyrene	3,120 J (61 or MDL)
Benzo(b)fluoranthene	3,880 (1,100)
Benzo(g,h,I)perylene	676 J
Benzo(k)fluoranthene	2,240 J (1,100)
Chrysene	2,220 (400)
Dibenzo(a,h)anthracene	288 J (14.3 or MDL)
Fluoranthene	5,120
Fluorene	432
Indeno(1,2,3-cd)pyrene	621 J
2-Methylnaphthalene	82.4
Naphthalene	266
Phenanthrene	2,140
Pyrene	6,330
Total PAH concentration	32,631.4
Concentration in Terms of BAP Equivalents	4,171
Metals (mg/kg)	
Arsenic	8.5
Beryllium	0.83 J
Cadmium	0.66 J
Chromium	36.6 J
Copper	179 J (50)
Lead	193 J
Mercury	1.6 (0.1)
Nickel	69.4 J (25)
Zinc	168 J (50)

WS-BOT-38

Parameter	WS-BOT-38
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	658
Acenaphthylene	764
Anthracene	1300
Benzo(a)anthracene	2880 (224 or MDL)
Benzo(a)pyrene	2950 J (61 or MDL)
Benzo(b)fluoranthene	2580 (1100)
Benzo(g,h,I)perylene	670 J
Benzo(k)fluoranthene	1710 (1100)
Chrysene	2250 (400)
Dibenzo(a,h)anthracene	235 J (14.3 or MDL)
Fluoranthene	4400
Fluorene	465
Indeno(1,2,3-cd)pyrene	572 J
2-Methylnaphthalene	125
Naphthalene	293
Phenanthrene	2550
Pyrene	5290
Total PAH concentration	29692
Concentration in Terms of BAP Equivalents	3828
Metals (mg/kg)	
Arsenic	10.5
Beryllium	0.88 J
Cadmium	0.83 J
Chromium	48.5 J (40)
Copper	134 J (50)
Lead	246 J
Mercury	2.5 (0.1)
Nickel	68.5 J (25)
Zinc	182 J (50)

WS-BOT-37

Parameter	WS-BOT-37
Volatile Organics (ug/kg)	
Carbon Disulfide	0.53 J
PAH (ug/kg)	
Acenaphthene	711
Acenaphthylene	69.7 J
Anthracene	1810
Benzo(a)anthracene	3,480 (224 or MDL)
Benzo(a)pyrene	2,940 J (61 or MDL)
Benzo(b)fluoranthene	2,940 (1,100)
Benzo(g,h,I)perylene	952
Benzo(k)fluoranthene	1,690 (1,100)
Chrysene	3,000 (400)
Dibenzo(a,h)anthracene	514 (14.3 or MDL)
Fluoranthene	5,960
Fluorene	598
Indeno(1,2,3-cd)pyrene	1,060
2-Methylnaphthalene	231
Naphthalene	454
Phenanthrene	5,480
Pyrene	5,980
Total PAH concentration	37,869.7
Concentration in Terms of BAP Equivalents	4,249
Metals (mg/kg)	
Arsenic	8
Beryllium	0.54 J
Cadmium	0.64 J
Chromium	22.8 J
Copper	75.8 J (50)
Lead	201 J
Mercury	0.62 (0.1)
Nickel	28.9 J (25)
Zinc	147 J (50)

WS-BOT-36

Parameter	WS-BOT-36
Volatile Organics (ug/kg)	
Carbon Disulfide	0.71 J
PAH (ug/kg)	
Acenaphthene	718
Acenaphthylene	399
Anthracene	1,490
Benzo(a)anthracene	3,940 (224 or MDL)
Benzo(a)pyrene	2,980 (61 or MDL)
Benzo(b)fluoranthene	2,940 (1,100)
Benzo(g,h,I)perylene	620
Benzo(k)fluoranthene	2,910 (1,100)
Chrysene	2,790 (400)
Dibenzo(a,h)anthracene	207 (14.3 or MDL)
Fluoranthene	7,930
Fluorene	602
Indeno(1,2,3-cd)pyrene	603
2-Methylnaphthalene	176
Naphthalene	453
Phenanthrene	5,770
Pyrene	7,920
Total PAH concentration	42,448
Concentration in Terms of BAP Equivalents	3,992
Metals (mg/kg)	
Arsenic	7.8
Beryllium	0.87 J
Cadmium	0.91 J
Chromium	35.7 J
Copper	123 J (50)
Lead	257 J
Mercury	1.7 (0.1)
Nickel	67.5 J (25)
Zinc	269 J (50)

WS-BOT-30

Parameter	WS-BOT-30
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1,390
Acenaphthylene	1,140
Anthracene	1,890
Benzo(a)pyrene	3,470 (61 or MDL)
Benzo(b)fluoranthene	4,850 (1,100)
Benzo(g,h,I)perylene	4,360
Benzo(k)fluoranthene	802 J (1,100)
Chrysene	3,650 (400)
Dibenzo(a,h)anthracene	3,620 (14.3 or MDL)
Fluoranthene	329 J
Fluorene	10,800
Indeno(1,2,3-cd)pyrene	847
2-Methylnaphthalene	718 J
Naphthalene	181
Phenanthrene	549
Pyrene	4,500
Total PAH concentration	43,096
Concentration in Terms of BAP Equivalents	7,712
Metals (mg/kg)	
Arsenic	11
Beryllium	1.7 J
Cadmium	0.79 J
Chromium	41 J (40)
Copper	228 J (50)
Lead	352 J
Mercury	2.3 (0.1)
Nickel	77.3 J (25)
Zinc	823 J (50)

WS-BOT-29

Parameter	WS-BOT-29
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	4280
Acenaphthylene	813
Anthracene	6600
Benzo(a)anthracene	10400 (224 or MDL)
Benzo(a)pyrene	9710 (61 or MDL)
Benzo(b)fluoranthene	9450 JN (1100)
Benzo(g,h,I)perylene	1550 J
Benzo(k)fluoranthene	7420 JN (1100)
Chrysene	8530 (400)
Dibenzo(a,h)anthracene	847 J (14.3 or MDL)
Fluoranthene	26500
Fluorene	3980
Indeno(1,2,3-cd)pyrene	1490 J
2-Methylnaphthalene	1260
Naphthalene	5480
Phenanthrene	21000
Pyrene	14400
Total PAH concentration	133710
Concentration in Terms of BAP Equivalents	12851
Metals (mg/kg)	
Arsenic	6.7
Beryllium	0.64 J
Cadmium	0.66 J
Chromium	26.9 J
Copper	86 J (50)
Lead	171 J
Mercury	1.1 (0.1)
Nickel	56 J (25)
Zinc	231 J (50)

WS-BOT-28

Parameter	WS-BOT-28
Volatile Organics (ug/kg)	
Acetone	25.7 J
Benzene	0.91 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2 J
Methyl Acetate	52.2
Methylene chloride	1.3 J
PAH (ug/kg)	
Acenaphthene	14,000
Acenaphthylene	998
Anthracene	19,800
Benzo(a)anthracene	29,500 (224 or MDL)
Benzo(a)pyrene	23,500 (61 or MDL)
Benzo(b)fluoranthene	29,500 (1,100)
Benzo(g,h,I)perylene	2,350 J
Benzo(k)fluoranthene	14,500 (1,100)
Chrysene	22,100 (400)
Dibenzo(a,h)anthracene	1,250 J (14.3 or MDL)
Fluoranthene	63,100
Fluorene	13,800
Indeno(1,2,3-cd)pyrene	2,240 J
2-Methylnaphthalene	4,900
Naphthalene	23,900
Phenanthrene	70,700
Pyrene	52,600
Total PAH concentration	388,738
Concentration in Terms of BAP Equivalents	31,240
Metals (mg/kg)	
Arsenic	8.2
Beryllium	0.77 J
Cadmium	0.79 J
Chromium	36.8 J
Copper	92.8 J (50)
Lead	236 J
Mercury	1.5 (0.1)
Nickel	62 J (25)
Zinc	192 J (50)

WS-BOT-27

Parameter	WS-BOT-27
Volatile Organics (ug/kg)	
Acetone	27.1 J
Carbon Disulfide	1.8 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2 J
Methyl Acetate	39.7
Methylene chloride	0.94 J
PAH (ug/kg)	
Acenaphthene	5,430
Acenaphthylene	1,240
Anthracene	2,420
Benzo(a)anthracene	4,920 (224 or MDL)
Benzo(a)pyrene	5,800 (61 or MDL)
Benzo(b)fluoranthene	5,220 JN (1,100)
Benzo(g,h,I)perylene	1,080 J
Benzo(k)fluoranthene	3,670 JN (1,100)
Chrysene	4,750 (400)
Dibenzo(a,h)anthracene	338 J (14.3 or MDL)
Fluoranthene	13,200
Fluorene	2,290
Indeno(1,2,3-cd)pyrene	825 J
2-Methylnaphthalene	529
Naphthalene	1,090
Phenanthrene	11,100
Pyrene	9,190
Total PAH concentration	73,092
Concentration in Terms of BAP Equivalents	7,319
Metals (mg/kg)	
Arsenic	10.2
Beryllium	0.95 J
Cadmium	0.76 J
Chromium	39.2 J
Copper	123 J (50)
Lead	265 J
Mercury	1.7 (0.1)
Nickel	83.7 J (25)
Zinc	208 J (50)

WS-BOT-26

Parameter	WS-BOT-26
Volatile Organics (ug/kg)	
Acetone	18.1 J
Carbon Disulfide	2.4 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2.2 J
Methyl Acetate	78.4
Methylene chloride	0.81 J
PAH (ug/kg)	
Acenaphthene	1,590
Acenaphthylene	1,300
Anthracene	3,000
Benzo(a)anthracene	7,100 (224 or MDL)
Benzo(a)pyrene	7,400 (61 or MDL)
Benzo(b)fluoranthene	6,570 JN (1,100)
Benzo(g,h,I)perylene	1,150 J
Benzo(k)fluoranthene	4,860 JN (1,100)
Chrysene	6,190 (400)
Dibenzo(a,h)anthracene	363 J (14.3 or MDL)
Fluoranthene	16,600
Fluorene	1,440
Indeno(1,2,3-cd)pyrene	935 J
2-Methylnaphthalene	280
Naphthalene	1,040
Phenanthrene	10,900
Pyrene	11,000
Total PAH concentration	81,718
Concentration in Terms of BAP Equivalents	9,334
Metals (mg/kg)	
Arsenic	10.3
Beryllium	0.84 J
Cadmium	1 J
Chromium	41.2 J (40)
Copper	102 J (50)
Lead	215 J
Mercury	1.7 (0.1)
Nickel	64.9 J (25)
Zinc	187 J (50)

WS-BOT-77

Parameter	WS-BOT-77
Volatile Organics (ug/kg)	
Acetone	14.7 J
Benzene	1.1
Carbon Disulfide	1.2 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	3.3 J
PAH (ug/kg)	
Acenaphthene	1,500
Acenaphthylene	1,080
Anthracene	2,620
Benzo(a)anthracene	3,870 (224 or MDL)
Benzo(a)pyrene	4,390 (61 or MDL)
Benzo(b)fluoranthene	3,360 (1,100)
Benzo(g,h,I)perylene	3,610
Benzo(k)fluoranthene	2,930 (1,100)
Chrysene	4,090 (400)
Dibenzo(a,h)anthracene	1,110 (14.3 or MDL)
Fluoranthene	7,760
Fluorene	1,190
Indeno(1,2,3-cd)pyrene	3,070
2-Methylnaphthalene	288
Naphthalene	679
Phenanthrene	6,700
Pyrene	8,490
Total PAH concentration	56,727
Concentration in Terms of BAP Equivalents	6,600
Metals (mg/kg)	
Arsenic	10.7
Beryllium	0.87
Cadmium	0.95 J
Chromium	51.9 J (40)
Copper	110 (50)
Lead	288 J
Mercury	1.8 (0.1)
Nickel	70.8 (25)
Zinc	193 J (50)

WS-BOT-76

Parameter	WS-BOT-76
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	171
Acenaphthylene	339
Anthracene	622
Benzo(a)anthracene	1,250 (224 or MDL)
Benzo(a)pyrene	1,900 (61 or MDL)
Benzo(b)fluoranthene	1,670 (1,100)
Benzo(g,h,I)perylene	724
Benzo(k)fluoranthene	985
Chrysene	1,390 (400)
Dibenzo(a,h)anthracene	274 (14.3 or MDL)
Fluoranthene	2,200
Fluorene	189
Indeno(1,2,3-cd)pyrene	649
2-Methylnaphthalene	69.7 J
Naphthalene	145
Phenanthrene	1,240
Pyrene	2,190
Total PAH concentration	16,007.7
Concentration in Terms of BAP Equivalents	2,555
Metals (mg/kg)	
Arsenic	3.2
Beryllium	0.33 J
Chromium	20.7 J
Copper	24.9 J
Lead	55.3 J
Mercury	0.24 (0.1)
Nickel	13.8 J
Zinc	47 J

WS-BOT-75

Parameter	WS-BOT-75
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1,010
Acenaphthylene	1,260
Anthracene	1,610
Benzo(a)anthracene	3,520 (224 or MDL)
Benzo(a)pyrene	4,900 (61 or MDL)
Benzo(b)fluoranthene	3,210 (1,100)
Benzo(g,h,I)perylene	1,060 J
Benzo(k)fluoranthene	3,230 (1,100)
Chrysene	3,180 (400)
Dibenzo(a,h)anthracene	285 J (14.3 or MDL)
Fluoranthene	6,750
Fluorene	710
Indeno(1,2,3-cd)pyrene	836 J
2-Methylnaphthalene	139
Naphthalene	359
Phenanthrene	3,730
Pyrene	7,950
Total PAH concentration	43,689
Concentration in Terms of BAP Equivalents	6,001
Metals (mg/kg)	
Arsenic	9.9
Beryllium	0.83 J
Cadmium	0.75 J
Chromium	44.2 J (40)
Copper	125 J (50)
Lead	417 J
Mercury	2 (0.1)
Nickel	67.4 J (25)
Zinc	170 J (50)

WS-BOT-74

Parameter	WS-BOT-74
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	508
Acenaphthylene	809
Anthracene	909
Benzo(a)anthracene	2,770 (224 or MDL)
Benzo(a)pyrene	2,510 J (61 or MDL)
Benzo(b)fluoranthene	3,070 J (1,100)
Benzo(g,h,I)perylene	493 J
Benzo(k)fluoranthene	1,840 J (1,100)
Chrysene	2,250 (400)
Dibenzo(a,h)anthracene	128 J (14.3 or MDL)
Fluoranthene	4,210
Fluorene	280
Indeno(1,2,3-cd)pyrene	529 J
2-Methylnaphthalene	58.8 J
Naphthalene	168
Phenanthrene	1,920
Pyrene	5,180
Total PAH concentration	27,632.8
Concentration in Terms of BAP Equivalents	3,316
Metals (mg/kg)	
Arsenic	7.1
Beryllium	0.75 J
Chromium	36.3 J
Copper	95.2 J (50)
Lead	234 J
Mercury	1.8 (0.1)
Nickel	49.9 J (25)
Zinc	137 J (50)

WS-BOT-73

Parameter	WS-BOT-73
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	650
Acenaphthylene	1,090
Anthracene	1,300
Benzo(a)anthracene	3,380 (224 or MDL)
Benzo(a)pyrene	4,100 (61 or MDL)
Benzo(b)fluoranthene	2,850 (1,100)
Benzo(g,h,I)perylene	1,010 J
Benzo(k)fluoranthene	2,640 (1,100)
Chrysene	2,800 (400)
Dibenzo(a,h)anthracene	138 J (14.3 or MDL)
Fluoranthene	5,830
Fluorene	549
Indeno(1,2,3-cd)pyrene	745 J
2-Methylnaphthalene	131
Naphthalene	375
Phenanthrene	3,180
Pyrene	6,720
Total PAH concentration	37,688
Concentration in Terms of BAP Equivalents	4,992
Metals (mg/kg)	
Arsenic	10.8
Beryllium	0.84 J
Cadmium	0.9 J
Chromium	38.3 J
Copper	107 J (50)
Lead	237 J
Mercury	1.7 (0.1)
Nickel	74.1 J (25)
Zinc	183 J (50)

WS-BOT-35

Parameter	WS-BOT-35
Volatile Organics (ug/kg)	
Carbon Disulfide	0.68 J
PAH (ug/kg)	
Acenaphthene	913
Acenaphthylene	371
Anthracene	2,020
Benzo(a)anthracene	3,970 (224 or MDL)
Benzo(a)pyrene	3,030 (61 or MDL)
Benzo(b)fluoranthene	3,190 (1,100)
Benzo(g,h,I)perylene	632
Benzo(k)fluoranthene	2,860 (1,100)
Chrysene	2,810 (400)
Dibenzo(a,h)anthracene	280 (14.3 or MDL)
Fluoranthene	8,070
Fluorene	947
Indeno(1,2,3-cd)pyrene	615
2-Methylnaphthalene	372
Naphthalene	664
Phenanthrene	7,380
Pyrene	7,700
Total PAH concentration	45,824
Concentration in Terms of BAP Equivalents	4,144
Metals (mg/kg)	
Arsenic	8.8
Beryllium	0.76 J
Cadmium	0.69 J
Chromium	37.9 J
Copper	83.9 J (50)
Lead	219 J
Mercury	1.6 (0.1)
Nickel	64.2 J (25)
Zinc	181 J (50)

WS-BOT-34

Parameter	WS-BOT-34
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	607
Acenaphthylene	721
Anthracene	1,090
Benzo(a)anthracene	2,400 (224 or MDL)
Benzo(a)pyrene	2,810 J (61 or MDL)
Benzo(b)fluoranthene	2,410 (1,100)
Benzo(g,h,I)perylene	626 J
Benzo(k)fluoranthene	1,610 (1,100)
Chrysene	2,360 (400)
Dibenzo(a,h)anthracene	186 J (14.3 or MDL)
Fluoranthene	4,600
Fluorene	397
Indeno(1,2,3-cd)pyrene	523 J
2-Methylnaphthalene	104
Naphthalene	308
Phenanthrene	2,610
Pyrene	5,270
Total PAH concentration	28,632
Concentration in Terms of BAP Equivalents	3,569
Metals (mg/kg)	
Arsenic	10.6
Beryllium	0.87 J
Cadmium	0.76 J
Chromium	39.5 J
Copper	106 J (50)
Lead	224 J
Mercury	1.3 (0.1)
Nickel	64.4 J (25)
Zinc	194 J (50)

WS-BOT-33

Parameter	WS-BOT-33
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	883
Acenaphthylene	835
Anthracene	1780 J
Benzo(a)anthracene	3350 (224 or MDL)
Benzo(a)pyrene	3820 (61 or MDL)
Benzo(b)fluoranthene	2950 (1100)
Benzo(g,h,I)perylene	2650 J
Benzo(k)fluoranthene	2620 (1100)
Chrysene	3520 (400)
Dibenzo(a,h)anthracene	779 J (14.3 or MDL)
Fluoranthene	6690
Fluorene	733
Indeno(1,2,3-cd)pyrene	2260 J
2-Methylnaphthalene	177
Naphthalene	563
Phenanthrene	4410
Pyrene	7200
Total PAH concentration	45220
Concentration in Terms of BAP Equivalents	5516
Metals (mg/kg)	
Arsenic	5.3
Beryllium	0.57 J
Chromium	26.1 J
Copper	60.3 J (50)
Lead	155 J
Mercury	1.4 (0.1)
Nickel	41.6 J (25)
Zinc	108 J (50)

