FORMER EAST COAST INDUSTRIAL UNIFORMS SITE

BROOKLYN, NEW YORK

Site Management Plan

NYSDEC Site Number: C224156

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Revisions to Final Approved Site Management Plan:

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LIST OF ACRONYMS

Acronym	Definition
AMC	AMC Engineering
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CQMP	Construction Quality Management Plan
DUSR	Data Usability Statement Report
EBC	Environmental Business Consultants
FER	Final Engineering Report
HDPE	High Density Polyethylene
IRM	Interim Remedial Measure
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PS	Public School
PVC	Polyvinyl Chloride
RAO	Remedial Action Objectives
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
RSCOs	Recommended Site Cleanup Objectives
SCG	Standards, Criteria, and Guidelines
SMMP	Soil/Materials Management Plan
SSDS	Sub-slab Depressurization System
SWPPP	Stormwater Pollution Prevention Plan
SVOCs	Semi-Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

CERTIFICATIONS

I Ariel Czemerinski certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

076508 — NYS Professional Engineer #

12/10/13 — Date

Signature

STATE OF NEW YORK
ARIEL CZEMERINSKI
LICENSED PROFESSIONAL ENGINEER
076508

SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at the Former East Coast Industrial Uniforms (hereinafter referred to as the "Site") under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index # C224156-03-12, which was executed on March 27, 2012.

1.1.1 General

39 Skillman Street LLC entered into a BCA with the NYSDEC to remediate a 0.57 acre property located in Brooklyn, New York. This BCA required the Remedial Party, 39 Skillman Street LLC to investigate and remediate contaminated media at the site. Figures showing the site location and boundaries of this 0.57-acre "site" are provided in **Figures 1 and 2**. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement (see Attachment I).

After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by AMC Engineering, on behalf of 39 Skillman Street LLC, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the site.

1.1.2 Purpose

The site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Kings County Clerk, will require compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary ensure compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC. It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA Site # C-241154 for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The Site is located in Kings County, New York City, New York and is identified as Block 1886 Lot 10 on the New York City Department of Assessment Tax Map. A United States Geological Survey (USGS) topographical quadrangle map (**Figure 1**) shows the Site location. The Site consists of a total of 25,000 square feet (0.57-acres) and is bounded by a community / office building to the north, residential buildings to the east, residential buildings to the West and family residential buildings to the south (**Figure 2**).

1.2.2 Site History

Sanborn Maps dating back to1887 show the property was developed prior to 1887 with a Brooklyn Union Gas "Gasometer" in the northern third of the property and multiple residential homes and stores on the southern portion. By 1935, the Gasometer is gone and that area of the site is now vacant. The southern portion is unchanged. A small storage building is added to the northern lot in 1947. By 1965 the houses are gone from the southern portion of the property and the north lot is now labeled as a furniture/frame company.

By 1977 property is shown in its current configuration with two attached buildings in the northern area and a small parking lot in the southern portion of the lot. The property is labeled as East Coast Industrial Uniform Company.

1.2.3 Geologic Conditions

Subsurface soils at the site include an urban fill layer at the surface which varies from less than 1 foot thick in the southern portion of the property to at least 15 feet thick at location B15 in the northwest corner of the Site. According to the SCR prepared by GEI, fill materials beneath building 3, on which the former gas holder was located, extended to a depth of approximately 20 feet below the surface. Surface grade (slab) in building 3 was approximately 4 feet lower than the remainder of the Site. Although the building was demolished prior to implementation of the RI, this area of the site remained 3-4 feet below street level.

Below the fill material native soils consisting of brown sand with some gravel grading to a native fine to medium brown sand with a trace amount of silt and / or gravel was observed to and below the water table.

Groundwater at the Site is present at a depth of approximately 22 to 25 feet below surface grade within the native sands. Groundwater flow is generally west to east which confirms the findings of the SCR prepared by GEI. The potentiometric difference between shallow and deep well couplets indicate a downward potential in the southern part of the site changing to an upward potential in the northern part of the site.

A geologic section is shown in **Figure 3**. A groundwater flow figure is shown in **Figure 4**.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the following reports:

The Remedial Investigation (RI) of the Site was performed by EBC on behalf of the Volunteer, 39 Skillman LLC. The field work portion of the RI was performed in from June 4th to June 19th 2012 in accordance with the protocols and methods as established in the approved Remedial Investigation Work Plan (EBC 5/12). EBC documented the results of the RI in a Remedial Investigation Report (RIR) dated January 2013. The RIR was accepted and approved by the NYSDEC in a letter dated April 8, 2013.

The purpose of the Remedial Investigation (RI) is to collect data of sufficient quality and quantity to characterize the nature and extent of petroleum contamination in on-site groundwater and soil vapor, to complete a qualitative exposure assessment for future occupants of the building and the surrounding community and to evaluate alternatives to remediate the contamination.

The RI included the following tasks:

- Sampling for non-petroleum contaminants such as pesticides, PCBs and metals in soil and groundwater including the analysis of soil and groundwater samples
- Soil sampling and analysis for petroleum compounds and industrial solvents including volatile and semi-volatile organic compounds in soil samples from soil boring locations;
- The installation of groundwater monitoring wells
- The collection and analysis of groundwater samples for volatile and semi-volatile organic compounds, pesticides, PCBs and metals;
- The collection of analysis of soil vapor samples for volatile organic compounds from soil vapor implants.

1.3.1 Soil

The soil boring program successfully delineated the extent of petroleum contamination associated with the fuel oil UST located in the northwest corner of building 2. The zone of impacted soil extended throughout much of the northern half of Building 2 as defined in borings SB5-SB13. The vertical extent of contamination ranges from 8 to 25 feet below grade (17 ft thick) at SB13 in close proximity to the UST, to approximately 22 feet to 23.5 feet below grade (1.5 ft thick) at locations SB8, SB9 south of the UST area.

Despite observations of stained soils, elevated PID readings and petroleum odors in shallow soil adjacent to the UST (SB13), there were no VOC or SVOC parameters reported above unrestricted SCOs in the shallow soil sample. In fact there were no SVOC parameters reported above unrestricted SCOs in any of the soil samples collected from the SB5-SB13 locations. Although several VOC parameters (1,2.4-trimethylbenzene and / or xylenes) were reported above unrestricted SCOs in SB5, SB6 and SB10-SB13, there were no VOCs reported above restricted residential criteria.

Following removal of the tank, it appeared that the tank was the source of the petroleum contamination identified in Building 2. Although trace amounts of PCE were reported in samples from SB10, SB12

and SB13 in the vicinity of the UST, there were no detections above unrestricted SCOs in any of the samples.

SVOCs above restricted residential SCOs were reported in two soil borings, SB14 and SB15, both located within the area formally occupied by the gas holder (SCR, 2/12). Both locations reported black sandy fill material with coal fragments at and/or above the water table. It is likely therefore that the elevated SVOCs are related to the coal within the fill.

No other source areas were identified or indicated during the RI. Elevated levels of metals reported in shallow soil throughout the site are characteristic of the historic fill materials present at the site and throughout the area. Summary tables of soil results from the Remedial Investigation are provided in **Attachment A**.

1.3.2 Groundwater

Petroleum VOC and SVOC impacts to groundwater were highest near the eastern property line within the northern third of Building 2. Migration of dissolved VOCs and SVOCs appears to have been from the UST area due east to the property line.

In contrast, CVOC impacts to groundwater were highest near the west property line in Building 2 and appear to be migrating in a northeast direction. The absence of CVOCs in soil at the site and the identification of CVOC plume upgradient of the site, suggests an off-site source.
The different flow paths may be related to differences in the time of transport, location of the sources and fluctuations in the groundwater flow direction over time. Summary tables of groundwater results from the Remedial Investigation are provided in **Attachment A**.