WS-BOT-32

Parameter	WS-BOT-32
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	706
Acenaphthylene	800
Anthracene	1,400
Benzo(a)anthracene	3,650 (224 or MDL)
Benzo(a)pyrene	4,810 (61 or MDL)
Benzo(b)fluoranthene	4,230 JN (1,100)
Benzo(g,h,I)perylene	806
Benzo(k)fluoranthene	3,260 JN (1,100)
Chrysene	3,520 (400)
Dibenzo(a,h)anthracene	348 (14.3 or MDL)
Fluoranthene	8,450
Fluorene	433
Indeno(1,2,3-cd)pyrene	805
2-Methylnaphthalene	86.8
Naphthalene	168
Phenanthrene	3,340
Pyrene	6,300
Total PAH concentration	43,112.8
Concentration in Terms of BAP Equivalents	6,094
Metals (mg/kg)	
Arsenic	8
Beryllium	0.72 J
Chromium	22.9 J
Copper	92.7 J (50)
Lead	1,110 J
Mercury	1.6 (0.1)
Nickel	27.2 J (25)
Zinc	135 J (50)

WS-BOT-31

Parameter	WS-BOT-31
Volatile Organics (ug/kg)	
Carbon Disulfide	1.6 J
PAH (ug/kg)	
Acenaphthene	588
Acenaphthylene	747
Anthracene	921
Benzo(a)anthracene	3,140 (224 or MDL)
Benzo(a)pyrene	3,520 J (61 or MDL)
Benzo(b)fluoranthene	3,040 JN (1,100)
Benzo(g,h,I)perylene	632 J
Benzo(k)fluoranthene	2,990 JN (1,100)
Chrysene	2,670 (400)
Dibenzo(a,h)anthracene	146 J (14.3 or MDL)
Fluoranthene	7,060
Fluorene	457
Indeno(1,2,3-cd)pyrene	510 J
2-Methylnaphthalene	156
Naphthalene	418
Phenanthrene	2,970
Pyrene	4,360
Total PAH concentration	34,325
Concentration in Terms of BAP Equivalents	4,392
Metals (mg/kg)	
Arsenic	6.3
Beryllium	0.66 J
Cadmium	0.55 J
Chromium	46.3 J (40)
Copper	80.9 J (50)
Lead	198
Mercury	1.4 (0.1)
Nickel	55.6 J (25)
Zinc	142 J (50)

WS-BOT-25

Parameter	WS-BOT-25
Volatile Organics (ug/kg)	
Acetone	13.5 J
Carbon Disulfide	2.6 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1.9 J
Methyl Acetate	14.7
Methylene chloride	1.3 J
PAH (ug/kg)	
Acenaphthene	493
Acenaphthylene	756
Anthracene	596
Benzo(a)anthracene	1,990 (224 or MDL)
Benzo(a)pyrene	2,130 (61 or MDL)
Benzo(b)fluoranthene	2,570 (1,100)
Benzo(g,h,I)perylene	337
Benzo(k)fluoranthene	1,850 (1,100)
Chrysene	2,220 (400)
Dibenzo(a,h)anthracene	158 (14.3 or MDL)
Fluoranthene	5,430
Fluorene	261
Indeno(1,2,3-cd)pyrene	312
2-Methylnaphthalene	57.7 J
Naphthalene	132
Phenanthrene	1,220
Pyrene	3,470
Total PAH concentration	23,982.7
Concentration in Terms of BAP Equivalents	2,816
Metals (mg/kg)	
Arsenic	7.9
Beryllium	0.76 J
Cadmium	0.94 J
Chromium	38.6 J
Copper	103 J (50)
Lead	184 J
Mercury	1.6 (0.1)
Nickel	55.2 J (25)
Zinc	141 J (50)

WS-BOT-24

Parameter	WS-BOT-24
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1,170
Acenaphthylene	758
Anthracene	1,480
Benzo(a)anthracene	4,480 (224 or MDL)
Benzo(a)pyrene	4,460 (61 or MDL)
Benzo(b)fluoranthene	4,200 (1,100)
Benzo(g,h,I)perylene	547
Benzo(k)fluoranthene	3,800 (1,100)
Chrysene	2,930 (400)
Dibenzo(a,h)anthracene	213 (14.3 or MDL)
Fluoranthene	9,970
Fluorene	950
Indeno(1,2,3-cd)pyrene	497
2-Methylnaphthalene	615
Naphthalene	859
Phenanthrene	6,450
Pyrene	6,140
Total PAH concentration	49,519
Concentration in Terms of BAP Equivalents	5,658
Metals (mg/kg)	
Arsenic	8.1
Beryllium	0.79 J
Cadmium	0.86 J
Chromium	45.2 J (40)
Copper	99.7 J (50)
Lead	231 J
Mercury	1.3 (0.1)
Nickel	59.5 J (25)
Zinc	173 J (50)

WS-BOT-23

Parameter	WS-BOT-23
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	726
Acenaphthylene	1,460
Anthracene	1,420
Benzo(a)anthracene	5,250 (224 or MDL)
Benzo(a)pyrene	6,460 (61 or MDL)
Benzo(b)fluoranthene	5,000 JN (1,100)
Benzo(g,h,I)perylene	864
Benzo(k)fluoranthene	4,670 JN (1100)
Chrysene	4,520 (400)
Dibenzo(a,h)anthracene	263 (14.3 or MDL)
Fluoranthene	13,800
Fluorene	547
Indeno(1,2,3-cd)pyrene	660
2-Methylnaphthalene	93.3
Naphthalene	301
Phenanthrene	3,600
Pyrene	9,340
Total PAH concentration	58,974.3
Concentration in Terms of BAP Equivalents	7,906
Metals (mg/kg)	
Arsenic	8.1
Beryllium	0.84 J
Cadmium	0.67 J
Chromium	52.8 J (40)
Copper	101 J (50)
Lead	183 J
Mercury	1.6 (0.1)
Nickel	57.5 J (25)
Zinc	157 J (50)

WS-BOT-22

Parameter	WS-BOT-22
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	90.3
Acenaphthylene	74.2 J
Anthracene	243
Benzo(a)anthracene	643 (224 or MDL)
Benzo(a)pyrene	597 (61 or MDL)
Benzo(b)fluoranthene	529
Benzo(g,h,I)perylene	465
Benzo(k)fluoranthene	395
Chrysene	611 (400)
Dibenzo(a,h)anthracene	120 (14.3 or MDL)
Fluoranthene	1,130
Fluorene	99.3
Indeno(1,2,3-cd)pyrene	369
Naphthalene	76.8 J
Phenanthrene	903
Pyrene	1,220
Total PAH concentration	7,565.6
Concentration in Terms of BAP Equivalents	881
Metals (mg/kg)	
Arsenic	3.3
Chromium	11 J
Copper	29.4
Lead	78.5 J
Mercury	0.11 J (0.1)
Nickel	9.8
Zinc	47.5 J

WS-BOT-21 / WS-BOT-211

Parameter	WS-BOT-21	WS-BOT-211
All Volatile Organics (ug/kg)	ND	ND
PAH (ug/kg)		
Acenaphthene	25.1 J	< 71
Acenaphthylene	22.2 J	< 71
Anthracene	80.9 J	14.8 J
Benzo(a)anthracene	228 J (224 or MDL)	58 J
Benzo(a)pyrene	208 (61 or MDL)	55.2 J
Benzo(b)fluoranthene	170 J	44.2 J
Benzo(g,h,I)perylene	151	55.4 J
Benzo(k)fluoranthene	156 J	35.3 J
Chrysene	214 J	58.1 J
Dibenzo(a,h)anthracene	42.7 J (14.3 or MDL)	< 71
Fluoranthene	392 J	113 J
Fluorene	25.9 J	< 71
Indeno(1,2,3-cd)pyrene	128 J	41.7 J
Naphthalene	21.9 J	< 71
Phenanthrene	291 J	55.9 J
Pyrene	408 J	97.8 J
Total PAH concentration	2,564.7	629.4
Concentration in Terms of BAP Equivalents	307	71
Metals (mg/kg)		
Arsenic	3	2.7
Chromium	10.9 J	9.5 J
Copper	7.6	5.4
Lead	46.1 J	10.9 J
Mercury	0.23 J (0.1)	< 0.032 UJ
Nickel	5.7	4.6
Zinc	25.1 J	21.2 J

WS-BOT-15

Parameter	WS-BOT-15
Volatile Organics (ug/kg)	
Carbon Disulfide	2 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2.2 J
Methyl Acetate	21.9
PAH (ug/kg)	
Acenaphthene	1,240
Acenaphthylene	917
Anthracene	1,550
Benzo(a)anthracene	5,170 (224 or MDL)
Benzo(a)pyrene	5,760 (61 or MDL)
Benzo(b)fluoranthene	5,610 JN (1,100)
Benzo(g,h,I)perylene	880
Benzo(k)fluoranthene	3,900 JN (1,100)
Chrysene	3,400 (400)
Dibenzo(a,h)anthracene	319 (14.3 or MDL)
Fluoranthene	12,500
Fluorene	1,020
Indeno(1,2,3-cd)pyrene	802
2-Methylnaphthalene	280
Naphthalene	911
Phenanthrene	6,100
Pyrene	7,370
Total PAH concentration	57,729
Concentration in Terms of BAP Equivalents	7,310
Metals (mg/kg)	
Arsenic	14.6 (12)
Beryllium	1.1 J
Cadmium	1.1 J (1)
Chromium	50.7 J (40)
Copper	301 J (50)
Lead	443 J
Mercury	2.3 (0.1)
Nickel	89.3 J (25)
Zinc	467 J (50)

WS-BOT-14

Parameter	WS-BOT-14
Volatile Organics (ug/kg)	
Carbon Disulfide	1.5 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	2.5 J
Methyl Acetate	13.6
PAH (ug/kg)	
Acenaphthene	627
Acenaphthylene	652
Anthracene	909
Benzo(a)anthracene	3,360 (224 or MDL)
Benzo(a)pyrene	2,660 (61 or MDL)
Benzo(b)fluoranthene	3,120 JN (1100)
Benzo(g,h,I)perylene	399
Benzo(k)fluoranthene	2,880 JN (1,100)
Chrysene	2,140 (400)
Dibenzo(a,h)anthracene	168 (14.3 or MDL)
Fluoranthene	7,650
Fluorene	532
Indeno(1,2,3-cd)pyrene	404
2-Methylnaphthalene	138
Naphthalene	423
Phenanthrene	3,290
Pyrene	4,260
Total PAH concentration	33,612
Concentration in Terms of BAP Equivalents	3,567
Metals (mg/kg)	
Arsenic	9.9
Beryllium	0.96 J
Cadmium	0.96 J
Chromium	50.8 J (40)
Copper	102 J (50)
Lead	208 J
Mercury	1.9 (0.1)
Nickel	72.9 J (25)
Zinc	190 J (50)

WS-BOT-13

Parameter	WS-BOT-13
Volatile Organics (ug/kg)	
Carbon Disulfide	1.5 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1.9 J
Methyl Acetate	19.3
PAH (ug/kg)	
Acenaphthene	1,490
Acenaphthylene	926
Anthracene	2,130
Benzo(a)anthracene	5,760 (224 or MDL)
Benzo(a)pyrene	5,640 (61 or MDL)
Benzo(b)fluoranthene	5,900 JN (1,100)
Benzo(g,h,I)perylene	1,070 J
Benzo(k)fluoranthene	4,020 JN (1,100)
Chrysene	3,390 (400)
Dibenzo(a,h)anthracene	274 J (14.3 or MDL)
Fluoranthene	14,100
Fluorene	1,410
Indeno(1,2,3-cd)pyrene	918 J
2-Methylnaphthalene	486
Naphthalene	1,150
Phenanthrene	8,740
Pyrene	8,450
Total PAH concentration	65,854
Concentration in Terms of BAP Equivalents	7,246
Metals (mg/kg)	
Arsenic	8
Beryllium	0.85 J
Cadmium	0.74 J
Chromium	59.6 J (40)
Copper	105 J (50)
Lead	191 J
Mercury	2.7 (0.1)
Nickel	60.1 J (25)
Zinc	209 J (50)

WS-BOT-12

Parameter	WS-BOT-12
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	124
Acenaphthylene	124
Anthracene	392
Benzo(a)anthracene	1,380 (224 or MDL)
Benzo(a)pyrene	1,230 (61 or MDL)
Benzo(b)fluoranthene	1,140 (1,100)
Benzo(g,h,I)perylene	856
Benzo(k)fluoranthene	881
Chrysene	1,340 (400)
Dibenzo(a,h)anthracene	267 (14.3 or MDL)
Fluoranthene	2,260
Fluorene	137
Indeno(1,2,3-cd)pyrene	700
2-Methylnaphthalene	51.1 J
Naphthalene	118
Phenanthrene	1,440
Pyrene	2,530
Total PAH concentration	14,970.1
Concentration in Terms of BAP Equivalents	1,841
Metals (mg/kg)	
Arsenic	5
Chromium	22.8 J
Copper	42.7
Lead	639 J (500)
Mercury	0.36 J (0.1)
Nickel	21.1
Zinc	99.5 J (50)

WS-BOT-11

Parameter	WS-BOT-11
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	96.4
Acenaphthylene	28.7 J
Anthracene	284
Benzo(a)anthracene	597 (224 or MDL)
Benzo(a)pyrene	483 (61 or MDL)
Benzo(b)fluoranthene	384
Benzo(g,h,I)perylene	304
Benzo(k)fluoranthene	341
Chrysene	531 (400)
Dibenzo(a,h)anthracene	87.2 (14.3 or MDL)
Fluoranthene	1210
Fluorene	105
Indeno(1,2,3-cd)pyrene	260
2-Methylnaphthalene	25.9 J
Naphthalene	72.7
Phenanthrene	1,040
Pyrene	1,190
Total PAH concentration	7,039.9
Concentration in Terms of BAP Equivalents	703
Metals (mg/kg)	
Arsenic	3.5
Beryllium	0.35
Chromium	20.7 J
Copper	7.6
Lead	11.1 J
Mercury	0.13 J (0.1)
Nickel	5.9
Zinc	23.8 J

WS-BOT-05

Parameter	WS-BOT-05
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthylene	57.9 J
Anthracene	109
Benzo(a)anthracene	283 (224 or MDL)
Benzo(a)pyrene	292 (61 or MDL)
Benzo(b)fluoranthene	254
Benzo(g,h,I)perylene	167
Benzo(k)fluoranthene	133
Chrysene	283
Dibenzo(a,h)anthracene	51.5 J (14.3 or MDL)
Fluoranthene	554
Fluorene	52.5 J
Indeno(1,2,3-cd)pyrene	140
Naphthalene	38.8 J
Phenanthrene	425
Pyrene	502
Total PAH concentration	3,343
Concentration in Terms of BAP Equivalents	415
Metals (mg/kg)	
Arsenic	3.1
Chromium	12.9
Copper	12.5 J
Lead	32.5 J
Mercury	0.13 J (0.1)
Nickel	7.8
Zinc	30.1 J

WS-BOT-04

Parameter	WS-BOT-04
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthylene	23.4 J
Anthracene	59 J
Benzo(a)anthracene	191
Benzo(a)pyrene	160 (61 or MDL)
Benzo(b)fluoranthene	139
Benzo(g,h,I)perylene	91.5
Benzo(k)fluoranthene	89.4
Chrysene	176
Dibenzo(a,h)anthracene	30.8 J (14.3 or MDL)
Fluoranthene	291
Fluorene	23.3 J
Indeno(1,2,3-cd)pyrene	82.9
Phenanthrene	216
Pyrene	274
Total PAH concentration	1,847
Concentration in Terms of BAP Equivalents	235
Metals (mg/kg)	
Arsenic	2.3
Beryllium	0.36
Chromium	15.4
Copper	26.2 J
Lead	53 J
Mercury	0.065 J
Nickel	12.5
Zinc	42.6 J

WS-BOT-03

Parameter	WS-BOT-03
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	248
Acenaphthylene	287
Anthracene	740
Benzo(a)anthracene	2,110 (224 or MDL)
Benzo(a)pyrene	1,890 (61 or MDL)
Benzo(b)fluoranthene	1,880 (1100)
Benzo(g,h,I)perylene	325
Benzo(k)fluoranthene	975
Chrysene	2,110 (400)
Dibenzo(a,h)anthracene	143 (14.3 or MDL)
Fluoranthene	3,610
Fluorene	278
Indeno(1,2,3-cd)pyrene	384
2-Methylnaphthalene	101
Naphthalene	278
Phenanthrene	3,080
Pyrene	3,740
Total PAH concentration	22,179
Concentration in Terms of BAP Equivalents	2,501
Metals (mg/kg)	
Arsenic	3.8
Beryllium	0.42
Chromium	22
Copper	29.9 J
Lead	134 J
Mercury	0.44 J (0.1)
Nickel	15.7
Zinc	79 J (50)

WS-BOT-02

Parameter	WS-BOT-02
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	345
Acenaphthylene	350
Anthracene	847
Benzo(a)anthracene	1,560 (224 or MDL)
Benzo(a)pyrene	1,520 (61 or MDL)
Benzo(b)fluoranthene	1,360 (1,100)
Benzo(g,h,I)perylene	272
Benzo(k)fluoranthene	894
Chrysene	1,610 (400)
Dibenzo(a,h)anthracene	97.6 (14.3 or MDL)
Fluoranthene	3,720
Fluorene	334
Indeno(1,2,3-cd)pyrene	260
2-Methylnaphthalene	85.4
Naphthalene	229
Phenanthrene	2,930
Pyrene	3,010
Total PAH concentration	19,424
Concentration in Terms of BAP Equivalents	1,961
Metals (mg/kg)	
Arsenic	3.5
Chromium	19.6
Copper	19.9 J
Lead	45.9 J
Mercury	0.17 J (0.1)
Nickel	12.1
Zinc	56.2 J (50)

WS-BOT-01

Parameter	WS-BOT-01
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	192
Acenaphthylene	27.5 J
Anthracene	562
Benzo(a)anthracene	805 (224 or MDL)
Benzo(a)pyrene	622 (61 or MDL)
Benzo(b)fluoranthene	457
Benzo(g,h,I)perylene	240
Benzo(k)fluoranthene	400
Chrysene	752 (400)
Dibenzo(a,h)anthracene	88.7 (14.3 or MDL)
Fluoranthene	1,620
Fluorene	250
Indeno(1,2,3-cd)pyrene	250
2-Methylnaphthalene	77.6
Naphthalene	273
Phenanthrene	2,140
Pyrene	1,550
Total PAH concentration	10,307
Concentration in Terms of BAP Equivalents	873
Metals (mg/kg)	
Arsenic	2.9
Chromium	9.7
Copper	6.2 J
Lead	16.6 J
Mercury	0.033 J
Nickel	4.8
Zinc	21.6 J

WS-SW-05

Parameter	WS-SW-05
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Anthracene	162
Benzo(a)anthracene	307 (224 or MDL)
Benzo(a)pyrene	277 (61 or MDL)
Benzo(b)fluoranthene	177
Benzo(g,h,I)perylene	172
Benzo(k)fluoranthene	176
Chrysene	332
Dibenzo(a,h)anthracene	63.3 J (14.3 or MDL)
Fluoranthene	570
Indeno(1,2,3-cd)pyrene	147
Naphthalene	55.5 J
Phenanthrene	645
Pyrene	633
Total PAH concentration	3,716.8
Concentration in Terms of BAP Equivalents	408
Metals (mg/kg)	
Arsenic	2.8
Chromium	9.4
Copper	7.5 J
Lead	14.8 J
Nickel	4.3
Zinc	24.6 J

WS-SW-04

Parameter	WS-SW-04
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	102
Acenaphthylene	129
Anthracene	308
Benzo(a)anthracene	792 (224 or MDL)
Benzo(a)pyrene	659 (61 or MDL)
Benzo(b)fluoranthene	537
Benzo(g,h,I)perylene	552
Benzo(k)fluoranthene	422
Chrysene	738 (400)
Dibenzo(a,h)anthracene	178 (14.3 or MDL)
Fluoranthene	1,250
Fluorene	115
Indeno(1,2,3-cd)pyrene	422
2-Methylnaphthalene	34.8 J
Naphthalene	96.6
Phenanthrene	1,200
Pyrene	1,490
Total PAH concentration	9,025.4
Concentration in Terms of BAP Equivalents	1,024
Metals (mg/kg)	
Arsenic	2.9
Chromium	10.7
Copper	14.6 J
Lead	66.7 J
Mercury	0.11 J (0.1)
Nickel	6.5
Zinc	34.3 J

WS-SW-03

Parameter	WS-SW-03
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	57.5 J
Acenaphthylene	32.1 J
Anthracene	144
Benzo(a)anthracene	303 (224 or MDL)
Benzo(a)pyrene	265 (61 or MDL)
Benzo(b)fluoranthene	216
Benzo(g,h,I)perylene	217
Benzo(k)fluoranthene	173
Chrysene	316
Dibenzo(a,h)anthracene	54.2 J (14.3 or MDL)
Fluoranthene	591
Fluorene	71.4
Indeno(1,2,3-cd)pyrene	159
2-Methylnaphthalene	22.1 J
Naphthalene	68.6
Phenanthrene	607
Pyrene	608
Total PAH concentration	3,904.9
Concentration in Terms of BAP Equivalents	392
Metals (mg/kg)	
Arsenic	2.4
Chromium	10.3
Copper	6.8 J
Lead	20.7 J
Mercury	0.05 J
Nickel	5.1
Zinc	23.4 J

WS-SW-02

Parameter	WS-SW-02
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	133
Anthracene	381
Benzo(a)anthracene	553 (224 or MDL)
Benzo(a)pyrene	511 (61 or MDL)
Benzo(b)fluoranthene	429
Benzo(g,h,I)perylene	358
Benzo(k)fluoranthene	309
Chrysene	609 (400)
Dibenzo(a,h)anthracene	134 (14.3 or MDL)
Fluoranthene	1,180
Fluorene	143
Indeno(1,2,3-cd)pyrene	297
2-Methylnaphthalene	54.2 J
Naphthalene	184
Phenanthrene	1,370
Pyrene	1,200
Total PAH concentration	7,845.2
Concentration in Terms of BAP Equivalents	782
Metals (mg/kg)	
Arsenic	2.7
Chromium	10.9
Copper	8.1 J
Lead	47.6 J
Mercury	0.062 J
Nickel	5.4
Zinc	26.5 J

WS-SW-01

Parameter	WS-SW-01
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthylene	41.3 J
Anthracene	58.9 J
Benzo(a)anthracene	231 (224 or MDL)
Benzo(a)pyrene	260 (61 or MDL)
Benzo(b)fluoranthene	209
Benzo(g,h,I)perylene	215
Benzo(k)fluoranthene	197
Chrysene	237
Dibenzo(a,h)anthracene	46.5 J (14.3 or MDL)
Fluoranthene	324
Indeno(1,2,3-cd)pyrene	160
Phenanthrene	222
Pyrene	381
Total PAH concentration	2,582.7
Concentration in Terms of BAP Equivalents	371
Metals (mg/kg)	
Arsenic	2.4
Chromium	12.7
Copper	12.3 J
Lead	23.6 J
Nickel	7.7
Zinc	31 J

WS-BOT-72

Parameter	WS-BOT-72
Volatile Organics (ug/kg)	
Methyl Acetate	28.1
PAH (ug/kg)	
Acenaphthene	947
Acenaphthylene	752
Anthracene	1,830
Benzo(a)anthracene	4,990 (224 or MDL)
Benzo(a)pyrene	4,790 (61 or MDL)
Benzo(b)fluoranthene	8,060 (1,100)
Benzo(g,h,I)perylene	890 J
Chrysene	3,540 (400)
Dibenzo(a,h)anthracene	291 J (14.3 or MDL)
Fluoranthene	11,600
Fluorene	799
Indeno(1,2,3-cd)pyrene	701 J
2-Methylnaphthalene	206
Naphthalene	567
Phenanthrene	5,270
Pyrene	7,210
Total PAH concentration	52,443
Concentration in Terms of BAP Equivalents	6,492
Metals (mg/kg)	
Arsenic	7.1
Beryllium	0.82 J
Cadmium	0.67 J
Chromium	70.1 J (40)
Copper	84.4 J (50)
Lead	207 J
Mercury	1.8 (0.1)
Nickel	59.7 J (25)
Zinc	175 J (50)

WS-BOT-71

Parameter	WS-BOT-71
Volatile Organics (ug/kg)	
Methyl Acetate	13.7
PAH (ug/kg)	
Acenaphthene	2,410
Acenaphthylene	854
Anthracene	5,200
Benzo(a)anthracene	8,740 (224 or MDL)
Benzo(a)pyrene	7,900 (61 or MDL)
Benzo(b)fluoranthene	12,100 (1,100)
Benzo(g,h,I)perylene	1,100 J
Chrysene	7,060 (400)
Dibenzo(a,h)anthracene	569 J (14.3 or MDL)
Fluoranthene	22,400
Fluorene	2,680
Indeno(1,2,3-cd)pyrene	999 J
2-Methylnaphthalene	841
Naphthalene	2,910
Phenanthrene	18,100
Pyrene	13,500
Total PAH concentration	107,383
Concentration in Terms of BAP Equivalents	10,744
Metals (mg/kg)	
Arsenic	8.3
Beryllium	0.77 J
Cadmium	0.88 J
Chromium	36.7 J
Copper	109 J (50)
Lead	239 J
Mercury	2.2 (0.1)
Nickel	72.6 J (25)
Zinc	219 J (50)

WS-BOT-70

Parameter	WS-BOT-70
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	798
Acenaphthylene	841
Anthracene	1,610
Benzo(a)anthracene	3,920 (224 or MDL)
Benzo(a)pyrene	3,450 J (61 or MDL)
Benzo(b)fluoranthene	4,720 (1,100)
Benzo(g,h,I)perylene	788 J
Benzo(k)fluoranthene	2,030 (1,100)
Chrysene	2,930 (400)
Dibenzo(a,h)anthracene	272 J (14.3 or MDL)
Fluoranthene	8,960
Fluorene	647
Indeno(1,2,3-cd)pyrene	642 J
2-Methylnaphthalene	184
Naphthalene	561
Phenanthrene	3,660
Pyrene	5,840
Total PAH concentration	41,853
Concentration in Terms of BAP Equivalents	4,700
Metals (mg/kg)	
Arsenic	9.6
Beryllium	0.64 J
Cadmium	0.77 J
Chromium	33.1 J
Copper	84.9 J (50)
Lead	172 J
Mercury	2 (0.1)
Nickel	53.2 J (25)
Zinc	164 J (50)

WS-BOT-69

Parameter	WS-BOT-69
Volatile Organics (ug/kg)	
Carbon Disulfide	0.72 J
PAH (ug/kg)	
Acenaphthene	6310
Acenaphthylene	667
Anthracene	10,200
Benzo(a)anthracene	14,800 (224 or MDL)
Benzo(a)pyrene	14,600 (61 or MDL)
Benzo(b)fluoranthene	13,900 (1,100)
Benzo(g,h,I)perylene	1,490 J
Benzo(k)fluoranthene	8,310 (1,100)
Chrysene	13,100 (400)
Dibenzo(a,h)anthracene	556 J (14.3 or MDL)
Fluoranthene	42,000
Fluorene	6,620
Indeno(1,2,3-cd)pyrene	1,380 J
2-Methylnaphthalene	2,380
Naphthalene	12,400
Phenanthrene	33,800
Pyrene	22,000
Total PAH concentration	204,513
Concentration in Terms of BAP Equivalents	18,378
Metals (mg/kg)	
Arsenic	11.2
Beryllium	0.88 J
Cadmium	0.93 J
Chromium	54.3 J (40)
Copper	132 J (50)
Lead	318 J
Mercury	2 (0.1)
Nickel	103 J (25)
Zinc	198 J (50)

WS-BOT-68

Parameter	WS-BOT-68
Volatile Organics (ug/kg)	
Carbon Disulfide	1.1 J
PAH (ug/kg)	
Acenaphthene	62.2 J
Acenaphthylene	206
Anthracene	222
Benzo(a)anthracene	685 (224 or MDL)
Benzo(a)pyrene	936 (61 or MDL)
Benzo(b)fluoranthene	1,270 (1,100)
Benzo(g,h,I)perylene	331
Chrysene	712 (400)
Dibenzo(a,h)anthracene	133 (14.3 or MDL)
Fluoranthene	1,330
Fluorene	77.8
Indeno(1,2,3-cd)pyrene	342
2-Methylnaphthalene	45.3 J
Phenanthrene	628
Pyrene	1,380
Total PAH concentration	8,360.3
Concentration in Terms of BAP Equivalents	1,306
Metals (mg/kg)	
Arsenic	3.9
Beryllium	0.38 J
Chromium	12.9 J
Copper	39.2 J
Lead	131 J
Mercury	0.49 (0.1)
Nickel	14.9 J
Zinc	80.3 J (50)

WS-BOT-63

Parameter	WS-BOT-63
Volatile Organics (ug/kg)	
Methyl Acetate	21.1
PAH (ug/kg)	
Acenaphthene	1,030
Acenaphthylene	1,060
Anthracene	1,690
Benzo(a)anthracene	3,420 (224 or MDL)
Benzo(a)pyrene	3,000 J (61 or MDL)
Benzo(b)fluoranthene	6,710 (1,100)
Benzo(g,h,I)perylene	1,030 J
Chrysene	2,920 (400)
Dibenzo(a,h)anthracene	305 J (14.3 or MDL)
Fluoranthene	9,650
Fluorene	775
Indeno(1,2,3-cd)pyrene	781 J
2-Methylnaphthalene	202
Naphthalene	620
Phenanthrene	4,240
Pyrene	5,920
Total PAH concentration	43,353
Concentration in Terms of BAP Equivalents	4,425
Metals (mg/kg)	
Arsenic	8.5
Beryllium	0.78 J
Cadmium	1.2 J (1)
Chromium	34.8 J
Copper	104 J (50)
Lead	229 J
Mercury	1.7 (0.1)
Nickel	64.1 J (25)
Zinc	171 J (50)

WS-BOT-62

Parameter	WS-BOT-62
Volatile Organics (ug/kg)	
Carbon Disulfide	1.2 J
PAH (ug/kg)	
Acenaphthene	754
Acenaphthylene	587
Anthracene	1,580
Benzo(a)anthracene	2,870 (224 or MDL)
Benzo(a)pyrene	2,930 (61 or MDL)
Benzo(b)fluoranthene	5,620 (1,100)
Benzo(g,h,I)perylene	405
Chrysene	2,540 (400)
Dibenzo(a,h)anthracene	187 (14.3 or MDL)
Fluoranthene	9,440
Fluorene	691
Indeno(1,2,3-cd)pyrene	411
2-Methylnaphthalene	212
Naphthalene	667
Phenanthrene	4,850
Pyrene	5,120
Total PAH concentration	38,864
Concentration in Terms of BAP Equivalents	4,033
Metals (mg/kg)	
Arsenic	13 (12)
Beryllium	0.82 J
Cadmium	0.84 J
Chromium	39.5 J
Copper	184 J (50)
Lead	195 J
Mercury	1.4 (0.1)
Nickel	68.9 J (25)
Zinc	154 J (50)

WS-BOT-61

Parameter	WS-BOT-61
Volatile Organics (ug/kg)	
Xylenes (total)	1.2 J
PAH (ug/kg)	
Acenaphthene	356
Acenaphthylene	65.5 J
Anthracene	1,030
Benzo(a)anthracene	3,370 (224 or MDL)
Benzo(a)pyrene	3,180 (61 or MDL)
Benzo(b)fluoranthene	5,030 (1,100)
Benzo(g,h,I)perylene	549
Chrysene	3,270 (400)
Dibenzo(a,h)anthracene	275 (14.3 or MDL)
Fluoranthene	7,880
Fluorene	326
Indeno(1,2,3-cd)pyrene	679
2-Methylnaphthalene	76.3 J
Naphthalene	113
Phenanthrene	3,810
Pyrene	5,250
Total PAH concentration	35,259.8
Concentration in Terms of BAP Equivalents	4,396
Metals (mg/kg)	
Arsenic	3.6
Chromium	12.1 J
Copper	40.3 J
Lead	110 J
Mercury	0.2 (0.1)
Nickel	14.3 J
Zinc	73.3 J (50)

WS-BOT-60 / WS-BOT-601

Parameter	WS-BOT-60	WS-BOT-601
Volatile Organics (ug/kg)		
Acetone	< 12	< 10
Benzene	< 1.2	< 1
Carbon Disulfide	0.87 J	1
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	< 5.9	< 5
Isopropylbenzene	< 5.9	< 5
Methyl Acetate	< 5.9	< 5
Xylenes (total)	< 2.4	< 2
PAH (ug/kg)		
Acenaphthene	2,190 J	894 J
Acenaphthylene	1,010	870
Anthracene	4,490 J	1,790 J
Benzo(a)anthracene	5,520 (224 or MDL)	3,310 (224 or MDL)
Benzo(a)pyrene	6,170 J (61 or MDL)	3,330 J (61 or MDL)
Benzo(b)fluoranthene	4,700 (1,100)	4,560 (1,100)
Benzo(g,h,I)perylene	4,090 J	610 J
Benzo(k)fluoranthene	4,310 J (1,100)	2,240 J (1,100)
Chrysene	5,790 J (400)	3,030 J (400)
Dibenzo(a,h)anthracene	1,300 J (14.3 or MDL)	204 J (14.3 or MDL)
Fluoranthene	11,300	10,000
Fluorene	2,270 J	773 J
Indeno(1,2,3-cd)pyrene	3,440 J (3,200)	471 J
2-Methylnaphthalene	840 J	185 J
Naphthalene	2,670 J	571 J
Phenanthrene	13,300 J	5,240 J
Pyrene	11,500 J	6,260 J
Total PAH concentration	84,890	44,358
Concentration in Terms of BAP Equivalents	8,937	4,423
Metals (mg/kg)		
Arsenic	9.7	7.1
Beryllium	0.97 J	0.77 J
Cadmium	0.92 J	0.53 J
Chromium	65 J (40)	30.8 J
Copper	127 J (50)	84.7 J (50)
Lead	255 J	218 J
Mercury	1.4 (0.1)	1.3 (0.1)
Nickel	68.1 J (25)	57.9 J (25)
Zinc	201 J (50)	154 J (50)

WS-BOT-59

Parameter	WS-BOT-59
Volatile Organics (ug/kg)	
Carbon Disulfide	0.46 J
PAH (ug/kg)	
Acenaphthene	1,040
Acenaphthylene	1,050
Anthracene	1,810
Benzo(a)anthracene	3,000 (224 or MDL)
Benzo(a)pyrene	4,120 (61 or MDL)
Benzo(b)fluoranthene	3,180 (1,100)
Benzo(g,h,I)perylene	3,280
Benzo(k)fluoranthene	2,730 (1,100)
Chrysene	3,190 (400)
Dibenzo(a,h)anthracene	871 (14.3 or MDL)
Fluoranthene	6,720
Fluorene	691
Indeno(1,2,3-cd)pyrene	2,490
2-Methylnaphthalene	248
Naphthalene	569
Phenanthrene	4,690
Pyrene	7,290
Total PAH concentration	46,969
Concentration in Terms of BAP Equivalents	5,917
Metals (mg/kg)	
Antimony	4.9 J
Arsenic	7.9
Beryllium	0.92
Cadmium	1.1 J (1)
Chromium	40.2 (40)
Copper	103 (50)
Lead	459
Mercury	1.6 (0.1)
Nickel	48.9 (25)
Zinc	300 R (50)

WS-BOT-54

Parameter	WS-BOT-54
Volatile Organics (ug/kg)	
Carbon Disulfide	0.71 J
PAH (ug/kg)	
Acenaphthene	1,270
Acenaphthylene	985
Anthracene	2,360
Benzo(a)anthracene	4,880 (224 or MDL)
Benzo(a)pyrene	4,940 (61 or MDL)
Benzo(b)fluoranthene	8,080 (1,100)
Benzo(g,h,I)perylene	1,110 J
Chrysene	3,950 (400)
Dibenzo(a,h)anthracene	316 J (14.3 or MDL)
Fluoranthene	12,400
Fluorene	1,200
Indeno(1,2,3-cd)pyrene	835 J
2-Methylnaphthalene	337
Naphthalene	1,350
Phenanthrene	6,250
Pyrene	7,050
Total PAH concentration	57,313
Concentration in Terms of BAP Equivalents	6,675
Metals (mg/kg)	
Arsenic	14.9 (12)
Beryllium	0.77 J
Cadmium	0.71 J
Chromium	36.4 J
Copper	95.9 J (50)
Lead	189 J
Mercury	1.9 (0.1)
Nickel	57.1 J (25)
Zinc	133 J (50)

WS-BOT-53

Parameter	WS-BOT-53
Volatile Organics (ug/kg)	
Carbon Disulfide	0.73 J
PAH (ug/kg)	
Acenaphthene	1,630
Acenaphthylene	629
Anthracene	2,960
Benzo(a)anthracene	5,320 (224 or MDL)
Benzo(a)pyrene	5,040 (61 or MDL)
Benzo(b)fluoranthene	4,950 (1,100)
Benzo(g,h,I)perylene	526
Benzo(k)fluoranthene	2,980 (1,100)
Chrysene	4,270 (400)
Dibenzo(a,h)anthracene	165 (14.3 or MDL)
Fluoranthene	14,100
Fluorene	1,460
Indeno(1,2,3-cd)pyrene	522
2-Methylnaphthalene	395
Naphthalene	1,130
Phenanthrene	9,600
Pyrene	8,300
Total PAH concentration	63,977
Concentration in Terms of BAP Equivalents	6,357
Metals (mg/kg)	
Arsenic	7.9
Beryllium	0.84 J
Cadmium	0.75 J
Chromium	33.3 J
Copper	94.7 J (50)
Lead	217 J
Mercury	1.5 (0.1)
Nickel	60.6 J (25)
Zinc	168 J (50)