1.3.3 Soil Vapor

Total VOC concentrations detected in soil-gas samples collected during the RI were elevated due to high concentrations of ethanol and isopropyl alcohol reported in all samples. The origin of these alcohols is not known but based on the uniform concentrations and universal presence they are not site related.

Total petroleum related volatile organic compounds were generally low ranging from 24.1 µg/m^3 in SG4 located near the 3,000 gallon UST to 381.7 µg/m^3 in SG2 located in the southeast corner of the parking lot. Since there were no petroleum VOCs reported in soil or groundwater samples collected

from the parking lot area, there does not appear to be any correlation between PVOCs in soil and groundwater and those in soil vapor.

CVOCs were reported in all seven samples ranging in concentration from 70.7 µg/m^3 in SG1 located in the southwest corner of the parking lot to 4,204 µg/m^3 near the UST. CVOCs above 500 µg/m^3 were reported in SG4 and SG5 located within the former wash building and in SG7 located in the northwest corner of the property. CVOC concentrations in the SG4 and SG5 samples included PCE at 3,510 and 2,610 µg/m^3, respectively, TCE at 687 and 508 µg/m3 and Cis-DCE at 73 and 23 µg/m^3, respectively. This contrasts with the results from the SB7 location which were composed almost entirely of PCE at 929 µg/m^3 and TCE at 5.91 µg/m^3.

Based on the absence of elevated PCE in soil, the low levels of PCE in groundwater and the absence of TCE in soil and groundwater at the site, an off-site origin is indicated for some or all of the CVOCs reported in soil vapor. Further evidence for an off-site origin is provided by the groundwater flow direction (west to east), and high concentrations of dissolved phase and vapor phase CVOCs reported off-site and upgradient of the site (SCR 2/12). Total CVOCs in groundwater were reported at a concentration of 19,680 µg/L 250 feet north of the site with concentrations in sub-slab soil vapor reported as 14,700 µg/m^3 approximately 185 feet north of the site. Summary tables of soil vapor results from the Remedial Investigation are provided in **Attachment A**.

1.3.4 Underground Storage Tanks

The property is identified in the NYSDEC Petroleum Bulk Storage database as Facility Site No. 2-055468. According to NYSDEC PBS records one 3,000 gallon underground fuel oil tank and one 2,000 gallon aboveground fuel oil tank were registered to the property. The underground tank was listed as being closed-in-place on 6/1/98. The installation date is unknown. These tanks were both permanently closed/removed as part of the IRM completed at the Site in June 2012. The tank removal was documented in accordance with 6 NYCRR Part 612.2 and 613.9 by submitting a modified Application for Petroelum Bulk Storage Registration identifying the tanks and the date of permanent closure/removal.

1.4 SUMMARY OF REMEDIAL ACTIONS

The Site was remediated in accordance with the remedy selected by the NYSDEC in the Interim Remedial Measure (IRM) dated June 2012 and approved on June 29, 2012 and the RAWP dated November 2012 and approved on April 8, 2013.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Removal of petroleum and CVOC impacted soil, under the IRM from the former UST area in the west-central area of the Site;
2. Excavation of soil/fill as necessary to construct the basement levels and foundation of the new buildings, under the IRM; Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during any intrusive Site work;
3. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 4 Site Specific SCOs;
4. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
5. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in **Table 1**, (2) all Federal, State and local rules and regulations for handling and transport of material;
6. Injection of a chemical oxidant solution to address petroleum VOCs and CVOCs in groundwater and residual petroleum VOC contamination in soil at the water table;
7. Installation of a sub-slab depressurization system and vapor barrier beneath occupied areas of the buildings to be constructed on the Site;
8. Construction of a composite cover system consisting of the concrete building slabs, and concrete and/or asphalt sidewalks and parking areas;
9. Implementation of a Site Management Plan (SMP) for long term maintenance of the Engineering Controls; and,
10. An Environmental Easement will be filed against the Site to ensure implementation of the SMP.

Remedial activities including the excavation and/or removal of the underground and aboveground storage tanks, and historic fill to a depth of 7 feet below grade and hot-spot areas to a depth of 20 feet below grade were completed at the Site from May through August 2012. Installation of the monitoring network and chemical oxidant injection points were completed in March 2013. Oxidant injections and groundwater monitoring began in April 2013 and are expected to continue for a 6-month period. Installation of the vapor barrier and venting system was completed in July 2013.

1.4.1 AST and UST Removal

Work commenced on May 25, 2012 by cleaning the 2,000 gallon aboveground tank and rendering it inoperable. The tank was then loaded on a flat bed truck and delivered to DPR Scrap Metal Inc. in Westbury NY for recycling.

The 3,000 gallon underground storage tank was excavated on July 19, 2012 by Eastern Environmental Solutions. The tank was filled with sand and water. Eastern removed the liquids with a vacuum truck and removed and stockpiled the sand for off-site disposal. The tank was then cleaned, removed from the ground and transported to a local scrap metal yard for recycling.

After the tanks were removed a NYSDEC PBS Application was submitted for information correction noting "Closed-Removed" for the tank status for each tank. In accordance with New York City regulations, tank removal affidavits were filed with the New York City Fire Department (FDNY).

1.4.2 Removal of Contaminated Materials from the Site

<u>Hot Spot PCE and Petroleum Contaminated Soil Excavation and Disposal</u>

A contaminated soil "Hot-Spot" area was identified at the Site below and adjacent to the 3,000 gallon underground storage tank located in the west central portion of the Site.

EBC field screened the soil beneath each UST for evidence of contamination. Petroleum contamination was noted and excavated to the water table surface at a depth of approximately 20 feet below grade. The excavation was expanded horizontally until clean soil was encountered. Endpoint samples were collected several times as the excavation was expanded to verify that impacted soil was successfully removed.

Tetrachloroethylene (PCE) was reported in some of the initial endpoint samples at concentrations above unrestricted soil cleanup objectives (SCOs). However the concentrations of PCE both in the endpoint samples and within waste characterization soil samples collected for disposal were below the soil "contained in" action level and the Land Disposal Restriction concentration. The NYSDEC issued a Contained-In Determination letter for this material stating that it did not have to be managed as hazardous waste and could be transported off-site to either the Clean Earth of Carteret Facility in Carteret, NJ or the Soil Safe Facility located in Logan, NJ.

Historic Fill Excavation and Disposal

Soil characterized by EBC personnel as Historic Fill during excavation of the site for construction of the new building was found throughout the site from varying depths, ranging from slightly below grade to more than 15 feet below grade. EBC personnel characterized historic fill as soil that contained materials such as brick, concrete, glass or ceramics, cinder, etc. In addition, all soil that exhibited evidence of petroleum impact (staining, odor, elevated PID values), whether encountered within the historic fill layer or within the native soil layer, was characterized as historic fill. As soil was excavated, EBC assigned a classification to the soil (historic fill or clean native soil). Historic fill soil which was pre-characterized through test pit sampling was temporarily stockpiled and loaded onto trucks for off-site disposal. Clean native soil was segregated from historic fill soil stockpiled by the excavation contractor (East Coast Drilling) in soil piles approximately 500 cubic yards.

Historic fill soil was characterized as non-hazardous and disposed of at either the Clean Earth of Carteret facility in Carteret, NJ and Soil Safe facility in Logan, NJ. A total of 5,644.45 tons of petroleum-impacted and historic fill soil was disposed of at the Clean Earth of Carteret facility in Carteret, NJ. An additional 3,969.54 tons of petroleum impacted and historic fill soil was disposed of at the Soil Safe Facility in Logan, NJ.