WS-BOT-52

Parameter	WS-BOT-52
Volatile Organics (ug/kg)	
Carbon Disulfide	0.95 J
PAH (ug/kg)	
Acenaphthene	1,290
Acenaphthylene	856
Anthracene	2,100
Benzo(a)anthracene	4,810 (224 or MDL)
Benzo(a)pyrene	4,690 (61 or MDL)
Benzo(b)fluoranthene	7,420 (1,100)
Benzo(g,h,I)perylene	723 J
Chrysene	3,090 (400)
Dibenzo(a,h)anthracene	293 J (14.3 or MDL)
Fluoranthene	11,700
Fluorene	1,100
Indeno(1,2,3-cd)pyrene	576 J
2-Methylnaphthalene	352
Naphthalene	1,200
Phenanthrene	6,450
Pyrene	6,660
Total PAH concentration	53,310
Concentration in Terms of BAP Equivalents	6,295
Metals (mg/kg)	
Arsenic	9.7
Beryllium	0.76 J
Cadmium	0.9 J
Chromium	34.5 J
Copper	102 J (50)
Lead	250 J
Mercury	2.1 (0.1)
Nickel	61.3 J (25)
Zinc	172 J (50)

WS-BOT-51

Parameter	WS-BOT-51
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	349
Acenaphthylene	271
Anthracene	979
Benzo(a)anthracene	2170 (224 or MDL)
Benzo(a)pyrene	1860 (61 or MDL)
Benzo(b)fluoranthene	1550 (1100)
Benzo(g,h,I)perylene	1230
Benzo(k)fluoranthene	1520 (1100)
Chrysene	2340 (400)
Dibenzo(a,h)anthracene	410 (14.3 or MDL)
Fluoranthene	3690
Fluorene	292
Indeno(1,2,3-cd)pyrene	1070
2-Methylnaphthalene	112
Naphthalene	150
Phenanthrene	3620
Pyrene	4810
Total PAH concentration	26423
Concentration in Terms of BAP Equivalents	2788
Metals (mg/kg)	
Arsenic	4.1
Chromium	15.2 J
Copper	32.7 J
Lead	127 J
Mercury	0.48 (0.1)
Nickel	16.5 J
Zinc	65.8 J (50)

WS-BOT-50

Parameter	WS-BOT-50
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1290
Acenaphthylene	1150
Anthracene	2310
Benzo(a)anthracene	4370 (224 or MDL)
Benzo(a)pyrene	5290 (61 or MDL)
Benzo(b)fluoranthene	3540 (1100)
Benzo(g,h,I)perylene	3780
Benzo(k)fluoranthene	4300 (1100)
Chrysene	4680 (400)
Dibenzo(a,h)anthracene	1100 (14.3 or MDL)
Fluoranthene	8300
Fluorene	855
Indeno(1,2,3-cd)pyrene	3200
2-Methylnaphthalene	271
Naphthalene	928
Phenanthrene	6350
Pyrene	8610
Total PAH concentration	60324
Concentration in Terms of BAP Equivalents	7591
Metals (mg/kg)	
Arsenic	8.3
Beryllium	0.79 J
Cadmium	0.8 J
Chromium	37.4 J
Copper	104 J (50)
Lead	396 J
Mercury	1.5 (0.1)
Nickel	62.1 J (25)
Zinc	194 J (50)

WS-BOT-45

Parameter	WS-BOT-45
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Anthracene	229
Benzo(a)anthracene	657 (224 or MDL)
Benzo(a)pyrene	617 (61 or MDL)
Benzo(b)fluoranthene	529
Benzo(g,h,I)perylene	335
Benzo(k)fluoranthene	465
Chrysene	631 (400)
Dibenzo(a,h)anthracene	167 (14.3 or MDL)
Fluoranthene	1,280
Indeno(1,2,3-cd)pyrene	364
Phenanthrene	596
Pyrene	1,080
Total PAH concentration	6,950
Concentration in Terms of BAP Equivalents	950
Metals (mg/kg)	
Arsenic	5.3
Beryllium	0.51
Chromium	60.3 (40)
Copper	30.6
Lead	54.4
Mercury	0.12 (0.1)
Nickel	32.1 (25)
Zinc	70.7 (50)

WS-BOT-44

Parameter	WS-BOT-44
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Anthracene	348
Benzo(a)anthracene	968 (224 or MDL)
Benzo(a)pyrene	938 (61 or MDL)
Benzo(b)fluoranthene	629
Benzo(g,h,I)perylene	467
Benzo(k)fluoranthene	873
Chrysene	955 (400)
Dibenzo(a,h)anthracene	226 (14.3 or MDL)
Fluoranthene	2,380
Indeno(1,2,3-cd)pyrene	538
Phenanthrene	987
Pyrene	1,560
Total PAH concentration	10,869
Concentration in Terms of BAP Equivalents	1,396
Metals (mg/kg)	
Arsenic	4.2
Beryllium	0.55
Chromium	35.9
Copper	30.4
Lead	49.2
Mercury	0.095
Nickel	18.7
Zinc	71 (50)

WS-BOT-43

Parameter	WS-BOT-43
Volatile Organics (ug/kg)	
Acetone	41.1
Xylenes (total)	1.3 J
PAH (ug/kg)	
Acenaphthene	152
Acenaphthylene	65.9 J
Anthracene	684
Benzo(a)anthracene	1130 (224 or MDL)
Benzo(a)pyrene	967 (61 or MDL)
Benzo(b)fluoranthene	529
Benzo(g,h,I)perylene	255
Benzo(k)fluoranthene	932
Chrysene	1140 (400)
Dibenzo(a,h)anthracene	175 (14.3 or MDL)
Fluoranthene	2340
Fluorene	230
Indeno(1,2,3-cd)pyrene	267
Naphthalene	176
Phenanthrene	2660
Pyrene	2080
Total PAH concentration	13782.9
Concentration in Terms of BAP Equivalents	1355
Metals (mg/kg)	
Arsenic	3
Chromium	15
Copper	28.3
Lead	95.4
Mercury	0.28 (0.1)
Nickel	15.8
Zinc	71 (50)

WS-BOT-42 / WS-BOT-421

Parameter	WS-BOT-42	WS-BOT-421
Volatile Organics (ug/kg)		
Acetone	21.1	< 12
Ethylbenzene	0.85 J	0.59 J
Methyl Acetate	< 5.8	11.7
Toluene	1.4	< 1.2
Xylenes (total)	2.1 J	1 J
PAH (ug/kg)		
Acenaphthene	217	277
Acenaphthylene	< 71	69.6 J
Anthracene	522	782
Benzo(a)anthracene	864 (224 or MDL)	963 (224 or MDL)
Benzo(a)pyrene	703 (61 or MDL)	771 (61 or MDL)
Benzo(b)fluoranthene	611	480
Benzo(g,h,I)perylene	353	273
Benzo(k)fluoranthene	501	693
Chrysene	903 (400)	992 (400)
Dibenzo(a,h)anthracene	244 (14.3 or MDL)	175 (14.3 or MDL)
Fluoranthene	1,920	2,410
Fluorene	199	300
Indeno(1,2,3-cd)pyrene	345	291
Naphthalene	84.5	397
Phenanthrene	1,990	3,000
Pyrene	1,850	1,970
Total PAH concentration	11,306.5	13,843.6
Concentration in Terms of BAP Equivalents	1,143	1,136
Metals (mg/kg)		
Arsenic	2.9	3.5
Beryllium	< 0.31	0.34
Chromium	14.7	15.3
Copper	24.5	26.3
Lead	88.9	87.9
Mercury	0.26 (0.1)	0.29 (0.1)
Nickel	15	16
Zinc	67.8 (50)	72.8 (50)

WS-BOT-41

Parameter	WS-BOT-41
Volatile Organics (ug/kg)	
Methyl Acetate	21.4
PAH (ug/kg)	
Acenaphthene	125
Anthracene	409
Benzo(a)anthracene	499 (224 or MDL)
Benzo(a)pyrene	359 (61 or MDL)
Benzo(b)fluoranthene	236
Benzo(g,h,I)perylene	249
Benzo(k)fluoranthene	381
Chrysene	504 (400)
Dibenzo(a,h)anthracene	127 (14.3 or MDL)
Fluoranthene	1,100
Fluorene	86
Indeno(1,2,3-cd)pyrene	209
2-Methylnaphthalene	98.7
Naphthalene	244
Phenanthrene	1,520
Pyrene	1,040
Total PAH concentration	7,186.7
Concentration in Terms of BAP Equivalents	589
Metals (mg/kg)	
Arsenic	2.5
Chromium	11.7
Copper	38.2
Lead	82.1
Mercury	0.062
Nickel	9.4
Zinc	44.6

WS-SW-15

Parameter	WS-SW-15
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	249
Acenaphthylene	31.1 J
Anthracene	925
Benzo(a)anthracene	1,730 (224 or MDL)
Benzo(a)pyrene	1,580 (61 or MDL)
Benzo(b)fluoranthene	950
Benzo(g,h,I)perylene	710
Benzo(k)fluoranthene	1,590 (1,100)
Chrysene	1,650 (400)
Dibenzo(a,h)anthracene	358 (14.3 or MDL)
Fluoranthene	4,580
Fluorene	258
Indeno(1,2,3-cd)pyrene	758
Phenanthrene	3,410
Pyrene	3,030
Total PAH concentration	21,809.1
Concentration in Terms of BAP Equivalents	2,314
Metals (mg/kg)	
Arsenic	4.8
Beryllium	0.71
Cadmium	0.57
Chromium	41.8 (40)
Copper	26.8
Lead	54.3
Mercury	0.15 (0.1)
Nickel	19.8
Zinc	66.1 (50)

WS-SW-14

Parameter	WS-SW-14
Volatile Organics (ug/kg)	
Acetone	12
PAH (ug/kg)	
Anthracene	584
Benzo(a)anthracene	1,460 (224 or MDL)
Benzo(a)pyrene	1,380 (61 or MDL)
Benzo(b)fluoranthene	1,120 (1,100)
Benzo(g,h,I)perylene	790
Benzo(k)fluoranthene	998
Chrysene	1,430 (400)
Dibenzo(a,h)anthracene	224 (14.3 or MDL)
Fluoranthene	3,580
Indeno(1,2,3-cd)pyrene	793
Phenanthrene	1,640
Pyrene	2,490
Total PAH concentration	16,489
Concentration in Terms of BAP Equivalents	1,966
Metals (mg/kg)	
Arsenic	4.8
Beryllium	0.5
Chromium	26.9
Copper	32.9
Lead	64.3
Mercury	0.11 (0.1)
Nickel	20.2
Zinc	82.6 (50)

WS-SW-13

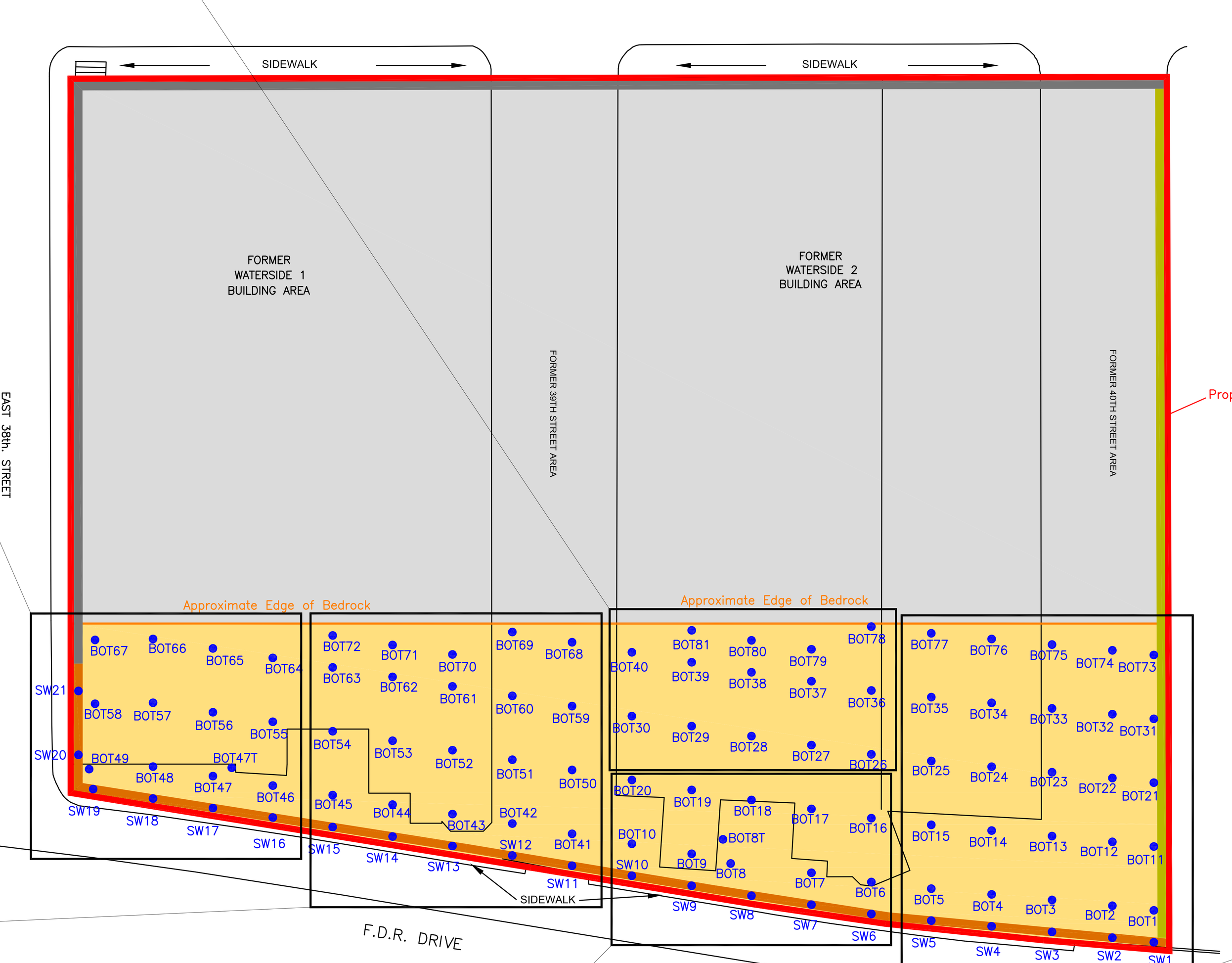
Parameter	WS-SW-13
Volatile Organics (ug/kg)	
Ethylbenzene	0.58 J
Xylenes (total)	2.2 J
PAH (ug/kg)	
Acenaphthylene	26.8 J
Anthracene	122
Benzo(a)anthracene	1040 (224 or MDL)
Benzo(a)pyrene	1320 (61 or MDL)
Benzo(b)fluoranthene	1220 (1100)
Benzo(g,h,I)perylene	706
Benzo(k)fluoranthene	1420 (1100)
Chrysene	1090 (400)
Dibenzo(a,h)anthracene	359 (14.3 or MDL)
Fluoranthene	1000
Fluorene	19.8 J
Indeno(1,2,3-cd)pyrene	868
Phenanthrene	239
Pyrene	918
Total PAH concentration	10348.6
Concentration in Terms of BAP Equivalents	2017
Metals (mg/kg)	
Antimony	3
Arsenic	4.9
Beryllium	0.68
Chromium	39.1
Copper	566 (50)
Lead	704
Mercury	1.1 (0.1)
Nickel	24.4
Zinc	132 (50)

WS-SW-12

Parameter	WS-SW-12
Volatile Organics (ug/kg)	
Methyl Acetate	14.6
Toluene	1.1 J
PAH (ug/kg)	
Acenaphthylene	79.6
Anthracene	224
Benzo(a)anthracene	830 (224 or MDL)
Benzo(a)pyrene	660 (61 or MDL)
Benzo(b)fluoranthene	1,020
Benzo(g,h,I)perylene	229
Benzo(k)fluoranthene	546
Chrysene	888 (400)
Dibenzo(a,h)anthracene	178 (14.3 or MDL)
Fluoranthene	1,350
Fluorene	74.4
Indeno(1,2,3-cd)pyrene	226
Phenanthrene	662
Pyrene	1,260
Total PAH concentration	8,352.6
Concentration in Terms of BAP Equivalents	1,260
Metals (mg/kg)	
Arsenic	6.9
Beryllium	1.3
Cadmium	0.67
Chromium	26.1
Copper	167 (50)
Lead	492
Mercury	0.34 (0.1)
Nickel	25
Zinc	167 (50)

WS-SW-11

Parameter	WS-SW-11
Volatile Organics (ug/kg)	
Ethylbenzene	1.1 J
Toluene	2.4
Xylenes (total)	2.8
PAH (ug/kg)	
Acenaphthylene	57.6 J
Anthracene	356
Benzo(a)anthracene	741 (224 or MDL)
Benzo(a)pyrene	655 (61 or MDL)
Benzo(b)fluoranthene	523
Benzo(g,h,I)perylene	245
Benzo(k)fluoranthene	435
Chrysene	714 (400)
Dibenzo(a,h)anthracene	136 (14.3 or MDL)
Fluoranthene	1,610
Fluorene	141
Indeno(1,2,3-cd)pyrene	277
Naphthalene	109
Phenanthrene	1,490
Pyrene	1,360
Total PAH concentration	8,849.6
Concentration in Terms of BAP Equivalents	957
Metals (mg/kg)	
Arsenic	2.8
Beryllium	0.34
Chromium	22
Copper	29.5
Lead	345
Mercury	0.26 (0.1)
Nickel	16.9
Zinc	89.5 (50)



WS-BOT-20

Parameter	WS-BOT-20
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1350
Acenaphthylene	886
Anthracene	1590
Benzo(a)anthracene	4390 (224 or MDL)
Benzo(a)pyrene	4610 (61 or MDL)
Benzo(b)fluoranthene	3800 JN (1100)
Benzo(g,h,I)perylene	705 J
Benzo(k)fluoranthene	3780 JN (1100)
Chrysene	3060 (400)
Dibenzo(a,h)anthracene	189 J (14.3 or MDL)
Fluoranthene	10100
Fluorene	1110
Indeno(1,2,3-cd)pyrene	621 J
2-Methylnaphthalene	312
Naphthalene	1160
Phenanthrene	5600
Pyrene	5940
Total PAH concentration	49113
Concentration in Terms of BAP Equivalents	5740
Metals (mg/kg)	
Arsenic	10.4
Beryllium	0.81 J
Cadmium	0.8 J
Chromium	43 J (40)
Copper	108 J (50)
Lead	200 J
Mercury	1.5 (0.1)
Nickel	64.5 J (25)
Zinc	169 J (50)