Due to the presence of slightly elevated PCE concentrations within some of the waste characterization samples the NYSDEC issued a "Contained-In" Determination allowing this material to be disposed of as non-hazardous.

A list of the soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this site is provided in **Table 1**. A figure showing areas where excavation was performed is shown in **Figure 5**.

Clean Native Soil Removal

Clean native soil was evaluated by EBC personnel based upon field screening results, which included visual and olfactory inspection, and the collection of multiple PID readings. Clean native soil was encountered predominantly in the southern third of the site beneath the layer of soil characterized as Historic Fill at depths as little as 2 below grade, and extended to the final excavation depth required for each area. As soil was excavated, EBC assigned a classification to the soil (historic fill or clean native soil), and the excavation contractor (East Coast Drilling), stockpiled the soil according to the classification in soil piles approximately 500 cubic yards. Each Clean Native Soil Pile was stockpiled on poly sheeting to await waste characterization soil sampling and soil disposal or onsite reuse approval.

Approximately 600 cubic yards of clean native soil excavated from the Site was tested, confirmed clean and reused as backfill.

1.4.3 Import of Backfill

No off-site material was imported for use as backfill at the Site.

1.4.4 Site-Related Treatment Systems

In-situ Chemical Oxidant Injection Program

The remedial plan for the Site includes the injection of a chemical oxidant solution to address affected groundwater and residual petroleum VOC contamination in soil at the water table. Chemical oxidant injection is intended to significantly reduce the CVOCs and PVOCs and thereby accelerate improvements in groundwater quality. The area of injection is within, and upgradient of, the former UST area which was the primary source of PVOC contamination at the Site, and also within the entire impacted zone to the east property line. Injections at these locations deliver oxidant through residual soil contamination in this area, allowing it to flow east with groundwater treating both the CVOC and PVOC residuals in groundwater.

Fifteen injection points were installed within the residually impacted area as shown on **Figure 6** Injection points were constructed of 1-inch pvc with a 10 ft 0.020-inch slot screened section installed 8 ft below the water table, and 2 ft above the water table. A No. 2 morie gravel pack was placed around the screen to a depth of approximately 1 ft above the screen followed by a 1 ft hydrated bentonite

pellet seal. The injection wells were then finished at grade with an 8-inch bolt down manhole to protect the wells. Injection wells were registered with the USEPA by filing form 7520-6 with the USEPA Region 2 office.

The oxidant selected for this project is high pH-activated sodium persulfate. Sodium persulfate is a robust oxidant which has a long residence time (anion lifetime) in the subsurface. Persulfate activation through high pH provides fast contaminant reaction kinetics capable of destroying a wide range of organics including the PVOCs and CVOCs present at the Site.

Sodium persulfate was delivered to the site as a dry powder which was mixed with water on-site to provide a 20% solution. Sodium hydroxide (NaOH) was delivered to the site as a 25% solution and added to the persulfate solution at a rate of 0.4 gallons of 25% NaOH solution per gallon of 20% persulfate solution.

The injections consisted of approximately 100 gallons of activated persulfate solution per injection point. The need for subsequent injections and the number and location of injection points to be utilized for subsequent injections will be determined following the collection and analysis of performance monitoring samples. See Section 4 (Operation and Maintenance Plan) of this SMP for further details.

One round of post-injection groundwater samples has been collected. The results are presented in **Table 3** as compared with the pre-injection baseline groundwater data and demonstrate that the oxidant is effectively remediating the VOCs. Chemical oxidant treatment will continue as needed to achieve further significant reduction of VOCs in groundwater at the site. The decision to perform subsequent oxidant applications will be based on performance sampling results and will be made in concurrence with the NYSDEC project manager.

1.4.6 Remaining Contamination

This Section describes remaining contamination at the Site beneath the impervious cover and/or the demarcation barrier in pervious areas, to serve as a guide to environmental conditions that may be encountered during potential future excavation activities at the Site.

The results of the RI and end point soil samples collected after the removal of hot-spot soils, confirms that contamination remains in soil beneath the property. The remaining contamination at the Site above restricted residential SCOs includes benzo(a)anthracene, benzo(b)anthracene and ideno(1,2,3c-

d)pyrene in the northwest corner of the site at a depth of 23-25 feet below the surface. Contamination including 1,2,4-trimethylbenzene, xylene and naphthalene at concentrations above unrestricted SCOs and the PGWSCOs, remains within the former UST area and central area of the Site at depths of 23-25 feet below the surface. The residual contamination at the groundwater table will be treated under a chemical oxidant treatment program.

Table 2 and **Figure 7** summarizes RI and endpoint soil sample analytical results which represent remaining soil exceeding unrestricted and restricted residential SCOs following the excavation. All soil at the site which remains above Unrestricted Use SCOs is capped with the composite cover system consisting of a concrete slab with a minimum thickness of 4 inches.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil, groundwater and soil vapor exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by the NYSDEC.

A summary of the remedial strategies and EC/ICs implemented at the Site are as follows:

- Removal of petroleum and CVOC impacted soil, under the IRM from the former UST area in the west-central area of the Site;
- Excavation of soil/fill as necessary to construct the basement levels and foundation of the new buildings, under the IRM; Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during any intrusive Site work;
- Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 4 Site Specific SCOs;
- Treatment of groundwater with chemical oxidant injections (EC);
- Installation of a vapor barrier and operation of a sub-slab depressurization system beneath the 3 buildings (EC);
- Installation of a composite cover system consisting of the concrete slab for the development (EC);
- Implementation of a Site Management Plan (IC); and
- Registration of an Environmental Easement, including Institutional Controls, to prevent future exposure to any contamination remaining at the Site (IC).

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Composite Cover System

Exposure to remaining contamination in soil/fill at the site is prevented by a composite cover system placed over the site. At the time of the publication of this SMP, this cover system is comprised of 4" concrete building slabs, 4" concrete parking garage slabs and 4" concrete entrance ramp slabs (see **Figure 8**). The cover system may be modified in the future to include unpaved areas with a minimum of 2 feet of clean fill, the upper 6 inches of which must be of sufficient quality to support vegetation, underlain by a demarcation layer. The Excavation Work Plan that appears in **Attachment B** outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

2.2.1.2 Vapor Barrier and Sub-Slab Depressurization System

An SSDS and vapor barrier were designed and installed beneath the portion of the basement slab in each of the 3 buildings which are to be used for residential space. An SSDS was not required beneath

the parking garage area in the rear of the building which is ventilated to remove vehicle fumes in accordance with the NYC Mechanical Code.

The SSDS beneath the each building consists of two separate venting zones. Each zone provides coverage of between 3,600 to 4,000 sf of slab area. The horizontal vent line is constructed of perforated 4-inch HDPE pipe. In each zone the horizontal pipe connects to a common 6-inch schedule 40 pvc line which extends beneath the garage slab to the exterior wall and then runs vertically to the parking garage roof. In accordance with the design plans, virgin-mined, ½ inch to ¾ inch gravel was placed around the horizontal vent piping and in a 2 inch layer beneath the entire slab.

A vapor barrier was installed over the gravel bed prior to pouring the concrete slab. The vapor barrier consists of a 20 mil polyethylene/EVOH resin liner system as manufactured by Raven Industries. The vapor barrier extends throughout the occupied area of each of the new buildings. All seams and perforations in the vapor barrier were sealed using tape as supplied by the manufacturer and a liquid membrane sealer.

Procedures for operating and maintaining the SSD system are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

Detailed specifications of the SSD system, and an as-built drawing detailing the SSD system are provided **Attachment C**.

2.2.1.3 In-Situ Chemical Oxidant (ISCO) Treatment

The remedial plan for the Site includes the injection of a chemical oxidant solution to address affected groundwater and residual petroleum VOC contamination in soil at and below the water table. Chemical oxidant injection is intended to significantly reduce the CVOCs and PVOCs in the high concentration areas, and thereby accelerate improvements in groundwater quality.

The area of injection is within, and down gradient of, the former UST area which was the primary source of PVOC contamination at the Site. Injections at this location will deliver oxidant through

residual soil contamination in this area, allowing it to flow east with groundwater treating both CVOC and PVOC constituents. The injection well layout is provided in **Figure 6**.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Composite Cover System

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.2.2.2 Vapor Barrier and Sub-slab Depressurization System (SSDS)

The vapor barrier is a permanent control.

The active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSD system is no longer required, a proposal to discontinue the SSD system will be submitted by the property owner to the NYSDEC and NYSDOH.

2.2.2.3 In-Situ Chemical Oxidant (ISCO) Treatment

The groundwater treatment will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the ISCO treatment is no longer required, a proposal to discontinue the ISCO treatment will be submitted by the property owner to the NYSDEC and NYSDOH.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the RAWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential uses only. Adherence to these Institutional Controls on the site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement by the Grantor and the Grantor's successors and assigns with all elements of this SMP;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- A composite cover system consisting of concrete covered sidewalks, and concrete building slabs must be inspected, certified and maintained as required in this SMP;
- A soil vapor mitigation system consisting of a sub-slab depressurization system/vapor barrier under the occupied area of the building must be inspected, certified, operated and maintained as required in this SMP;
- Groundwater treatment consisting of a series of injection and monitoring wells must be inspected, certified, operated and maintained as required in this SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defied in the SMP.
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;
- On-Site environmental monitoring devices, including but not limited to, groundwater monitor wells and soil vapor probes, must be protected and replaced as necessary to ensure the devices function in the manner specified in this SMP.
- Engineering Controls may not be discontinued without an amendment or the extinguishment of this Environmental Easement.

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted residential, commercial or industrial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as residential or unrestricted use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it suitable for intended use;
- Vegetable gardens and farming on the property are prohibited;
- 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.

2.3.1 Excavation Work Plan

The site has been remediated for restricted residential use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as **Attachment B** to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP is attached as **Attachment D** to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of

the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Brownfield Cleanup Agreement (BCA).
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be 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 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- 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 Brownfield Cleanup Agreement (BCA), and all approved work plans and reports, including this SMP
- 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.

2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to a qualified environmental professional. These emergency contact lists must be maintained in an easily accessible location at the site.

Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Site Contact Numbers

Building Superintendant: To be Determined	
Owner Contact: Ari Goldman	(718) 599-8399
Environmental Consultant: EBC	(631) 504-6000

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

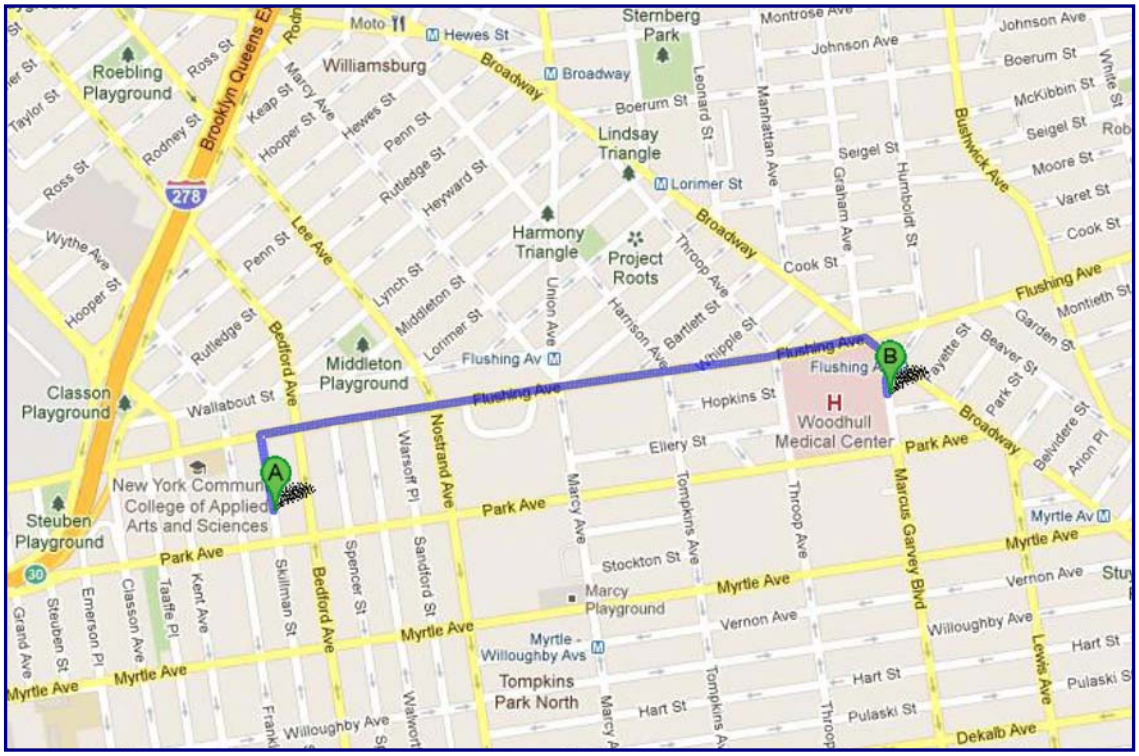
Site Location: 139 Skillman Street, Brooklyn, NY
Nearest Hospital Name: Woodhull Medical Center
Hospital Location: 760 Broadway, Brooklyn, New York 11206
Hospital Telephone: (718) 963-8000

TOTAL DISTANCE: 0.9 MILES, ABOUT 3 MINUTES

Directions to the Hospital:

1. Head north on Skillman Street for approximately 0.1 miles
2. Turn right onto Flushing Avenue heading east for approximately 0.8 miles
3. Turn right onto Broadway heading east for approximately 292 feet.
4. Take the first right onto Marcus Garvey Blvd. / Sumner Ave. for approximately 253 feet, hospital is on the right.

MAP SHOWING ROUTE FROM THE SITE TO THE HOSPITAL:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan. The list will also be posted prominently at the site and made readily available to all personnel at all times.

All environmental releases shall be contained as close to the source as possible. Whenever possible, the MSDS will be consulted to assist in determining the best means of containment and cleanup. For small spills, sorbent materials such as sand, sawdust or commercial sorbents should be placed directly on the substance to contain the spill and aid recovery. Any acid spills should be diluted or neutralized carefully prior to attempting recovery. Berms of earthen or sorbent materials can be used to contain the leading edge of the spills. Drains or drainage areas should be blocked. All spill containment materials will be properly disposed. An exclusion zone of 50 to 100 feet around the spill area should be established depending on the size of the spill. The following steps should be taken by the Emergency Coordinator:

- Determine the nature, identity and amounts of major spill components;
- If a flammable liquid, gas or vapor is involved, remove all ignition sources and use nonsparking and/or explosive proof equipment to contain or clean up the spill (diesel only vehicles, air operated pumps, etc.);
- Make sure all unnecessary persons are removed from the spill area;
- Take action to stop or minimize the spill; such as shutting down equipment,
- Notify appropriate response teams and authorities;
- Use proper PPE in handling of the spill;
- If possible, try to stop the leak with appropriate material; and,
- Remove all surrounding materials that can react or compound with the spill.
- Ensure spilled material, containment material and PPE are contained for proper disposal.