WS-BOT-19

Parameter	WS-BOT-19
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	2,100
Acenaphthylene	882
Anthracene	2,990
Benzo(a)anthracene	7,810 (224 or MDL)
Benzo(a)pyrene	6,690 (61 or MDL)
Benzo(b)fluoranthene	6,870 (1,100)
Benzo(g,h,I)perylene	738
Benzo(k)fluoranthene	4,370 (1,100)
Chrysene	6,050 (400)
Dibenzo(a,h)anthracene	419 (14.3 or MDL)
Fluoranthene	18,900
Fluorene	2,210
Indeno(1,2,3-cd)pyrene	724
2-Methylnaphthalene	890
Naphthalene	2,070
Phenanthrene	13,300
Pyrene	10,700
Total PAH concentration	87,713
Concentration in Terms of BAP Equivalents	8,754
Metals (mg/kg)	
Arsenic	9.2
Beryllium	0.69 J
Cadmium	0.77 J
Chromium	38 J
Copper	111 J (50)
Lead	197 J
Mercury	1.6 (0.1)
Nickel	60.2 J (25)
Zinc	160 J (50)

WS-BOT-18

Parameter	WS-BOT-18
Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	2,560
Acenaphthylene	927
Anthracene	2,910
Benzo(a)anthracene	6,650 (224 or MDL)
Benzo(a)pyrene	7,350 (61 or MDL)
Benzo(b)fluoranthene	6,670 JN (1,100)
Benzo(g,h,I)perylene	947 J
Benzo(k)fluoranthene	4,850 JN (1,100)
Chrysene	6,280 (400)
Dibenzo(a,h)anthracene	370 J (370)
Fluoranthene	17,000
Fluorene	2,230
Indeno(1,2,3-cd)pyrene	813 J
2-Methylnaphthalene	707
Naphthalene	2,660
Phenanthrene	10,800
Pyrene	9,910
Total PAH concentration	83,634
Concentration in Terms of BAP Equivalents	9,245
Metals (mg/kg)	
Arsenic	9.3
Beryllium	0.68 J
Cadmium	0.64 J
Chromium	33.5 J
Copper	93.1 J (50)
Lead	181 J
Mercury	1.5 (0.1)
Nickel	53.6 J (25)
Zinc	143 J (50)

WS-BOT-17

Parameter	WS-BOT-17
Volatile Organics (ug/kg)	
Carbon Disulfide	1.4 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1.3 J
Methyl Acetate	14.6
PAH (ug/kg)	
Acenaphthene	681
Acenaphthylene	648
Anthracene	925
Benzo(a)anthracene	3220 (224 or MDL)
Benzo(a)pyrene	2560 (61 or MDL)
Benzo(b)fluoranthene	2740 (1100)
Benzo(g,h,I)perylene	467
Benzo(k)fluoranthene	2790 (1100)
Chrysene	2040 (400)
Dibenzo(a,h)anthracene	151 (14.3 or MDL)
Fluoranthene	7620
Fluorene	652
Indeno(1,2,3-cd)pyrene	378
2-Methylnaphthalene	153
Naphthalene	453
Phenanthrene	3450
Pyrene	4540
Total PAH concentration	33488
Concentration in Terms of BAP Equivalents	3413
Metals (mg/kg)	
Arsenic	8
Beryllium	0.74 J
Cadmium	0.89 J
Chromium	35.6 J
Copper	105 J (50)
Lead	191 J
Mercury	2.3 (0.1)
Nickel	55.3 J (25)
Zinc	221 J (50)

WS-BOT-16

Parameter	WS-BOT-16
Volatile Organics (ug/kg)	
Carbon Disulfide	1.4 J
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	1.2 J
Methyl Acetate	21.2
PAH (ug/kg)	
Acenaphthene	1,360
Acenaphthylene	744
Anthracene	1870
Benzo(a)anthracene	4,800 (224 or MDL)
Benzo(a)pyrene	4,800 (61 or MDL)
Benzo(b)fluoranthene	5,020 JN (1,100)
Benzo(g,h,I)perylene	619
Benzo(k)fluoranthene	3,430 JN (1,100)
Chrysene	3,200 (400)
Dibenzo(a,h)anthracene	268 (14.3 or MDL)
Fluoranthene	12,300
Fluorene	1,190
Indeno(1,2,3-cd)pyrene	560
2-Methylnaphthalene	260
Naphthalene	738
Phenanthrene	6,530
Pyrene	6,740
Total PAH concentration	54,429
Concentration in Terms of BAP Equivalents	6,172
Metals (mg/kg)	
Arsenic	8
Beryllium	0.83 J
Cadmium	3.2 J (1)
Chromium	36.9 J
Copper	106 J (50)
Lead	189 J
Mercury	2.3 (0.1)
Nickel	57.8 J (25)
Zinc	189 J (50)

WS-BOT-10

Parameter	WS-BOT-10
Volatile Organics (ug/kg)	
Chloroform	1.4 J
Methylene chloride	2.6 J
PAH (ug/kg)	
Acenaphthene	269
Acenaphthylene	523
Anthracene	769
Benzo(a)anthracene	1,360 (224 or MDL)
Benzo(a)pyrene	1,530 (61 or MDL)
Benzo(b)fluoranthene	1,060
Benzo(k)fluoranthene	917
Chrysene	1,560 (400)
Dibenzo(a,h)anthracene	258 (14.3 or MDL)
Fluoranthene	3,500
Fluorene	295
Indeno(1,2,3-cd)pyrene	588
2-Methylnaphthalene	73.7 J
Naphthalene	279
Phenanthrene	1,990
Pyrene	3,900
Total PAH concentration	18,872
Concentration in Terms of BAP Equivalents	2,114
Metals (mg/kg)	
Arsenic	3.8
Beryllium	0.44
Chromium	25.4
Copper	38.3 J
Lead	181 J
Mercury	5.3 J (0.1)
Nickel	19.9
Zinc	119 J (50)

WS-BOT-09

Parameter	WS-BOT-09
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	549
Acenaphthylene	66.4 J
Anthracene	1,300
Benzo(a)anthracene	1,970 (224 or MDL)
Benzo(a)pyrene	1,690 (61 or MDL)
Benzo(b)fluoranthene	1,780 (1,100)
Benzo(g,h,I)perylene	194
Benzo(k)fluoranthene	1,230
Chrysene	1,830 (400)
Dibenzo(a,h)anthracene	86.8 (14.3 or MDL)
Fluoranthene	4,080
Fluorene	622
Indeno(1,2,3-cd)pyrene	248
2-Methylnaphthalene	193
Naphthalene	371
Phenanthrene	4,290
Pyrene	3,210
Total PAH concentration	23,710.2
Concentration in Terms of BAP Equivalents	2,207
Metals (mg/kg)	
Arsenic	5.3
Beryllium	0.34
Chromium	35.5
Copper	61.6 J (50)
Lead	216 J
Mercury	0.31 J (0.1)
Nickel	49 (25)
Zinc	100 J (50)

WS-BOT-08 / WS-BOT-8T

Parameter	WS-BOT-08	WS-BOT-8T
Polychlorinated Biphenyls (ug/kg)		
Aroclor 1254	343	137
Aroclor 1260	137	58.4
All Volatile Organics (ug/kg)	ND	--
PAH (ug/kg)		
Acenaphthene	290	--
Acenaphthylene	183	--
Anthracene	650	--
Benzo(a)anthracene	1,800 (224 or MDL)	--
Benzo(a)pyrene	1,700 (61 or MDL)	--
Benzo(b)fluoranthene	2,350 (1,100)	--
Benzo(g,h,I)perylene	229	--
Benzo(k)fluoranthene	935	--
Chrysene	1,860 (400)	--
Fluoranthene	3,070	--
Fluorene	199	--
Indeno(1,2,3-cd)pyrene	235	--
2-Methylnaphthalene	63.8 J	--
Naphthalene	148	--
Phenanthrene	2,150	--
Pyrene	2,850	--
Total PAH concentration	18,713	--
Concentration in Terms of BAP Equivalents	2,166	--
Metals (mg/kg)		
Arsenic	50.7 (12)	--
Beryllium	1.5	--
Cadmium	0.87	--
Chromium	196 (40)	--
Copper	91.2 J (50)	--
Lead	165 J	--
Mercury	1.2 J (0.1)	--
Nickel	42.4 (25)	--
Selenium	4.1	--
Thallium	1.1 J	--
Zinc	399 J (50)	--

WS-BOT-07

Parameter	WS-BOT-07
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	324
Acenaphthylene	294
Anthracene	927
Benzo(a)anthracene	2,150 (224 or MDL)
Benzo(a)pyrene	2,290 (61 or MDL)
Benzo(b)fluoranthene	2,400 (1,100)
Benzo(g,h,I)perylene	305
Benzo(k)fluoranthene	1,330 (1,100)
Chrysene	2,160 (400)
Fluoranthene	4,460
Fluorene	317
Indeno(1,2,3-cd)pyrene	313
2-Methylnaphthalene	86.8
Naphthalene	186
Phenanthrene	3,270
Pyrene	5,540
Total PAH concentration	26,373
Concentration in Terms of BAP Equivalents	2,811
Metals (mg/kg)	
Arsenic	4.8
Beryllium	0.37
Chromium	22.6
Copper	17.3 J
Lead	42 J
Mercury	0.13 J (0.1)
Nickel	9.3
Zinc	50.2 J (50)

WS-BOT-06

Parameter	WS-BOT-06
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	109
Anthracene	242
Benzo(a)anthracene	612 (224 or MDL)
Benzo(a)pyrene	580 (61 or MDL)
Benzo(b)fluoranthene	378
Benzo(g,h,I)perylene	215
Benzo(k)fluoranthene	436
Chrysene	585 (400)
Dibenzo(a,h)anthracene	72 J (14.3 or MDL)
Fluoranthene	992
Fluorene	116
Indeno(1,2,3-cd)pyrene	210
2-Methylnaphthalene	26.9 J
Naphthalene	61.4 J
Phenanthrene	894
Pyrene	1,120
Total PAH concentration	6,649
Concentration in Terms of BAP Equivalents	782
Metals (mg/kg)	
Arsenic	8.8
Chromium	22.4
Copper	29.6 J
Lead	95.6 J
Mercury	0.094 J
Nickel	15.9
Zinc	64.4 J (50)

WS-SW-10

Parameter	WS-SW-10
Volatile Organics (ug/kg)	
Chloroform	4.8 J
Methylene chloride	2.2 J
PAH (ug/kg)	
Acenaphthene	1,380
Acenaphthylene	82.9
Anthracene	3,260
Benzo(a)anthracene	3,960 (224 or MDL)
Benzo(a)pyrene	3,220 (61 or MDL)
Benzo(b)fluoranthene	2,640 (1,100)
Benzo(g,h,I)perylene	1,560
Benzo(k)fluoranthene	2,490 (1,100)
Chrysene	3,740 (400)
Dibenzo(a,h)anthracene	828 (14.3 or MDL)
Fluoranthene	10,400
Fluorene	1,520
Indeno(1,2,3-cd)pyrene	1,740
2-Methylnaphthalene	455
Naphthalene	952
Phenanthrene	12,800
Pyrene	7,850
Total PAH concentration	58,877.9
Concentration in Terms of BAP Equivalents	4,944
Metals (mg/kg)	
Arsenic	5.1
Beryllium	0.41
Cadmium	0.74
Chromium	34.7
Copper	48.8 J
Lead	181 J
Mercury	0.33 J (0.1)
Nickel	74.6 (25)
Zinc	202 J (50)

WS-SW-09

Parameter	WS-SW-09
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	144
Anthracene	403
Benzo(a)anthracene	493 (224 or MDL)
Benzo(a)pyrene	423 (61 or MDL)
Benzo(b)fluoranthene	339
Benzo(g,h,I)perylene	338
Benzo(k)fluoranthene	374
Chrysene	522 (400)
Dibenzo(a,h)anthracene	128 (14.3 or MDL)
Fluoranthene	1,180
Fluorene	173
Indeno(1,2,3-cd)pyrene	298
Naphthalene	126
Phenanthrene	1,310
Pyrene	1,010
Total PAH concentration	7,261
Concentration in Terms of BAP Equivalents	673
Metals (mg/kg)	
Chromium	7.8
Copper	6.5 J
Lead	22.6 J
Mercury	0.032 J
Nickel	6.7
Zinc	15.2 J

WS-SW-08

Parameter	WS-SW-08
Volatile Organics (ug/kg)	
Chloroform	6.7
PAH (ug/kg)	
Acenaphthene	103
Acenaphthylene	288
Anthracene	310
Benzo(a)anthracene	890 (224 or MDL)
Benzo(a)pyrene	969 (61 o MDL)
Benzo(b)fluoranthene	716
Benzo(g,h,I)perylene	900
Benzo(k)fluoranthene	688
Chrysene	965 (400)
Dibenzo(a,h)anthracene	247 (14.3 or MDL)
Fluoranthene	1,570
Fluorene	74.4
Indeno(1,2,3-cd)pyrene	701
Naphthalene	141
Phenanthrene	1,070
Pyrene	1,680
Total PAH concentration	11,312.4
Concentration in Terms of BAP Equivalents	1,463
Metals (mg/kg)	
Arsenic	3
Beryllium	0.35
Chromium	19.4
Copper	31 J
Lead	149 J
Mercury	0.48 J (0.1)
Nickel	16.5
Zinc	92.8 J (50)

WS-SW-07

Parameter	WS-SW-07
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	1,650
Acenaphthylene	2,130
Anthracene	2,520
Benzo(a)anthracene	5,070 (224 or MDL)
Benzo(a)pyrene	5,550 (61 or MDL)
Benzo(b)fluoranthene	3,810 (1,100)
Benzo(g,h,I)perylene	1,370 J
Benzo(k)fluoranthene	3,250 J (1,100)
Chrysene	5,580 (400)
Dibenzo(a,h)anthracene	427 J (14.3 or MDL)
Fluoranthene	11,200
Fluorene	673
Indeno(1,2,3-cd)pyrene	1,370 J
2-Methylnaphthalene	236
Naphthalene	416
Phenanthrene	4,910
Pyrene	14,900
Total PAH concentration	65,062
Concentration in Terms of BAP Equivalents	7,090
Metals (mg/kg)	
Arsenic	11.7
Beryllium	0.49
Chromium	30.4
Copper	39.5 J
Lead	118 J
Mercury	0.38 J (0.1)
Nickel	19.5
Zinc	89.2 J (50)

WS-SW-06

Parameter	WS-SW-06
All Volatile Organics (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	270
Acenaphthylene	198
Anthracene	728
Benzo(a)anthracene	1,610 (224 or MDL)
Benzo(a)pyrene	1,260 (61 or MDL)
Benzo(b)fluoranthene	991
Benzo(g,h,I)perylene	977
Benzo(k)fluoranthene	1,310 (1,100)
Chrysene	1,520 (400)
Dibenzo(a,h)anthracene	310 (14.3 or MDL)
Fluoranthene	3,350
Fluorene	278
Indeno(1,2,3-cd)pyrene	821
2-Methylnaphthalene	62 J
Naphthalene	141
Phenanthrene	3,040
Pyrene	3,390
Total PAH concentration	20,256
Concentration in Terms of BAP Equivalents	1,941
Metals (mg/kg)	
Arsenic	3.2
Chromium	12
Copper	15.2 J
Lead	51.8 J
Mercury	0.15 J (0.1)
Nickel	8.4
Zinc	45.1 J

LEGEND:

- All soil excavated to bedrock surface. No bottom end point samples possible.
- All soil excavated to an elevation just below the water table (Below Development Depth). Bottom samples were collected approximately every 30 feet.
- Continuous concrete vault under sidewalk or timber lagging at excavation perimeter. No sidewall end point samples possible.
- Soil present at excavation perimeter. Side wall end point samples collected approximately every 30 feet.
- Soil excavated to bedrock or the groundwater table along north property line, matching the Development Depth excavation grade at the adjoining 708 First Avenue property. No sidewall end point samples possible.
- Property Line
- 2,610 (1,100) — Result exceeds the TAGM RSCO criteria. Criterion omitted where result does not exceed criterion.
- J — Estimated Value.
- U — Undetected.