In order to mobilize the manpower resources and equipment necessary to cope with a fire or other emergency, a clear chain of authority should be established. The local fire department will take charge of all emergency response activities and dictate the procedures that will be followed for the duration of

the emergency. The fire department will report immediately to the scene of the emergency, assess the seriousness of the situation, and direct whatever efforts are necessary until the emergency response units arrive. All project personnel will be instructed on proper emergency response procedures and locations of emergency telephone numbers. If an emergency occurs, including but not limited to fire, explosion or significant release of fuel, all heavy equipment will be shut down and all personnel will evacuate the work areas and assemble at an evacuation meeting point.

The emergency responders will give directions for implementing whatever actions are necessary. If traffic control is necessary, as in the event of a fire or explosion, a project team member, who has been trained in these procedures and designated at the Site safety meeting, will take over these duties until local police and fire fighters arrive. Any future amendments to the Contingency Plan will be included in this section.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the soil cover system, and all affected site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria.
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Quarterly monitoring of the performance of the chemical oxidant treatment program through groundwater sampling will be conducted while chemical oxidant treatment continues and for up to eight additional quarters after the treatment program has been completed. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in below and outlined in detail in Sections 3.2 and 3.3 below.

Monitoring/Inspection Schedule

Monitoring Program	**Frequency***	**Matrix**	**Analysis**
SSDS	at system start-up and system re-start	Soil Vapor	pressure/vacuum readings
SSDS	Annual	Soil Vapor	Inspection of system components and test alarm function
Composite Cover	Annual	Soil	Visual Inspection of concrete, asphalt caps and soil cover
Groundwater Performance Monitoring	Quarterly	Groundwater	VOCs (EPA Method 8260)
Monitoring Well Condition	Quarterly	Groundwater	Visual Inspection

* *The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH*

3.2 COMPOSITE COVER SYSTEM MONITORING

The composite cover system, including the concrete building slabs, concrete parking garage slabs and concrete entry ramps will be monitored to document existing conditions and ensure that no penetrations or damage has occurred which will affect cover system integrity. The cover system is in place to prevent human exposure to remaining soil/fill above unrestricted SCOs at Site. The cover system consists of impervious surfaces such as the concrete building slabs, concrete parking garage slabs and concrete entry ramps. The cover system will be inspected at a minimum of once a year using the checklist included in **Appendix G**. The status, including the existing condition and evidence of

breaching will be observed and recorded. The location of the various types of cover systems is illustrated in **Figure 8**.

3.3 MEDIA MONITORING PROGRAM

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. The network of monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the site. The network of on-site wells has been designed based on the following criteria:

- The pattern of groundwater flow from the west area of the site to the east. (See **Figure 4**);
- Provide downgradient coverage of the chemical injection well network;
- The concentration distribution of VOCs in groundwater across the site (**Figure 9**); and
- To provide coverage of upgradient areas, downgradient areas and former source areas as previously defined.

The monitoring well network consists of ten wells including three upgradient wells located along the west property line, three interior area wells downgradient of the source area to monitor the performance of the chemical injections and four wells located at the downgradient (east) property line.

All monitoring wells were constructed of 1-inch pvc with a 15-foot 0.010 screened section set with approximately 5 feet above and 10 feet below the water table. A No. 00 morie gravel pack was placed around the screen to a depth of approximately 1 foot above the screen followed by a 1 foot hydrated bentonite pellet seal. The wells are completed at the surface with a locking compression-style cap and an 8-inch bolt down manhole cover.

The locations of the injection points and monitoring wells are shown both Figure 6 and **Figure 10**. Well construction logs are included in **Attachment E**.

Groundwater samples will be collected from the ten monitoring wells on a quarterly basis. Changes in the sampling frequency or number and location of wells included in the program will not be made without written approval from NYSDEC. The SMP will be modified to reflect changes in sampling

plans approved by NYSDEC. Deliverables for the groundwater-monitoring program are specified in Section 3.6 below.

The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC. Deliverables for the groundwater monitoring program are specified in Section 3.6 below.

3.3.1.1 Sampling Protocol

All well sampling activities will be recorded in a field book and a groundwater-sampling log presented in **Attachment F**. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network. This should include a description of:

- Well gauging;
- Well purging;
- Sampling methodology;
- Analytical methodology:
    - Lab certification;
    - Analytical methods;
    - Analytes.

Groundwater samples will be collected using a peristaltic pump or check valve and oscillation method and dedicated polyethylene tubing in accordance with the following:

- Record pump make & model on sampling form.
- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan
- Inspect each well for any damage or evidence of tampering and note condition in field logbook.
- Remove the well cap.
- Lay out plastic sheeting and place the monitoring, purging and sampling equipment on the sheeting.
- To avoid cross-contamination, do not let any downhole equipment touch the ground.
- A synoptic water level measurement round should be performed (in the shortest possible time) before any purging and sampling activities begin. Measure and record the depth to water using a water level meter or interface probe to the nearest 0.01 ft. Record the measurement in the

field logbook. Do not measure the depth to the bottom of the well at this time (to avoid disturbing any sediment that may have accumulated). Obtain depth to bottom information from installation information in the field logbook or soil boring logs.

- Collect samples in order from wells with lowest contaminant concentration to highest concentration.
- Fit the polyethylene tubing with a check valve, connect the tubing to the peristaltic pump and lower the tubing into the well to approximately the middle of the screen. Tubing should be a minimum of 2 feet above the bottom of the well as this may cause mobilization of any sediment present in the bottom of the well.
- Start the pump at its lowest speed setting and slowly increase the speed until discharge occurs. Check water level. Adjust pump speed until there is little or no water level drawdown (less than 0.3 feet). If the minimal drawdown that can be achieved exceeds 0.3 feet but remains stable, continue purging until indicator field parameters stabilize.
- There should be at least 1 foot of water over the end of the tubing so there is no risk of entrapment of air in the sample. Pumping rates should, if needed, and reduced to the minimum capabilities of the pump to avoid purging the well dry. However, if the recharge rate of the well is very low and the well is purged dry, then wait until the well has recharged to a sufficient level and collect the appropriate volume of sample. During well purging, monitor indicator field parameters (turbidity, temperature and pH) every three to five minutes until the parameters stabilize.
- VOC samples should be collected first and directly into pre-preserved sample containers. Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.
- Use pre-preserved 40 ml glass vials and non-acidified 100 ml nalgene bottles as provided by the contract laboratory. Fill the VOA vials first, and then fill the remaining containers for persulfate and ferrous iron analysis. Fill each container with sample to just overflowing so that no air bubbles are entrapped inside. Fill all sample bottles by allowing the pump discharge to flow gently down the inside of the bottle with minimal turbulence. Cap each bottle as it is filled.
- Label the samples, and record them on the chain of custody form. Place immediately into a cooler for shipment and maintain at 4^{o}C.

- Remove the tubing from the well. The polyethylene tubing must either be dedicated to each well or discarded. If dedicated the tubing should be placed in a large plastic garbage bag, sealed, and labeled with the appropriate well identification number.
- Close and lock the well.
- Decontaminate pump either by changing the surgical pump tubing between wells or as follows:
    - Flush the equipment/pump with potable water.
    - Flush with non-phosphate detergent solution. If the solution is recycled, the solution must be changed periodically.
    - Flush with potable or distilled/deionized water to remove all of the detergent solution. If the water is recycled, the water must be changed periodically.
    - Flush with isopropyl alcohol (pesticide grade). If equipment blank data from the previous sampling event show that the level of contaminants is insignificant, then this step may be skipped.
    - Flush with distilled/deionized water. The final water rinse must not be recycled.

Samples will be collected in pre-cleaned laboratory supplied glassware, stored in a cooler with ice and submitted to Phoenix Environmental Laboratories, Inc., a New York State ELAP certified environmental laboratory (NY Lab ID # 11.01) or other ELAP certified laboratory. All purging and sampling data will be recorded on dedicated well sampling forms.

3.3.1.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells

that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.4 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (**Attachment G**). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that site records are up to date.

3.5 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site (**Attachment H**). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.

  - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice or "cold-paks" to maintain a temperature of 4^{o}C.

Dedicated disposable sampling materials will be used for both soil and groundwater samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every eight samples collected.

Decontamination of non-dedicated sampling equipment will consist of the following:

  - Flush the equipment/pump with potable water.
  - Flush with non-phosphate detergent solution. If the solution is recycled, the solution must be changed periodically.
  - Flush with potable or distilled/deionized water to remove all of the detergent solution. If the water is recycled, the water must be changed periodically.
  - Flush with isopropyl alcohol (pesticide grade). If equipment blank data from the previous sampling event show that the level of contaminants is insignificant, then this step may be skipped.

- Flush with distilled/deionized water. The final water rinse must not be recycled.

Field blanks, if used, will be prepared by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers. Trip blanks will accompany samples each time they are transported to the laboratory. Matrix spike and matrix spike duplicates (MS/MSD) will be collected at the rate of one per 20 samples submitted to the laboratory. Laboratory reports will be upgradeable to ASP category B deliverables for use in the preparation of a data usability report (DUSR). In accordance with DER-10, the final round of confirmatory (post remediation) samples will include Category B laboratory data deliverables and a Data Usability Summary Report will be prepared by a party independent from the laboratory performing the analysis.

3.6 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter report will also be prepared subsequent to each quarterly groundwater sampling event. The report (or letter) will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and

- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized below.

Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
SSDS Inspection	Annual
Composite Cover System Inspection	Annual
Groundwater Sampling	Quarterly

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

This Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the SSD system;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSD systems are operated and maintained.

Information on non-mechanical Engineering Controls (i.e. soil cover system) is provided in Section 3 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

4.2.1 SSD System Scope

The SSD systems at the site will operate 24/7 with no maintenance requirements. Periodic annual inspections will be performed to assure that the system is continuing to operate properly. Each fan will be fitted with a pressure switch which will activate a visual and audible alarm if the fan stops operating.

4.2.2 SSD System Start-Up and Testing

The start-up test procedure will first consist of a visual inspection to make sure all of the system components are installed properly. Following this, each system will be started individually and checked for leaks and adequate pressure at the discharge stack. Power to each blower will then be cut in sequence to verify that each warning alarm is functioning properly. Negative pressure readings will be taken at several locations beneath the slab with a digital manometer (see **Figure 11**). The system testing described above will be conducted if, in the course of the SSD system lifetime, significant

changes are made to the system, and the system restarted. The results of the start-up testing will be submitted to the NYDEC and documented in the Periodic Review Report.

4.2.3 SSD System Operation: Non-Routine Equipment Maintenance

The SSD systems are maintenance free. The fans should only stop operating in the event of a power outage or a severe blockage. The visual/audible alarm is triggered when negative pressure is not maintained in the vertical vent system piping. In the event that one of the system alarms trips, the owner, owner's representative or Environmental Business Consultants should be contacted for repairs. If the system cannot be returned to immediate operation or if the system has or will remain off for more than 48 hours, the DEC project manager will be notified to determine if further actions are necessary to evaluate impacts to indoor air. Details regarding the extent of repairs, system downtime and subsequent testing will be submitted to the NYDEC and documented in the Periodic Review Report.

4.2.4 Chemical Oxidant Treatment Scope

The remedial plan for the Site includes the injection of a chemical oxidant solution to address affected groundwater and residual petroleum VOC contamination in soil at and below the water table. Chemical oxidant injection is intended to significantly reduce the CVOCs and PVOCs in the high concentration areas, and thereby accelerate improvements in groundwater quality.

The area of injection is within, and downgradient of, the former UST area which was the primary source of PVOC contamination at the Site. Injections at this location will deliver oxidant through residual soil contamination in this area, allowing it to flow east with groundwater treating both CVOC and PVOC constituents.

4.2.5 Chemical Oxidant Treatment Procedure

The oxidant selected for this project is high pH-activated sodium persulfate. Sodium persulfate is a robust oxidant which has a long residence time (anion lifetime) in the subsurface. Persulfate activation through high pH provides fast contaminant reaction kinetics capable of destroying a wide range of organics including the PVOCs and CVOCs present at the Site.

Sodium persulfate will be delivered to the site as a dry powder which will be mixed with water on-site to provide a 20% solution. Sodium hydroxide (NaOH) will be delivered to the site as a 25% solution

and added to the persulfate solution at a rate of 0.4 gallons of 25% NaOH solution per gallon of 20% persulfate solution.

The initial injection consisted of approximately 100 gallons of activated persulfate solution per injection point. The need for subsequent injections and the number and location of injection points to be utilized for subsequent injections will be determined following the collection and analysis of performance monitoring samples.

The volume of solution and the number and location of injections will be based on the results of performance sampling and modified to concentrate on remaining areas with VOC concentrations above cleanup goals.

Chemical oxidant treatment will continue as needed to achieve further significant reduction of VOCs in groundwater at the site. The decision to perform subsequent oxidant applications will be based on performance sampling results and will be made in concurrence with the NYSDEC project manager.

4.3 ENGINEERING CONTROL SYSTEM PERFORMANCE MONITORING

An SSD system has been installed to mitigate possible soil vapor intrusion into occupied areas of the new building. Effectiveness of the SSD system will be tested by collecting pressure readings at several locations beneath the slab with a digital manometer. Negative pressure readings below the slab of the occupied portions of the building indicates sub-slab soil vapor is being drawn to the SSD system piping. System designs are described in the Engineering and Institutional Control Plan**.** Detailed specifications of the SSD system, and an as-built drawing detailing the SSD system are provided **Attachment C**.

4.3.1 SSDS Monitoring Schedule

The components of the SSDS system will be inspected by a qualified environmental professional on an annual basis to assure that the system is functioning properly.

Inspection frequency is subject to change by NYSDEC and NYSDOH. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSD system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the SSD system are specified later in this Plan.

4.3.2 SSDS General Equipment Monitoring

A visual inspection of the complete system will be conducted during the monitoring event. SSD system components to be monitored include, but are not limited to, the following:

- Vacuum blower; and,
- General system piping.
- Vacuum gauges.
- Control switches and system alarms.

A complete list of components to be checked is provided in the Inspection Checklist, presented in **Attachment G**. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan are required immediately, and the SSD system restarted.

4.3.3 SSDS System Monitoring Devices and Alarms

The SSD system has a warning device to indicate that the system is not operating properly. Each of the three systems has its own device. The devices are located at each system riser pipe along the east wall within the parking garage area of the building. In the event that the warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SSD system restarted. It will be the responsibility of owner to report SSDS alarms to the environmental consultant - Environmental Business Consultants - (631) 504-6000. Operational problems will be noted in the quarterly monitoring report and in the annual Site Management Report.

4.3.4 SSDS Sampling Event Protocol

Sub-slab vacuum readings will be collected from at least 3 locations (SS1-SS3 shown on **Figure 11**) within each building upon system start up (or re-start) in accordance with USEPA and NYSDOH guidance.

Vacuum sampling locations can be as simple as a hole drilled through the slab and vapor barrier to allow access to a 1/4 to 3/8 inch sampling tube which is sealed to the slab. The tube is then connected to a digital manometer to demonstrate negative pressure. Once the reading is taken, sampling ports should be permanently sealed to prevent preferential pathway for vapor intrusion. If the system defaults and is required to be re-started, the sampling ports will be re-installed (inserted in the same location), sampled and sealed in the same manner.