50 0 50 100 FT

FIRST AVENUE PROPERTIES
700 First Avenue Property
New York, New York

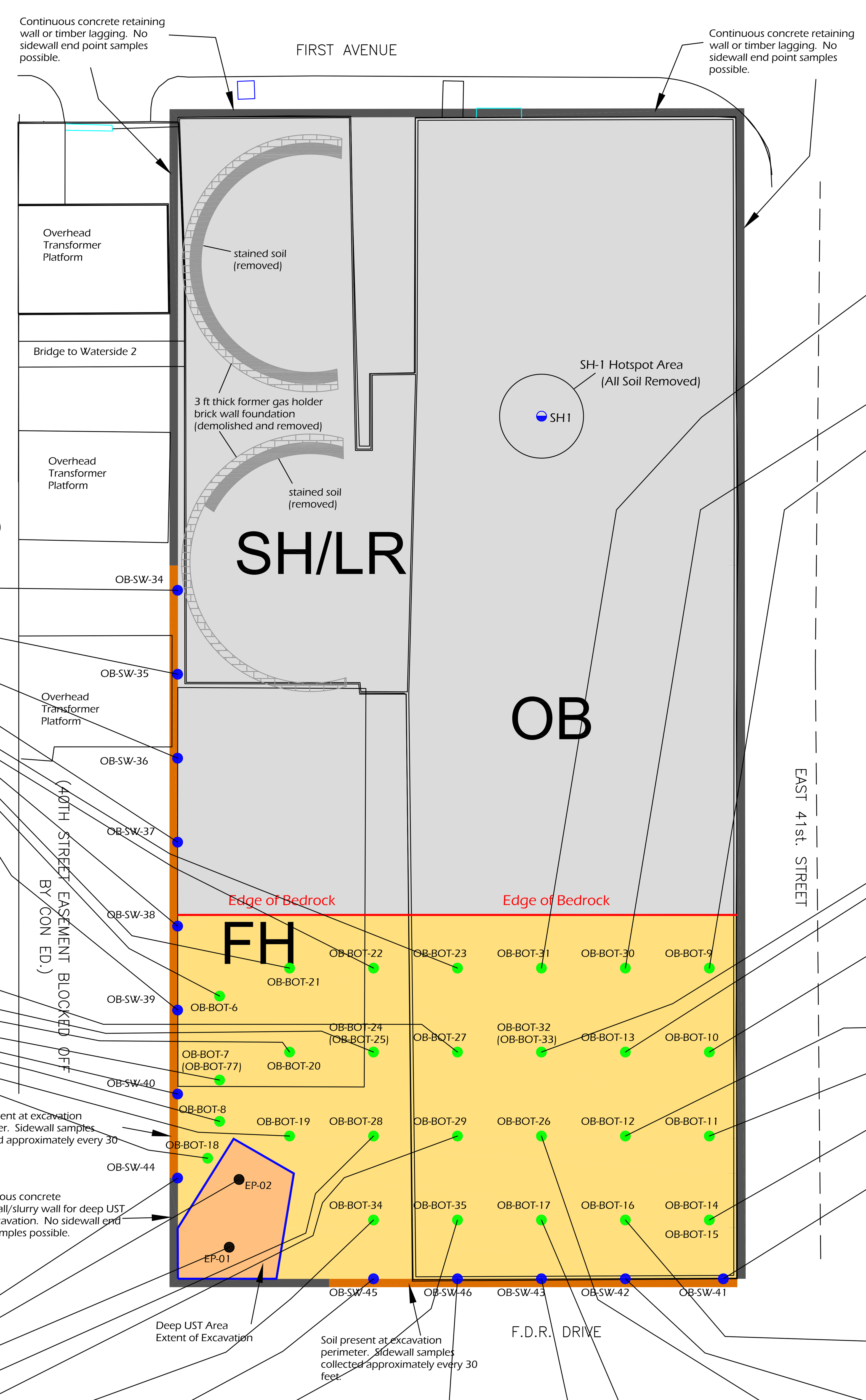
TRC
1200 Wall Street West, 2nd Floor
Lyndhurst, New Jersey 07071

Designed by:	Date:
MAS	12/18/07
Drawn by: LM	Scale: As Shown
File Name: Appendix E.dwg	Project Number: 105179-00WS05-02440T

APPENDIX E

Drawing Title: Soil Below Development Depth Map

\\Lyndhurst_bd1\First Avenue Files\Waterside Generating Station\SMP\Appendices\Appendix C Soil Below Development Depth Map.dwg



OB-SW-37

	OB-SW-37
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Anthracene	36 J
Benzo(a)anthracene	98.5
Benzo(a)pyrene	87.8 (61 or MDL)
Benzo(b)fluoranthene	75.1 J
Benzo(g,h,I)perylene	62.8 J
Benzo(k)fluoranthene	88.3
Chrysene	93.7
Fluoranthene	210
Fluorene	21 J
Indeno(1,2,3-cd)pyrene	45.5 J
Naphthalene	20.3 J
Phenanthrene	141
Pyrene	191
Total PAH concentration	1487.0
Total carcinogenic PAHs in terms of BAP Equivalents	191
Metals (mg/kg)	
Chromium	23.2
Copper	37.6
Lead	24.6
Nickel	24.2
Zinc	58.7 (50)

OB-SW-36

	OB-SW-36
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	51.6 J
Acenaphthylene	51.6 J
Anthracene	152
Benzo(a)anthracene	867 (224 or MDL)
Benzo(a)pyrene	947 (61 or MDL)
Benzo(b)fluoranthene	835
Benzo(g,h,I)perylene	610
Benzo(k)fluoranthene	536
Chrysene	947 (400)
Dibenzo(a,h)anthracene	192 (14.3 or MDL)
Fluoranthene	1570
Fluorene	33.2 J
Indeno(1,2,3-cd)pyrene	511
Naphthalene	20.2 J
Phenanthrene	704
Pyrene	1780
Total PAH concentration	9807.6
Total carcinogenic PAHs in terms of BAP Equivalents	1,375
Metals (mg/kg)	
Arsenic	4.7
Chromium	15.1
Copper	42
Lead	156
Nickel	18.3
Zinc	81.3 (50)

OB-SW-35

	OB-SW-35
All VOCs (ug/kg)	ND
All PAH (ug/kg)	< 79
Metals (mg/kg)	
Beryllium	1.7 J
Chromium	23.3
Copper	25.1
Lead	14.5
Nickel	8.6
Zinc	15.7

OB-SW-34

	OB-SW-34
All VOCs (ug/kg)	ND
All PAH (ug/kg)	< 80
Metals (mg/kg)	
Beryllium	1.4
Chromium	33.2
Copper	21.4
Lead	9.1
Nickel	27.6 (25)
Zinc	85.5 (50)

OB-BOT-31, -2'

	OB-BOT-31, -2'
VOCs (ug/kg)	
Acetone	69.6
Ethylbenzene	34.5
Styrene	162
Toluene	14.5
Xylenes	249
PAH (ug/kg)	
Acenaphthene	660
Acenaphthylene	2,120
Anthracene	1,200
Benzo(a)anthracene	1,910 (224 or MDL)
Benzo(a)pyrene	2,310 (61 or MDL)
Benzo(b)fluoranthene	2,290 (1,100)
Benzo(g,h,I)perylene	738
Benzo(k)fluoranthene	1,000
Chrysene	1,900 (400)
Dibenzo(a,h)anthracene	191 (14.3 or MDL)
Fluoranthene	4,020
Fluorene	1,160
Indeno(1,2,3-cd)pyrene	549
2-Methylnaphthalene	1,570
Naphthalene	13,500 (13,000)
Phenanthrene	5,180
Pyrene	6,060
Total PAH concentration	46,358
Total carcinogenic PAHs in terms of BAP Equivalents	3,005
Metals (mg/kg)	
Arsenic	3.8
Chromium	26.9 J
Copper	38.4
Lead	106
Mercury	0.29 J (0.1)
Nickel	17.4
Zinc	83.5 (50)

OB-BOT-30, -2'

	OB-BOT-30, -2'
VOCs (ug/kg)	
Acetone	68.6
Ethylbenzene	124
Isopropylbenzene	19.7 J
Methylcyclohexane	78.8
Styrene	538
Toluene	30.4
Xylenes	916
PAH (ug/kg)	
Acenaphthene	1,400
Acenaphthylene	5,690
Anthracene	2,080
Benzo(a)anthracene	3,000 (224 or MDL)
Benzo(a)pyrene	4,760 (61 or MDL)
Benzo(b)fluoranthene	3,560 (1,100)
Benzo(g,h,I)perylene	1,260
Benzo(k)fluoranthene	2,100 (1,100)
Chrysene	2,910 (400)
Dibenzo(a,h)anthracene	335 (14.3 or MDL)
Fluoranthene	8,250
Fluorene	2,510
Indeno(1,2,3-cd)pyrene	916
2-Methylnaphthalene	5,130
Naphthalene	44,800 (13,000)
Phenanthrene	9,680
Pyrene	13,700
Total PAH concentration	112,081
Total carcinogenic PAHs in terms of BAP Equivalents	5,893
Metals (mg/kg)	
Arsenic	2.8
Chromium	21.2 J
Copper	37.1
Lead	75.2
Mercury	0.26 J (0.1)
Nickel	18.2
Zinc	81.7 (50)

OB-BOT-9, -2'

	OB-BOT-9, -2'
VOCs (ug/kg)	
Benzene	85.9 (60)
Ethylbenzene	718
Isopropylbenzene	170 J
Methylcyclohexane	1,280
Styrene	1,600
Toluene	729
Xylenes	3,960 (1,200)
PAH (ug/kg)	
Acenaphthene	2,230
Acenaphthylene	7,560 J
Anthracene	2,840
Benzo(a)anthracene	3,270 (224 or MDL)
Benzo(a)pyrene	4,510 (61 or MDL)
Benzo(b)fluoranthene	2,370 (1,100)
Benzo(g,h,I)perylene	1,850
Benzo(k)fluoranthene	1,240 (1,100)
Chrysene	3,150 (400)
Dibenzo(a,h)anthracene	373 (14.3 or MDL)
Fluoranthene	7,260
Fluorene	3,920
Indeno(1,2,3-cd)pyrene	1,340
2-Methylnaphthalene	9,580
Naphthalene	96,300 (13,000)
Phenanthrene	13,700
Pyrene	13,400
Total PAH concentration	174,893
Total carcinogenic PAHs in terms of BAP Equivalents	5,625
Metals (mg/kg)	
Arsenic	3 J
Chromium	12
Copper	33.1
Lead	79.5
Nickel	10.1
Zinc	80.4 (50)

OB-BOT-21, -2'

	OB-BOT-21, -2'
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	337
Acenaphthylene	1,380
Anthracene	739
Benzo(a)anthracene	1,610 (224 or MDL)
Benzo(a)pyrene	2,330 (61 or MDL)
Benzo(b)fluoranthene	2,580 (1,100)
Benzo(g,h,I)perylene	1,540
Benzo(k)fluoranthene	789
Chrysene	1,610 (400)
Dibenzo(a,h)anthracene	280 (14.3 or MDL)
Fluoranthene	3,510
Fluorene	564
Indeno(1,2,3-cd)pyrene	1,140
2-Methylnaphthalene	549
Naphthalene	4,730
Phenanthrene	2,790
Pyrene	3,790
Total PAH concentration	30,268
Total carcinogenic PAHs in terms of BAP Equivalents	3,167
Metals (mg/kg)	
Arsenic	4.3
Chromium	27.1
Copper	55.8 J (50)
Lead	134
Mercury	0.5 J (0.1)
Nickel	20.9
Zinc	108 J (50)

OB-SW-38, -2'

	OB-SW-38, -2'
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Acenaphthene	35.4 J
Acenaphthylene	98.2
Anthracene	133
Benzo(a)anthracene	772 (224 or MDL)
Benzo(a)pyrene	772 (61 or MDL)
Benzo(b)fluoranthene	734
Benzo(g,h,I)perylene	282
Benzo(k)fluoranthene	783
Chrysene	786 (400)
Dibenzo(a,h)anthracene	83.2 (14.3 or MDL)
Fluoranthene	1,240
Fluorene	32.8 J
Indeno(1,2,3-cd)pyrene	242
Phenanthrene	571
Pyrene	1,770
Total PAH concentration	8,334.6
Total carcinogenic PAHs in terms of BAP Equivalents	1,046
Metals (mg/kg)	
Arsenic	2.1 J
Chromium	16.8
Copper	35.9 J
Lead	90.3 J
Nickel	16.6
Zinc	118 J (50)

OB-BOT-22, -2'

	OB-BOT-22, -2'
VOCs (ug/kg)	
Acetone	15.1
PAH (ug/kg)	
Acenaphthene	405
Acenaphthylene	647
Anthracene	772
Benzo(a)anthracene	1,820 (224 or MDL)
Benzo(a)pyrene	2,010 (61 or MDL)
Benzo(b)fluoranthene	2,470 (1,100)
Benzo(g,h,I)perylene	722
Benzo(k)fluoranthene	910
Chrysene	1,790 (400)
Dibenzo(a,h)anthracene	189 (14.3 or MDL)
Fluoranthene	4,050
Fluorene	504
Indeno(1,2,3-cd)pyrene	740
2-Methylnaphthalene	398
Naphthalene	2,210
Phenanthrene	3,280
Pyrene	4,220
Total PAH concentration	27,137
Total carcinogenic PAHs in terms of BAP Equivalents	2,729
Metals (mg/kg)	
Arsenic	3 J
Chromium	27.1
Copper	51.5 J (50)
Lead	98.4
Mercury	0.32 J (0.1)
Nickel	25.2 (25)
Zinc	85.8 J (50)

OB-BOT-23, -2'

	OB-BOT-23, -2'
VOCs (ug/kg)	
Acetone	330 (200)
Benzene	11.7
Ethylbenzene	228
Isopropylbenzene	33.7 J
Methylcyclohexane	245
Styrene	379
Toluene	160
Xylenes	990
PAH (ug/kg)	
Acenaphthene	935
Acenaphthylene	1,690
Anthracene	1,700
Benzo(a)anthracene	3,550 (224 or MDL)
Benzo(a)pyrene	3,780 (61 or MDL)
Benzo(b)fluoranthene	3,980 (1,100)
Benzo(g,h,I)perylene	1,240
Benzo(k)fluoranthene	1,400 (1,100)
Chrysene	3,470 (400)
Dibenzo(a,h)anthracene	328 (14.3 or MDL)
Fluoranthene	8,180
Fluorene	1,100
Indeno(1,2,3-cd)pyrene	1,250
2-Methylnaphthalene	1,220
Naphthalene	8,730
Phenanthrene	7,460
Pyrene	9,710
Total PAH concentration	59,723
Total carcinogenic PAHs in terms of BAP Equivalents	5,035
Metals (mg/kg)	
Arsenic	3.7 J
Chromium	20.1
Copper	41.4 J
Lead	118
Mercury	0.38 J (0.1)
Nickel	15.7
Zinc	99.9 J (50)

OB-BOT-32, -2' / OB-BOT-33, -2'

	OB-BOT-32, -2'	OB-BOT-33, -2'
VOCs (ug/kg)		
Acetone	51.1 J	50.4 J
Ethylbenzene	155	468
Isopropylbenzene	43.7	140
Styrene	45.6	< 26
Toluene	8.5	10.3
Xylenes	330	817
PAH (ug/kg)		
Acenaphthene	262	282
Acenaphthylene	180	886
Anthracene	167	349
Benzo(a)anthracene	259 (224 or MDL)	490 (224 or MDL)
Benzo(a)pyrene	334 (61 or MDL)	711 (61 or MDL)
Benzo(b)fluoranthene	265	389
Benzo(g,h,I)perylene	155	282
Benzo(k)fluoranthene	216	380
Chrysene	276	477 (400)
Dibenzo(a,h)anthracene	35.8 J (14.3 or MDL)	53.6 J (14.3 or MDL)
Fluoranthene	542	1,080
Fluorene	149	438
Indeno(1,2,3-cd)pyrene	121	196
2-Methylnaphthalene	398	737
Naphthalene	1,780	5,580
Phenanthrene	576	1,480
Pyrene	677	1,810
Total PAH concentration	6,393	15,621
Total carcinogenic PAHs in terms of BAP Equivalents	439	881
Metals (mg/kg)		
Arsenic	3	2.8
Chromium	22.5 J	19.6 J
Copper	29.5	22
Lead	88.5	38.5
Mercury	0.42 J (0.1)	0.13 J (0.1)
Nickel	17.6	15.3
Zinc	70.8 (50)	44 (50)

OB-BOT-13, -2'

	OB-BOT-13, -2'
VOCs (ug/kg)	
Benzene	14.2
Carbon Disulfide	32.6 J
Cyclohexane	142
Ethylbenzene	407
Isopropylbenzene	112
Methylcyclohexane	1,090
Styrene	391
Toluene	142
Xylenes	1,650 (1,200)
PAH (ug/kg)	
Acenaphthene	1,620
Acenaphthylene	3,710
Anthracene	1,360
Benzo(a)anthracene	2,720 (224 or MDL)
Benzo(a)pyrene	4,560 (61 or MDL)
Benzo(b)fluoranthene	3,400 (1,100)
Benzo(g,h,I)perylene	2,330
Benzo(k)fluoranthene	1,010
Chrysene	2,620 (400)
Dibenzo(a,h)anthracene	403 (14.3 or MDL)
Fluoranthene	6,570
Fluorene	1,920
Indeno(1,2,3-cd)pyrene	1,890
2-Methylnaphthalene	3,850
Naphthalene	32,100 (13,000)
Phenanthrene	6,610
Pyrene	14,200
Total PAH concentration	90,873
Total carcinogenic PAHs in terms of BAP Equivalents	5,800
Metals (mg/kg)	
Arsenic	4.5
Chromium	27.8
Copper	36.8
Lead	82.3
Mercury	0.32 J (0.1)
Nickel	19 J
Zinc	89.3 J (50)

OB-BOT-10, -2'

	OB-BOT-10, -2'
VOCs (ug/kg)	
Benzene	4.4
Ethylbenzene	44.3
Isopropylbenzene	9.2
Methylcyclohexane	18
Styrene	11.1
Toluene	12
Xylenes	113
PAH (ug/kg)	
Acenaphthene	181
Acenaphthylene	344
Anthracene	298
Benzo(a)anthracene	643 (224 or MDL)
Benzo(a)pyrene	746 (61 or MDL)
Benzo(b)fluoranthene	480
Benzo(g,h,I)perylene	526
Benzo(k)fluoranthene	348
Chrysene	671 (400)
Dibenzo(a,h)anthracene	124 (14.3 or MDL)
Fluoranthene	1,280
Fluorene	163
Indeno(1,2,3-cd)pyrene	378
2-Methylnaphthalene	180
Naphthalene	849
Phenanthrene	1,070
Pyrene	1,660
Total PAH concentration	9,941
Total carcinogenic PAHs in terms of BAP Equivalents	1,030
Metals (mg/kg)	
Arsenic	3.4 J
Cadmium	1.4 J (1)
Chromium	23.2
Copper	58.3 (50)
Lead	1,020 (500)
Mercury	0.26 J (0.1)
Nickel	14.6
Zinc	267 (50)

OB-BOT-6, -2'

	OB-BOT-6, -2'
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Benzo(a)pyrene	29.7 J
Benzo(g,h,I)perylene	39 J
Pyrene	20.6 J
Total PAH concentration	89.3
Total carcinogenic PAHs in terms of BAP Equivalents	29.7
Metals (mg/kg)	
Arsenic	1.6 J
Beryllium	0.67 J
Chromium	31.3
Copper	45.4
Lead	51.1
Nickel	32.4 (25)
Zinc	72 (50)

OB-SW-39, -2'

	OB-SW-39, -2'
VOCs (ug/kg)	
Ethylbenzene	16.7
Isopropylbenzene	3.3 J
Methylcyclohexane	29.5
Styrene	25.6
Toluene	2.2
Xylenes	125
PAH (ug/kg)	
Acenaphthene	112
Acenaphthylene	184
Anthracene	332
Benzo(a)anthracene	1,060 (224 or MDL)
Benzo(a)pyrene	1,110 (61 or MDL)
Benzo(b)fluoranthene	1,070
Benzo(g,h,I)perylene	529
Benzo(k)fluoranthene	942
Chrysene	1,120 (400)
Dibenzo(a,h)anthracene	148 (14.3 or MDL)
Fluoranthene	2,020
Fluorene	121
Indeno(1,2,3-cd)pyrene	408
2-Methylnaphthalene	35 J
Naphthalene	105
Phenanthrene	1,500
Pyrene	2,340
Total PAH concentration	13,136.0
Total carcinogenic PAHs in terms of BAP Equivalents	1,532
Metals (mg/kg)	
Arsenic	2.3 J
Chromium	14.6
Copper	42.9 J
Lead	102 J
Nickel	10.8
Zinc	77.1 J (50)

OB-BOT-20, -2'

	OB-BOT-20, -2'
VOCs (ug/kg)	
Acetone	43.8
Ethylbenzene	2.6
Xylenes	7.8
PAH (ug/kg)	
Acenaphthene	186 J
Acenaphthylene	679
Anthracene	561
Benzo(a)anthracene	1,270 (224 or MDL)
Benzo(a)pyrene	1,600 (61 or MDL)
Benzo(b)fluoranthene	1,670 (1100)
Benzo(g,h,I)perylene	1,310
Benzo(k)fluoranthene	511
Chrysene	1,310 (400)
Dibenzo(a,h)anthracene	250 (14.3 or MDL)
Fluoranthene	2,740
Fluorene	241
Indeno(1,2,3-cd)pyrene	989
2-Methylnaphthalene	108 J
Naphthalene	279
Phenanthrene	1,600
Pyrene	2,610
Total PAH concentration	17,914
Total carcinogenic PAHs in terms of BAP Equivalents	2,261
Metals (mg/kg)	
Arsenic	4
Chromium	24.8
Copper	43.3 J
Lead	124
Mercury	0.83 J (0.1)
Nickel	19.7
Zinc	100 J (50)