4.4 MAINTENANCE AND PERFORMANCE MONITORING REPORTING REQUIREMENTS

Maintenance reports and any other information generated during regular operations at the site will be kept on-file on-site. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

Checklists or forms (see **Attachment G**) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.4.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms which are contained in **Attachment G**. Additionally, a general site-wide inspection form will be completed during the site-wide inspection (see **Attachment G**). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and FER.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State (depending on the need to evaluate engineering

systems) will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my 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 practice]; and
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] for the site; and
- No new information has come to the remedial party's attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid.

Every five years the following certification will be added:

- The assumptions made in the qualitative exposure assessment remain valid.

The signed certification will be included in the Periodic Review Report described below.

5.3 PERIODIC REVIEW REPORT

A Periodic Review Report will be submitted to the Department every year, beginning eighteen months after the Certificate of Completion is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in **Attachment I** (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site; Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- 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;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

- A performance summary for oxidant injections performed at the site during the calendar year, including information such as:
    - The dates and amounts of oxidant added
    - Comments, conclusions, and recommendations based on data evaluation.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Regional Office in which the site is located, and in electronic format to NYSDEC Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 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 the 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 measures plan until it is approved by the NYSDEC.

EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination (excavation 15 or more below the surface), the site owner or their representative will notify the Department. Currently, this notification will be made to:

Jane O'Connell

Regional Hazardous Waste Remediation Engineer

NYSDEC Region 2

47-40 21st Street

Long Island City, NY 11101

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix D of this document,
- Identification of disposal facilities for potential waste streams,

- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

B-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

The qualified environmental professional will be responsible for ensuring that all outbound trucks will be cleaned as needed before leaving the site until the activities performed under this section are complete. Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with covers. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be inspected prior to leaving the site. Trucks will be dry brushed when possible to remove collected soil.

Truck transport routes are as follows: Head east on Jamaica Avenue to the Van Wyck Expressway. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site

queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; (g) community input.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in **Table 1**. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the RAWP. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), as shown on **Figure 8**, this will constitute a modification of the cover element of the remedy and the

upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

B-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in **Table 1**. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Fill and stone materials which can be certified as virgin mined material will not require testing assuming adequate documentation is obtained and submitted to the NYSDEC for approval. Under no circumstances will fill materials be imported to the site without prior approval from the NYSDEC Project Manager. If sufficient documentation is not obtained, fill materials will be tested at the in accordance with NYSDEC CP51 recommended frequency. Sample analysis will include TCL VOCs, TCL SVOCs, PCBs, Pesticides and TAL metals. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC.

Trucks entering the site with imported soils will be securely covered with covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

B-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

B-13 COMMUNITY AIR MONITORING PLAN

The CAMP provides measures for protection for the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in the remedial work) from potential airborne contaminant releases resulting from remedial activities at construction sites.

The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that the remedial work did not spread contamination off-site through the air. The primary concerns for this site are nuisance odors and dust particulates.

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report. The complete CAMP developed for this site is included in **Attachment D** of the project RAWP.

B-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous

soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

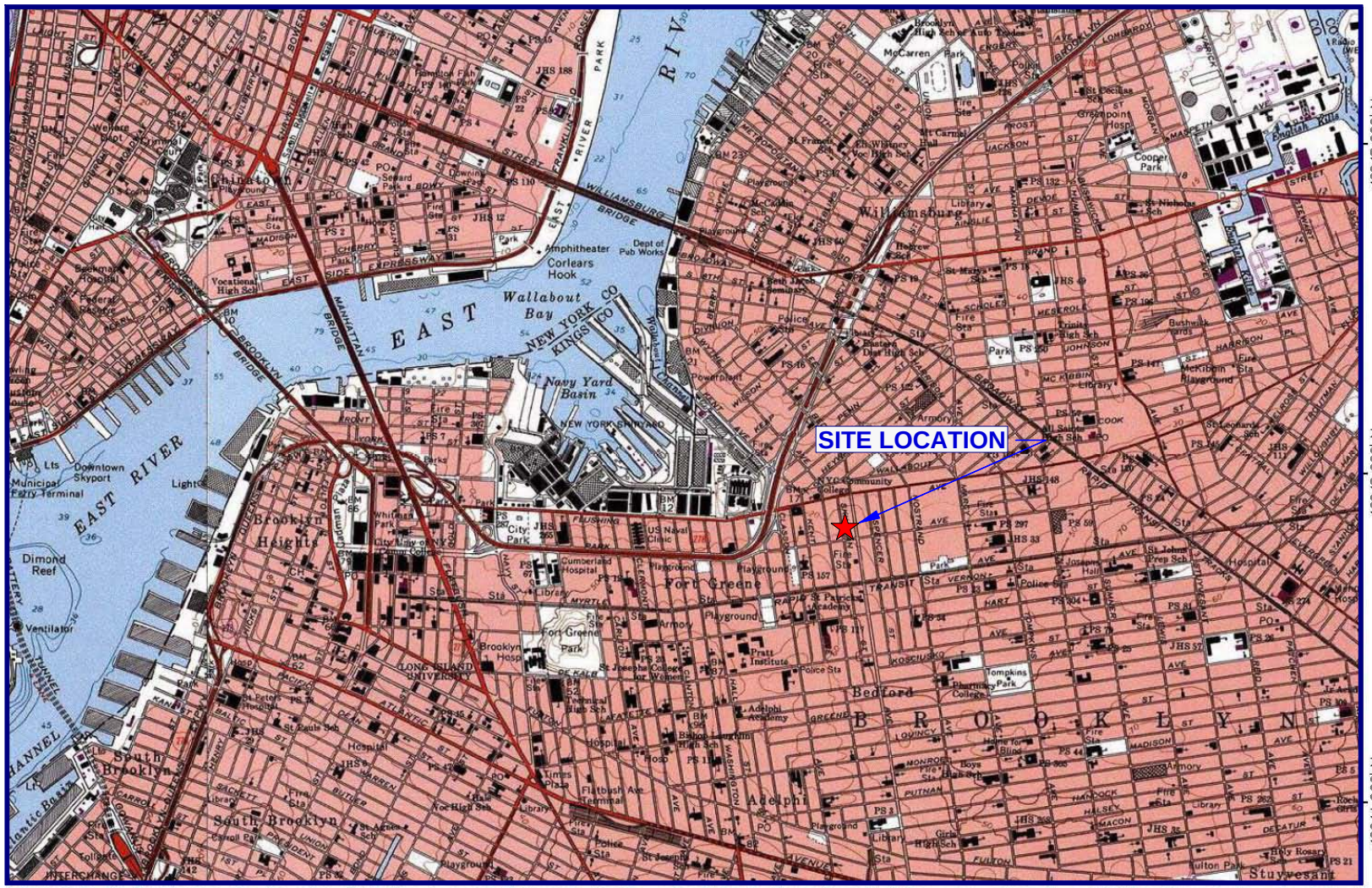
- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all excavation work.

A plan will be developed and utilized by the contractor for all excavation work to ensure compliance with local noise control ordinances.