OB-BOT-24, -2' / OB-BOT-25, -2'

	OB-BOT-24, -2'	OB-BOT-25, -2'
VOCs (ug/kg)		
Acetone	39.2	34.5
PAH (ug/kg)		
Acenaphthene	133	117
Acenaphthylene	46.9 J	< 79
Benzo(a)anthracene	46.3 J	< 79
Benzo(a)pyrene	46.4 J	< 79
Benzo(b)fluoranthene	34.3 J	< 79
Benzo(g,h,I)perylene	28.7 J	< 79
Chrysene	44.1 J	< 79
Fluoranthene	95.2	< 79
Pyrene	142	< 79
Total PAH concentration	617	117
Total carcinogenic PAHs in terms of BAP Equivalents	55	ND
Metals (mg/kg)		
Arsenic	1.1 J	2.1 J
Chromium	13.1	20.4
Copper	16.9 J	24.3 J
Lead	8	16.6
Mercury	0.037 J	0.037 J
Nickel	9.6	15.6
Zinc	22.8 J	35.4 J

OB-BOT-27, -2'

	OB-BOT-27, -2'
VOCs (ug/kg)	
Acetone	56.4
Carbon Disulfide	2.5 J
Ethylbenzene	2.8
Isopropylbenzene	1.9 J
Toluene	0.86 J
Xylenes	8.9
PAH (ug/kg)	
Acenaphthene	438
Acenaphthylene	425
Anthracene	748
Benzo(a)anthracene	1,040 (224 or MDL)
Benzo(a)pyrene	1,100 (61 or MDL)
Benzo(b)fluoranthene	743
Benzo(g,h,I)perylene	419
Benzo(k)fluoranthene	924
Chrysene	999 (400)
Dibenzo(a,h)anthracene	92.6 (14.3 or MDL)
Fluoranthene	2,450
Fluorene	378
Indeno(1,2,3-cd)pyrene	301
2-Methylnaphthalene	217
Naphthalene	460
Phenanthrene	2,620
Pyrene	3,010
Total PAH concentration	16,365
Total carcinogenic PAHs in terms of BAP Equivalents	1,420
Metals (mg/kg)	
Arsenic	2.9 J
Chromium	22.1
Copper	32.7
Mercury	0.36 (0.1)
Nickel	16.3
Zinc	131 J (50)

OB-BOT-12, -2'

	OB-BOT-12, -2'
VOCs (ug/kg)	
Benzene	6.1 J
Cyclohexane	33.5 J
Ethylbenzene	89.7
Isopropylbenzene	22.1 J
Methylcyclohexane	386
Styrene	137
Toluene	56.4
Xylenes	508
PAH (ug/kg)	
Acenaphthene	646
Acenaphthylene	1,560
Anthracene	703
Benzo(a)anthracene	1,360 (224 or MDL)
Benzo(a)pyrene	2,150 (61 or MDL)
Benzo(b)fluoranthene	1,510 (1,100)
Benzo(g,h,I)perylene	1,180
Benzo(k)fluoranthene	492
Chrysene	1,240 (400)
Dibenzo(a,h)anthracene	178 (14.3 or MDL)
Fluoranthene	2,890
Fluorene	830
Indeno(1,2,3-cd)pyrene	891
2-Methylnaphthalene	1,560
Naphthalene	11,700
Phenanthrene	2,870
Pyrene	4,570
Total PAH concentration	36,330
Total carcinogenic PAHs in terms of BAP Equivalents	2,721
Metals (mg/kg)	
Arsenic	2.7 J
Chromium	13.4
Copper	13.7
Lead	67.2
Mercury	0.082 J
Nickel	8.2 J
Zinc	35.8 J

OB-BOT-11, -2'

	OB-BOT-11, -2'
VOCs (ug/kg)	
Ethylbenzene	664
Isopropylbenzene	117
Xylenes	328
PAH (ug/kg)	
Acenaphthene	23.1 J
Acenaphthylene	27.9 J
Benzo(a)anthracene	32.1 J
Benzo(a)pyrene	43 J
Benzo(b)fluoranthene	34.1 J
Benzo(g,h,I)perylene	28.2 J
Chrysene	32.9 J
Fluoranthene	62.9 J
2-Methylnaphthalene	78.9 J
Naphthalene	2,280
Phenanthrene	65.3 J
Pyrene	99.9
Total PAH concentration	2,808
Total carcinogenic PAHs in terms of BAP Equivalents	50
Metals (mg/kg)	
Arsenic	1.4 J
Chromium	22.1
Copper	26.6
Lead	30.7
Mercury	0.14 J (0.1)
Nickel	17.2 J
Zinc	46.7 J

OB-BOT-7, -2' / OB-BOT-77, -2'

	OB-BOT-7, -2'	OB-BOT-77, -2'
VOCs (ug/kg)		
Acetone	15.8	16
Xylenes	4.2	2.3 J
PAH (ug/kg)		
Acenaphthene	279	283
Acenaphthylene	463	470
Anthracene	812	732
Benzo(a)anthracene	1,720 (224 or MDL)	1,520 (224 or MDL)
Benzo(a)pyrene	1,520 (61 or MDL)	1,640 (61 or MDL)
Benzo(b)fluoranthene	1,570 (1,100)	1,350 (1,100)
Benzo(g,h,I)perylene	956	978
Benzo(k)fluoranthene	691	994
Chrysene	1,690 (400)	1,470 (400)
Dibenzo(a,h)anthracene	244 (14.3 or MDL)	226 (14.3 or MDL)
Fluoranthene	3,360	2,750
Fluorene	332	369
Indeno(1,2,3-cd)pyrene	683	663
2-Methylnaphthalene	164	161
Naphthalene	743	535
Phenanthrene	2,820	2,350
Pyrene	3,100	2,960
Total PAH concentration	21,147.0	19,451.0
Total carcinogenic PAHs in terms of BAP Equivalents	2,185	2,244
Metals (mg/kg)		
Arsenic	3 J	2.1 J
Chromium	19.2	15.4
Copper	50.6 J (50)	43.7 J
Lead	135 J	127 J
Mercury	0.41 J (0.1)	0.52 J (0.1)
Nickel	13.9	14.8
Zinc	132 J (50)	128 J (50)

OB-SW-40, -2'

	OB-SW-40, -2'
VOCs (ug/kg)	
Acetone	30.1
PAH (ug/kg)	
Acenaphthene	156
Acenaphthylene	188
Anthracene	414
Benzo(a)anthracene	1,210 (224 or MDL)
Benzo(a)pyrene	1,210 (61 or MDL)
Benzo(b)fluoranthene	1,010
Benzo(g,h,I)perylene	903
Benzo(k)fluoranthene	706
Chrysene	1,170 (400)
Dibenzo(a,h)anthracene	164 (14.3 or MDL)
Fluoranthene	2,210
Fluorene	164
Indeno(1,2,3-cd)pyrene	743
2-Methylnaphthalene	72.1 J
Naphthalene	346
Phenanthrene	1,710
Pyrene	2,460
Total PAH concentration	14,836.1
Total carcinogenic PAHs in terms of BAP Equivalents	1,689
Metals (mg/kg)	
Arsenic	3.1 J
Chromium	16.6 J
Copper	25.5 J
Lead	71 J
Mercury	0.24 J (0.1)
Nickel	9.6 J
Zinc	60 (50)

OB-BOT-8, -2'

	OB-BOT-8, -2'
VOCs (ug/kg)	
Methyl Acetate	15.0
PAH (ug/kg)	
Acenaphthene	124
Acenaphthylene	634
Anthracene	550
Benzo(a)anthracene	1,270 (224 or MDL)
Benzo(a)pyrene	1,670 (61 or MDL)
Benzo(b)fluoranthene	1,560 (1,100)
Benzo(g,h,I)perylene	818
Benzo(k)fluoranthene	873
Chrysene	1,330 (400)
Dibenzo(a,h)anthracene	188 (14.3 or MDL)
Fluoranthene	2,400
Fluorene	200
Indeno(1,2,3-cd)pyrene	555
2-Methylnaphthalene	69.8 J
Naphthalene	253
Phenanthrene	1,610
Pyrene	3,850
Total PAH concentration	17,954.8
Total carcinogenic PAHs in terms of BAP Equivalents	2,219
Metals (mg/kg)	
Arsenic	2.9 J
Chromium	18.2
Copper	40.6 J
Lead	103 J
Mercury	0.39 J (0.1)
Nickel	17.2
Zinc	82.3 J (50)

OB-BOT-19, -2'

	OB-BOT-19, -2'
VOCs (ug/kg)	
Acetone	31.9
PAH (ug/kg)	
Acenaphthene	88.1 J
Acenaphthylene	333
Anthracene	138
Benzo(a)anthracene	425 (224 or MDL)
Benzo(a)pyrene	801 (61 or MDL)
Benzo(b)fluoranthene	758
Benzo(g,h,I)perylene	2,550
Benzo(k)fluoranthene	547
Chrysene	484 (400)
Dibenzo(a,h)anthracene	222 (14.3 or MDL)
Fluoranthene	572
Indeno(1,2,3-cd)pyrene	1,110
Naphthalene	39.2 J
Phenanthrene	227
Pyrene	738
Total PAH concentration	9,032.3
Total carcinogenic PAHs in terms of BAP Equivalents	1,263
Metals (mg/kg)	
Arsenic	18.3 (12)
Beryllium	2 J (1.75)
Chromium	85.1 J (40)
Copper	222 J (50)
Lead	242 J
Mercury	1.5 J (0.1)
Nickel	53 J (25)
Selenium	1.7
Zinc	243 (50)

OB-BOT-18, -2'

	OB-BOT-18, -2'
Total PCBs (ug/kg)	ND
VOCs (ug/kg)	
Trichlorofluoromethane	4 J
PAH (ug/kg)	
Acenaphthene	85 J
Acenaphthylene	274
Anthracene	314
Benzo(a)anthracene	260 (224 or MDL)
Benzo(a)pyrene	206 J (61 or MDL)
Benzo(b)fluoranthene	278 J
Benzo(g,h,I)perylene	2,440
Benzo(k)fluoranthene	634
Chrysene	222
Dibenzo(a,h)anthracene	265 J (14.3 or MDL)
Fluoranthene	607
Fluorene	132
Indeno(1,2,3-cd)pyrene	935
2-Methylnaphthalene	36.9 J
Naphthalene	120 J
Phenanthrene	673
Pyrene	506
Total PAH concentration	7,988
Total carcinogenic PAHs in terms of BAP Equivalents	627
Metals (mg/kg)	
Arsenic	2.1 J
Chromium	5.7 J
Copper	35.3 J
Lead	76.3
Mercury	0.13 (0.1)
Zinc	63.1 (50)

OB-SW-41, -2'

	OB-SW-41, -2'
VOCs (ug/kg)	
Xylenes	1.4 J
All PAH (ug/kg)	ND
Metals (mg/kg)	
Chromium	18.5
Copper	20.7
Lead	94.3 J
Mercury	0.3 J (0.1)
Nickel	17.9
Zinc	53.3 (50)

OB-BOT-14, -2' / OB-BOT-15, -2'

	OB-BOT-14, -2'	OB-BOT-15, -2'
VOCs (ug/kg)		
Benzene	< 11	11.8 J
Carbon Disulfide	< 55	30.6 J
Cyclohexane	< 55	79.3
Ethylbenzene	220	224
Isopropylbenzene	8.7 J	38.2 J
Methylcyclohexane	< 55	431
Styrene	39.9 J	263
Toluene	11.5	205
Xylenes	309	1,080
PAH (ug/kg)		
Acenaphthene	178	1,150
Acenaphthylene	1,740	2,010
Anthracene	532	1,210
Benzo(a)anthracene	461 (224 or MDL)	1,370 (224 or MDL)
Benzo(a)pyrene	531 (61 or MDL)	1,640 (61 or MDL)
Benzo(b)fluoranthene	401 (1,100)	1,410 (1,100)
Benzo(g,h,I)perylene	297	875
Benzo(k)fluoranthene	146	485
Chrysene	438 (400)	1,360 (400)
Dibenzo(a,h)anthracene	31.2 J (14.3 or MDL)	127 (14.3 or MDL)
Fluoranthene	1,150	3,000
Fluorene	663	1,270
Indeno(1,2,3-cd)pyrene	255	825
2-Methylnaphthalene	2,170	3,080
Naphthalene	13,200 (13,000)	11,300
Phenanthrene	2,270	2,690
Pyrene	1,560	5,680
Total PAH concentration	26,023	39,482
Total carcinogenic PAHs in terms of BAP Equivalents	680	2,146
Metals (mg/kg)		
Arsenic	< 1.1	4.7
Chromium	20.3	32.4
Copper	25.9	38.9
Lead	7.1	142
Mercury	< 0.035	0.3 J (0.1)
Nickel	16.3 J	21.7 J
Zinc	39.8 J	86.6 J (50)

OB-SW-44, -2'

	OB-SW-44, -2'
Total PCBs (ug/kg)	ND
All VOCs (ug/kg)	ND
PAH (ug/kg)	
Acenaphthylene	1,300
Anthracene	298
Benzo(a)anthracene	199
Benzo(a)pyrene	1,440 (61 or MDL)
Benzo(b)fluoranthene	1,300 (1,100)
Benzo(g,h,I)perylene	4,400
Benzo(k)fluoranthene	2,210 (1,100)
Chrysene	344
Dibenzo(a,h)anthracene	365 J (14.3 or MDL)
Fluoranthene	59 J
Fluorene	143
Indeno(1,2,3-cd)pyrene	1,560
2-Methylnaphthalene	164
Pyrene	209
Total PAH concentration	14,101.0
Total carcinogenic PAHs in terms of BAP Equivalents	2,136
Metals (mg/kg)	
Chromium	7
Copper	17.9 J
Lead	43.6
Zinc	33 J

EP-02, 39' bgs

	EP-02, 39' bgs
All VOCs (ug/kg)	ND

EP-01, 39' bgs

	EP-01, 39' bgs
All VOCs (ug/kg)	ND

OB-BOT-28, -2'

	OB-BOT-28, -2'
VOCs (ug/kg)	
Ethylbenzene	69.3
Methylcyclohexane	98.3 J
Styrene	273
Xylenes	317
PAH (ug/kg)	
Acenaphthene	789
Acenaphthylene	2,580
Anthracene	1,020
Benzo(a)anthracene	966 (224 or MDL)
Benzo(a)pyrene	1,360 (61 or MDL)
Benzo(b)fluoranthene	672
Benzo(g,h,I)perylene	583
Benzo(k)fluoranthene	792
Chrysene	923 (400)
Dibenzo(a,h)anthracene	102 (14.3 or MDL)
Fluoranthene	2,350
Fluorene	1,260
Indeno(1,2,3-cd)pyrene	376
2-Methylnaphthalene	2,100
Naphthalene	20,400 (13,000)
Phenanthrene	4,780
Pyrene	3,670
Total PAH concentration	44,723
Total carcinogenic PAHs in terms of BAP Equivalents	1,681
Metals (mg/kg)	
Arsenic	2.9 J
Chromium	14.3
Copper	18.6
Mercury	0.18 (0.1)
Nickel	10.1
Zinc	54.4 J (50)

OB-BOT-29, -2'

	OB-BOT-29, -2'
VOCs (ug/kg)	
Ethylbenzene	860 J
Isopropylbenzene	513 J
Methylcyclohexane	205 J
Styrene	279 J
Toluene	391 J
Xylenes	4,170 J (1,200)
PAH (ug/kg)	
Acenaphthene	842
Acenaphthylene	1,980
Anthracene	1,750
Benzo(a)anthracene	2,610 (224 or MDL)
Benzo(a)pyrene	2,780 (61 or MDL)
Benzo(b)fluoranthene	2,840 (1,100)
Benzo(g,h,I)perylene	1,300
Benzo(k)fluoranthene	927
Chrysene	2,410 (400)
Dibenzo(a,h)anthracene	2,875 (14.3 or MDL)
Fluoranthene	5,430
Fluorene	2,540
Indeno(1,2,3-cd)pyrene	891
2-Methylnaphthalene	8,020
Naphthalene	13,700 (13,000)
Phenanthrene	7,280
Pyrene	6,670
Total PAH concentration	64,845
Total carcinogenic PAHs in terms of BAP Equivalents	6,322
Metals (mg/kg)	
Arsenic	4 J
Chromium	22.7
Copper	38
Mercury	0.33 (0.1)
Nickel	17
Zinc	84.6 J (50)

OB-BOT-34, -2'

	OB-BOT-34, -2'
VOCs (ug/kg)	
Benzene	1.3
Ethylbenzene	3.9
Methyl Acetate	20
Toluene	3.5
Xylenes	3.8
PAH (ug/kg)	
Acenaphthene	591
Acenaphthylene	738
Anthracene	497
Benzo(a)anthracene	589 (224 or MDL)
Benzo(a)pyrene	749 (61 or MDL)
Benzo(b)fluoranthene	490
Benzo(g,h,I)perylene	339
Benzo(k)fluoranthene	433
Chrysene	566 (400)
Dibenzo(a,h)anthracene	62.5 J (14.3 or MDL)
Fluoranthene	1,320
Fluorene	480
Indeno(1,2,3-cd)pyrene	224
2-Methylnaphthalene	1,040
Naphthalene	5,750
Phenanthrene	1,830
Pyrene	1,940
Total PAH concentration	17,639
Total carcinogenic PAHs in terms of BAP Equivalents	952
Metals (mg/kg)	
Arsenic	2.6
Chromium	16.5 J
Copper	22.7
Lead	56
Mercury	0.23 J (0.1)
Nickel	11.9
Zinc	54.2 (50)

OB-SW-45, -2'

	OB-SW-45, -2'
VOCs (ug/kg)	
Acetone	13
Ethylbenzene	2
Methyl Acetate	7.1
Toluene	1.4
Xylenes	3.4
PAH (ug/kg)	
Acenaphthene	402
Acenaphthylene	2,610 J
Anthracene	1,060
Benzo(a)anthracene	1,810 (224 or MDL)
Benzo(a)pyrene	2,410 (61 or MDL)
Benzo(b)fluoranthene	2,050 (1,100)
Benzo(g,h,I)perylene	1,050
Benzo(k)fluoranthene	1,690 (1,100)
Chrysene	1,730 (400)
Dibenzo(a,h)anthracene	278 (14.3 or MDL)
Fluoranthene	4,360 J
Fluorene	902
Indeno(1,2,3-cd)pyrene	714
2-Methylnaphthalene	1,470
Naphthalene	12,000
Phenanthrene	4,340 J
Pyrene	5,130 J
Total PAH concentration	44,006
Total carcinogenic PAHs in terms of BAP Equivalents	3,180
Metals (mg/kg)	
Arsenic	4.4
Beryllium	0.6
Chromium	30.8 J
Copper	24.2
Lead	35.3
Mercury	0.23 J (0.1)
Nickel	16.6
Zinc	50.6 (50)

OB-BOT-35, -2'

	OB-BOT-35, -2'
VOCs (ug/kg)	
Acetone	13.6
Benzene	2.2
Ethylbenzene	12.5
Methyl Acetate	12.4
Styrene	9.4
Toluene	8
Xylenes	18.4
PAH (ug/kg)	
Acenaphthene	586
Acenaphthylene	1,060
Anthracene	548
Benzo(a)anthracene	586 (224 or MDL)
Benzo(a)pyrene	835 (61 or MDL)
Benzo(b)fluoranthene	521
Benzo(g,h,I)perylene	427
Benzo(k)fluoranthene	475
Chrysene	582 (400)
Dibenzo(a,h)anthracene	67.8 J (14.3 or MDL)
Fluoranthene	1,330
Fluorene	553
Indeno(1,2,3-cd)pyrene	272
2-Methylnaphthalene	1,160
Naphthalene	7,640
Phenanthrene	1,950
Pyrene	2,050
Total PAH concentration	20,643
Total carcinogenic PAHs in terms of BAP Equivalents	1,051
Metals (mg/kg)	
Arsenic	3
Chromium	14.6 J
Copper	19.2
Lead	58.9
Mercury	0.18 J (0.1)
Nickel	10.7
Zinc	49.3 (50)

OB-SW-46, -2'

	OB-SW-46, -2'
VOCs (ug/kg)	
Acetone	13.7
Ethylbenzene	8.7
Methyl Acetate	19.3
Toluene	2.8
Xylenes	9.8
PAH (ug/kg)	
Acenaphthene	843
Acenaphthylene	930
Anthracene	657
Benzo(a)anthracene	799 (224 or MDL)
Benzo(a)pyrene	995 (61 or MDL)
Benzo(b)fluoranthene	695
Benzo(g,h,I)perylene	379
Benzo(k)fluoranthene	664
Chrysene	776 (400)
Dibenzo(a,h)anthracene	79.1 (14.3 or MDL)
Fluoranthene	1,780
Fluorene	632
Indeno(1,2,3-cd)pyrene	265
2-Methylnaphthalene	1,430
Naphthalene	7,890
Phenanthrene	2,420
Pyrene	2,520
Total PAH concentration	23,754
Total carcinogenic PAHs in terms of BAP Equivalents	1,264
Metals (mg/kg)	
Arsenic	2.5
Chromium	15.6 J
Copper	18.9
Lead	48.2
Mercury	0.21 J (0.1)
Nickel	10.7
Zinc	43.8

OB-SW-43, -2'

	OB-SW-43, -2'
VOCs (ug/kg)	
Benzene	1.9
Ethylbenzene	7.4
Isopropylbenzene	5.1 J
Toluene	3.5
Xylenes	12
PAH (ug/kg)	
Acenaphthene	5,590
Acenaphthylene	2,730
Anthracene	4,510
Benzo(a)anthracene	7,490 (224 or MDL)
Benzo(a)pyrene	9,890 (61 or MDL)
Benzo(b)fluoranthene	5,540 (1,100)
Benzo(g,h,I)perylene	9,920
Benzo(k)fluoranthene	5,740 (1,100)
Chrysene	7,680 (400)
Dibenzo(a,h)anthracene	968 (14.3 or MDL)
Fluoranthene	20,600
Fluorene	8,270
Indeno(1,2,3-cd)pyrene	6,490 (3,200)
2-Methylnaphthalene	11,500
Naphthalene	9,010
Phenanthrene	38,200
Pyrene	29,000
Total PAH concentration	183,128
Total carcinogenic PAHs in terms of BAP Equivalents	12,944
Metals (mg/kg)	
Arsenic	5.4
Chromium	9.9
Copper	48.8
Lead	172 J
Mercury	0.54 J (0.1)
Nickel	12.1
Zinc	79.1 (50)

OB-BOT-17, -2'

	OB-BOT-17, -2'
VOCs (ug/kg)	
Acetone	34.3
Ethylbenzene	6.2
Isopropylbenzene	2.4 J
Styrene	5 J
Xylenes	15.1
PAH (ug/kg)	
Acenaphthene	368
Acenaphthylene	604
Anthracene	434
Benzo(a)anthracene	863 (224 or MDL)
Benzo(a)pyrene	1,320 (61 or MDL)
Benzo(b)fluoranthene	794
Benzo(g,h,I)perylene	1,670
Benzo(k)fluoranthene	817
Chrysene	974 (400)
Fluoranthene	1,720
Fluorene	335
Indeno(1,2,3-cd)pyrene	1,040
2-Methylnaphthalene	388
Naphthalene	2,410
Phenanthrene	1,720
Pyrene	2,500
Total PAH concentration	17,957
Total carcinogenic PAHs in terms of BAP Equivalents	1,608
Metals (mg/kg)	
Arsenic	3.7
Chromium	20.8
Copper	222 (50)
Lead	203 J
Mercury	0.54 J (0.1)
Nickel	16.9
Zinc	120 (50)

OB-BOT-26, -2'

	OB-BOT-26, -2'
VOCs (ug/kg)	
Ethylbenzene	149
Isopropylbenzene	22.9 J
Toluene	14.2
Xylenes	282
PAH (ug/kg)	
Acenaphthene	321
Acenaphthylene	626
Anthracene	513
Benzo(a)anthracene	1,360 (224 or MDL)
Benzo(a)pyrene	1,680 (61 or MDL)
Benzo(b)fluoranthene	1,590 (1,100)
Benzo(g,h,I)perylene	1,080
Benzo(k)fluoranthene	585
Chrysene	1,380 (400)
Dibenzo(a,h)anthracene	256 (14.3 or MDL)
Fluoranthene	2,390
Fluorene	321
Indeno(1,2,3-cd)pyrene	1,020
2-Methylnaphthalene	552
Naphthalene	2,780
Phenanthrene	1,710
Pyrene	2,430
Total PAH concentration	20,594
Total carcinogenic PAHs in terms of BAP Equivalents	2,353
Metals (mg/kg)	
Arsenic	3.7 J
Chromium	22.3
Copper	32.2 J
Lead	107
Mercury	0.4 J (0.1)
Nickel	18.3
Zinc	78.1 J (50)

OB-SW-42, -2'

	OB-SW-42, -2'
VOCs (ug/kg)	
Ethylbenzene	5.6
Xylenes	9.7
PAH (ug/kg)	
Acenaphthylene	1,990
Anthracene	389
Benzo(a)anthracene	180 J
Benzo(a)pyrene	1,930 (61 or MDL)
Benzo(b)fluoranthene	2,600 (1,100)
Benzo(g,h,I)perylene	12,800
Benzo(k)fluoranthene	607
Chrysene	541 (400)
Dibenzo(a,h)anthracene	1,180 (14.3 or MDL)
Fluoranthene	134 J
Indeno(1,2,3-cd)pyrene	6,400 (3,200)
2-Methylnaphthalene	146 J
Pyrene	298 J
Total PAH concentration	29,015
Total carcinogenic PAHs in terms of BAP Equivalents	4,021
Metals (mg/kg)	
Arsenic	3.5
Chromium	10
Copper	62.1 (50)
Lead	204 J
Mercury	0.84 J (0.1)
Nickel	10.9
Zinc	154 (50)

OB-BOT-16, -2'

	OB-BOT-16, -2'
VOCs (ug/kg)	
Ethylbenzene	14.2 J
Methylcyclohexane	13.7 J
Styrene	10.5 J
Toluene	10.3 J
Xylenes	55.2 J
PAH (ug/kg)	
Acenaphthene	787
Acenaphthylene	1,630
Anthracene	982
Benzo(a)anthracene	1,850 (224 or MDL)
Benzo(a)pyrene	3,150 (61 or MDL)
Benzo(b)fluoranthene	1,870 (1,100)
Benzo(g,h,I)perylene	3,030
Benzo(k)fluoranthene	1,350 (1,100)
Chrysene	1,860 (400)
Dibenzo(a,h)anthracene	358 (14.3 or MDL)
Fluoranthene	3,470
Fluorene	992
Indeno(1,2,3-cd)pyrene	1,930
2-Methylnaphthalene	1,580
Naphthalene	12,500
Phenanthrene	3,880
Pyrene	7,530
Total PAH concentration	48,749
Total carcinogenic PAHs in terms of BAP Equivalents	4,105
Metals (mg/kg)	
Arsenic	4.4
Chromium	22.3
Copper	46.5
Lead	109 J
Mercury	0.76 J (0.1)
Nickel	19.2
Zinc	85.5 (50)

LEGEND:

- OB — Former Office Building
- SH/LR — Former Switch House/Locker Room
- FH — Former Frequency House
- WS — Waterside Generating Station
- OB-SW-38 (blue dot) — TRC Sidewall End Point Sample. All sidewall samples were collected at a depth of 2 feet below development depth, except OB-SW-34, 35, 36, and 37, which were collected just above bedrock.
- OB-BOT-15 (green dot) — TRC Bottom End Point Sample. All botom samples were collected at a depth of 2 feet below development depth.
- EP-01 (black dot) — TRC Deep UST Area Bottom End Point Sample. The two deep end point samples in the former UST area were collected at a depth of 39 feet below grade.
- (grey) — All soil excavated to bedrock surface. No bottom end point samples possible.
- (yellow) — All soil excavated to an elevation of - 2 feet (Below Development Depth). Bottom samples were collected approximately every 30 feet.
- (orange) — Deep UST Area Excavation. All soil excavated to a depth of 39 feet below grade
- (orange line) — Soil present at excavation perimeter. Sidewall end point samples collected approximately every 30 feet.
- (grey line) — Continuous concrete perimeter retaining wall or timber lagging at excavation perimeter. No sidewall end point samples possible.
- (red line) — Bedrock drop-off line
- (black line) — Former Building Location Outline (708 First Avenue Property only)
- 1,930 (400) — Result Exceeds Soil Cleanup Criterion (TAGM RSCO). Criterion omitted where result does not exceed criterion.
- J — Estimated Value
- ND — Non-Detect
- bgs — Below Ground Surface
- ug/kg — All PCB, volatile and semi-volatile sample result concentrations are in micrograms per kilogram (ug/kg).
- mg/kg — All metals sample result concentrations are in milligrams per kilogram (mg/kg). Metals standards based on highest background range of Eastern USA.
- Cleanup Criterion — New York State Technical Assistance Guidance Memorandum (TAGM) 4046, January 24, 1994, and December 2000 revisions, Residential Soil Cleanup Objectives (RSCO) and Revisions (1998).
- Notes — Base map 1842a.dwg Lichtenstein drawing provided by MTA. Base map prepared by Atlantis Aerial Survey Co., Inc. from photography dated 9-25-98. Well/boring locations surveyed by GEOD Corporation, Newfoundland, N.J.

30 0 30 60 90 FT

GRAPHIC SCALE

FIRST AVENUE PROPERTIES
708 First Avenue Property
New York, New York

TRC
TRC ENVIRONMENTAL CORPORATION
1200 Wall Street West, 2nd Floor
Lyndhurst, New Jersey 07071

Designed by:	Date:
MAS	2/6/04
Drawn by: LMW	Scale: As Shown
File Name: Figure 5.dwg	Project Number: 28410-OB05-2440T

APPENDIX E

Drawing Title:
Soil Below Development Depth Map

\\Lyndhrst_bd1\shared\First Avenue Files\708 Office Building\Final Remediation Report\Figures\Figure 5 Excavation End Point Soil Sampling Locations and Results Map.dwg

Appendix F
NYSDEC Criteria for Imported Soils

APPENDIX F
NYSDEC CRITERIA FOR IMPORTED SOILS
SITE MANAGEMENT PLAN
GREATER WATERSIDE SITE
700-708 FIRST AVENUE, NEW YORK, NEW YORK

VOLATILE ORGANIC COMPOUNDS (VOCs)	Residential Use	Restricted Residential Use
1,1,1-Trichloroethane	0.68	0.68
1,1-Dichloroethane	0.27	0.27
1,1-Dichloroethene	0.33	0.33
1,2,4-Trimethylbenzene	3.6	3.6
1,2-Dichlorobenzene	1.1	1.1
1,2-Dichloroethane	0.02	0.02
1,3,5-Trimethylbenzene	8.4	8.4
1,3-Dichlorobenzene	2.4	2.4
1,4-Dichlorobenzene	1.8	1.8
1,4-Dioxane	0.1	0.1
Acetone	0.05	0.05
Benzene	0.06	0.06
Carbon tetrachloride	0.76	0.76
Chlorobenzene	1.1	1.1
Chloroform	0.37	0.37
cis-1,2-Dichloroethene	0.25	0.25
Ethylbenzene	1	1
Methylene Chloride	0.05	0.05
MTBE	0.93	0.93
n-Butylbenzene	12	12
N-Propylbenzene	3.9	3.9
sec-Butylbenzene	11	11
tert-Butylbenzene	5.9	5.9
Tetrachloroethene	1.3	1.3
Toluene	0.7	0.7
trans-1,2-Dichloroethene	0.19	0.19
Trichloroethene	0.47	0.47
Vinyl chloride	0.02	0.02
Xylenes, Total	1.6	1.6

SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)	Residential Use	Restricted Residential Use
Acenaphthene	98	98
Acenaphthylene	100	100
Anthracene	100	100
Benzo[a]anthracene	1	1
Benzo[a]pyrene	1	1
Benzo[b]fluoranthene	1	1
Benzo[g,h,i]perylene	100	100
Benzo[k]fluoranthene	1	1.7
Chrysene	1	1
Dibenz(a,h)anthracene	0.33	0.33
Dibenzofuran	14	59
Fluoranthene	100	100
Fluorene	100	100
Hexachlorobenzene	0.33	1.2
Indeno[1,2,3-cd]pyrene	0.5	0.5
m-Cresol	0.33	0.33
o-Cresol	0.33	0.33
p-Cresol	0.33	0.33
Naphthalene	12	12
Pentachlorophenol	0.8	0.8
Phenanthrene	100	100
Phenol	0.33	0.33
Pyrene	100	100

METALS	Residential Use	Restricted Residential Use
Arsenic	16	16
Barium	350	400
Beryllium	14	47
Cadmium	2.5	4.3
Chromium, hexavalent	19	19
Chromium, trivalent	36	180
Copper	270	270
Cyanide, Total	27	27
Lead	400	400
Manganese	2000	2000
Mercury	0.73	0.73
Nickel	130	130
Selenium	4	4
Silver	8.3	8.3
Zinc	2200	2480

POLYCHLORINATED BIPHENYLS (PCBs)/PESTICIDES	Residential Use	Restricted Residential Use
Total PCBs	1	1
4,4'-DDD	2.6	13
4,4'-DDE	1.8	8.9
4,4'-DDT	1.7	7.9
Aldrin	0.019	0.097
alpha-BHC	0.02	0.02
beta-BHC	0.072	0.09
Chlordane (alpha)	0.91	2.9
delta-BHC	0.25	0.25
Dieldrin	0.039	0.1
Endosulfan I	NC	NC
Endosulfan II	NC	NC
Endosulfan sulfate	NC	NC
Total Endosulfans	4.8	24
Endrin	0.06	0.06
gamma-BHC (Lindane)	0.1	0.1
Heptachlor	0.38	0.38
Silvex (2,4,5-TP)	3.8	3.8

NOTES:
1) Concentrations presented in mg/kg - milligrams per kilogram.
2) All levels from 6 NYCRR 375-6. Table 375-6.8(b) Restricted Use Soil Cleanup Objectives, in accordance with 6 NYCRR Part 375-6.7(d)(1)(ii)(b).
3) Residential Use allowable levels apply to soils to be placed above Development Depth.
4) Restricted Residential Use allowable levels apply to soils to be placed below Development Depth.
5) NC - No criterion.

Appendix G
Environmental Easements

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 17th day of August, 2011, between Owner 700 First Realty Company, LLC, having an office c/o Solow Realty & Development Company, LLC at 9 West 57th Street, County of New York, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 700 First Avenue in the City of New York, County of New York and State of New York, known and designated on the tax map of the Borough of Manhattan as tax map Block 970 Lot 1, being the same as that property conveyed to Grantor by deed dated May 31, 2005 and recorded in the City Register of the City of New York in Instrument No. CRFN 2005000335189, comprising approximately 4.47 acres, and hereinafter more fully described in the Land Title Survey dated November 10, 2010, which will be attached to the Site Management Plan. The property description (the "Controlled Property") is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of human health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of BCA Index Number: A2-0515-0405, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii) and Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii), and any other uses permitted under applicable laws, rules, regulations, codes and/or ordinances to the extent not inconsistent with (x) 6 NYCRR Part 375-1.8(g)(2)(ii) and 6 NYCRR Part 375-1.8(g)(2)(iii) or (y) the other restrictions expressly set forth in Section 2. of this Environmental Easement.

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan ("SMP");

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for raising livestock or producing animal products for human consumption, and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer
NYSDEC – Region 2
Division of Environmental Remediation
47-40 21st St.
Long Island City, NY 11101
Phone: (718) 482-4995

or

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number C2341013
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, Grantor and Grantee each has caused this instrument to be signed in its name.

700 First Realty Company, LLC:

By: _____

Print Name: Sheldon H. Solow

Title: President Date: 1/13/2011

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF New York)

On the 13th day of January, in the year 20 11, before me, the undersigned, personally appeared Sheldon H. Solow, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Amalia C. DeLucia
Notary Public - State of New York

AMALIA C. DELUCIA
Notary Public, State of New York
No. 01DE6032868
Qualified in Queens County
Commission Expires November 8, 2013

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Dale A. Desnoyers, Director
Division of Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Albany)

On the 17th day of August, in the year 2011, before me, the undersigned, personally appeared Dale Desnoyers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

Drew A. Wellette
Notary Public, State of New York
Qualified in Schenectady Co.
No. 01WE6089074
Commission Expires 03/17/ 2015

SCHEDULE A PROPERTY DESCRIPTION

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the northerly line of East 38th Street with the easterly line of First Avenue;

RUNNING THENCE northerly, along the easterly line of First Avenue, 515 feet 0 inches;

THENCE easterly, parallel with the northerly line of East 38th Street, 411 feet 7 3/8 inches to a point in the westerly line of Franklin D. Roosevelt Drive;

THENCE southerly, along the westerly line of Franklin D. Roosevelt Drive, on the arc of a circle curving to the right having a radius of 2431 feet 8 inches and a central angle of 6° 13' 33 inches, 264 feet 2 5/8 inches to a point of tangency;

THENCE southerly still along the westerly line of Franklin D. Roosevelt Drive, 56 feet 4 ¼ inches to an angle point therein;

THENCE easterly, still along the westerly line of Franklin D. Roosevelt Drive and parallel with the northerly line of East 38th Street, 1 foot 2 3/8 inches to an angle point therein;

THENCE southerly, still along the westerly line of Franklin D. Roosevelt Drive, 200 feet 3 1/8 inches to the corner formed by the intersection of the northerly line of East 38th Street with the westerly line of Franklin D. Roosevelt Drive;

THENCE westerly, along the northerly line of East 38th Street, 336 feet 10 3/8 inches to a point or place of BEGINNING.