FIGURES



USGS Brooklyn Quadrangle 1995, Contour Interval = 10 feet

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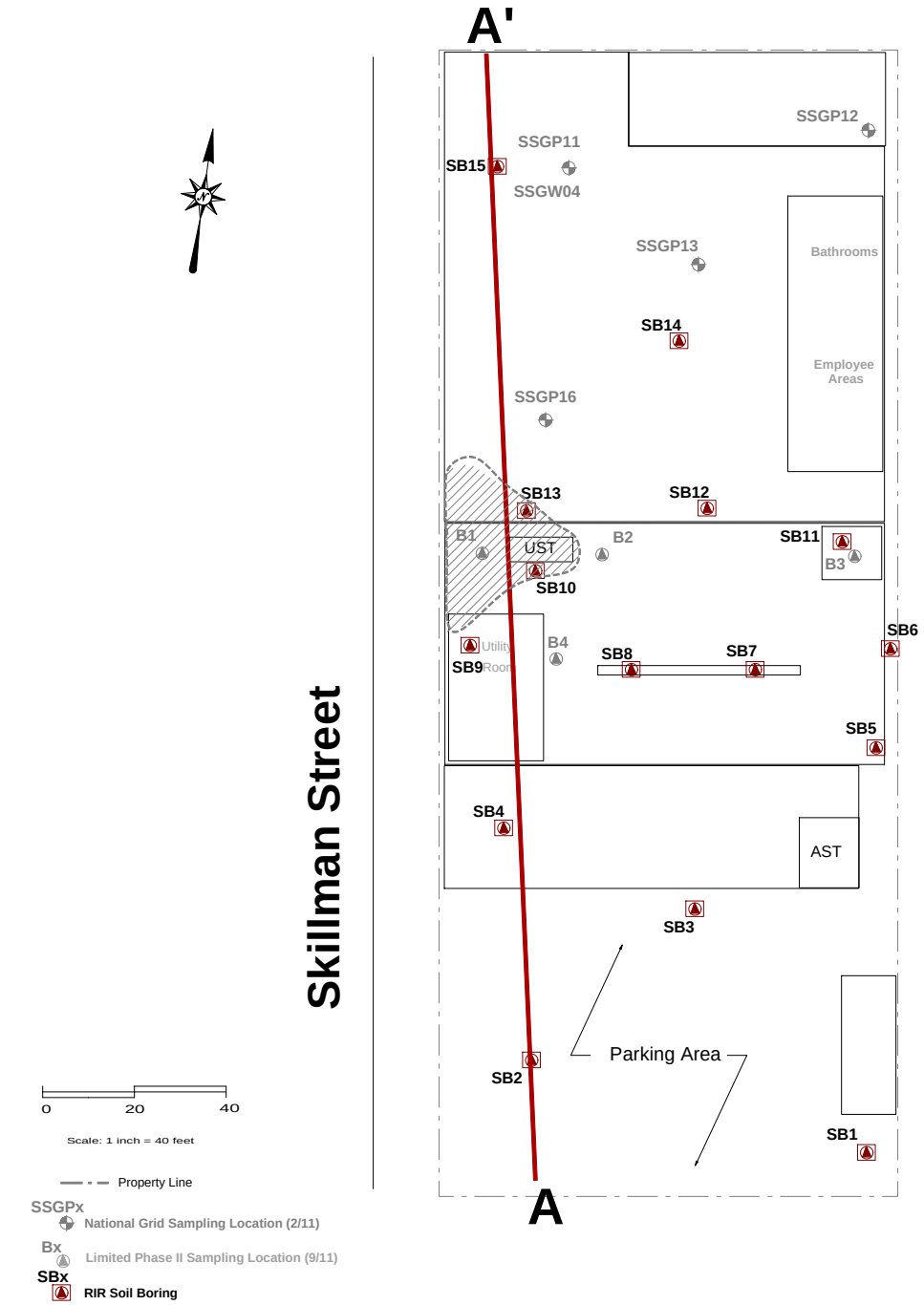
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD. RIDGE. NY 11961
Phone 631.504.6000
Fax 631.924.2780

FORMER EAST COAST INDUSTRIAL UNIFORMS SITE
39 SKILLMAN AVENUE, BROOKLYN, NY

FIGURE 1 SITE LOCATION MAP



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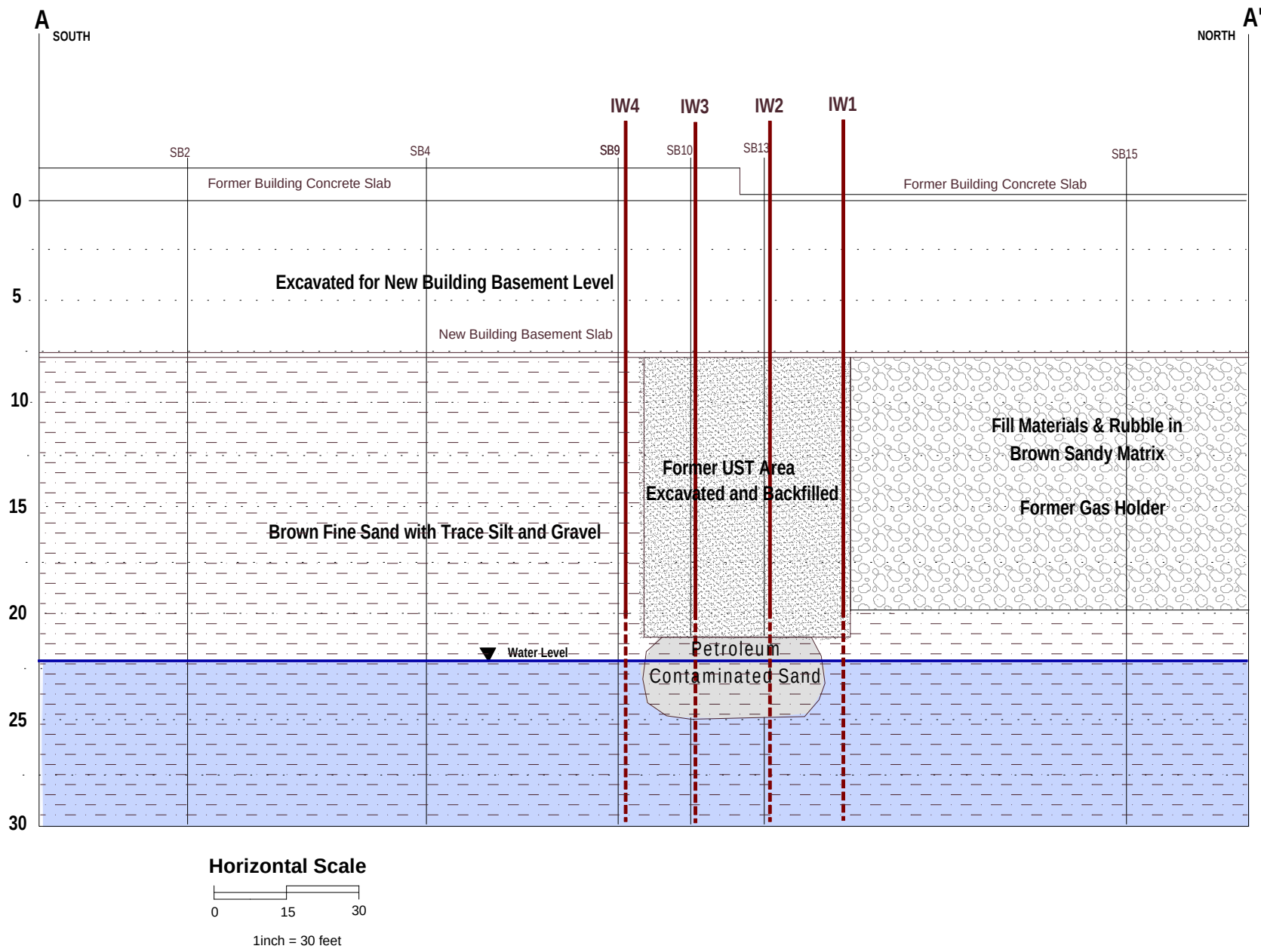
Fax 631. 924 .2870

FORMER EAST COAST INDUSTRIAL UNIFORM SITE
39 SKILLMAN STREET, BROOKLYN, NY

FIGURE 2 SITE PLAN



Horizontal Scale

0 15 30

1inch = 30 feet

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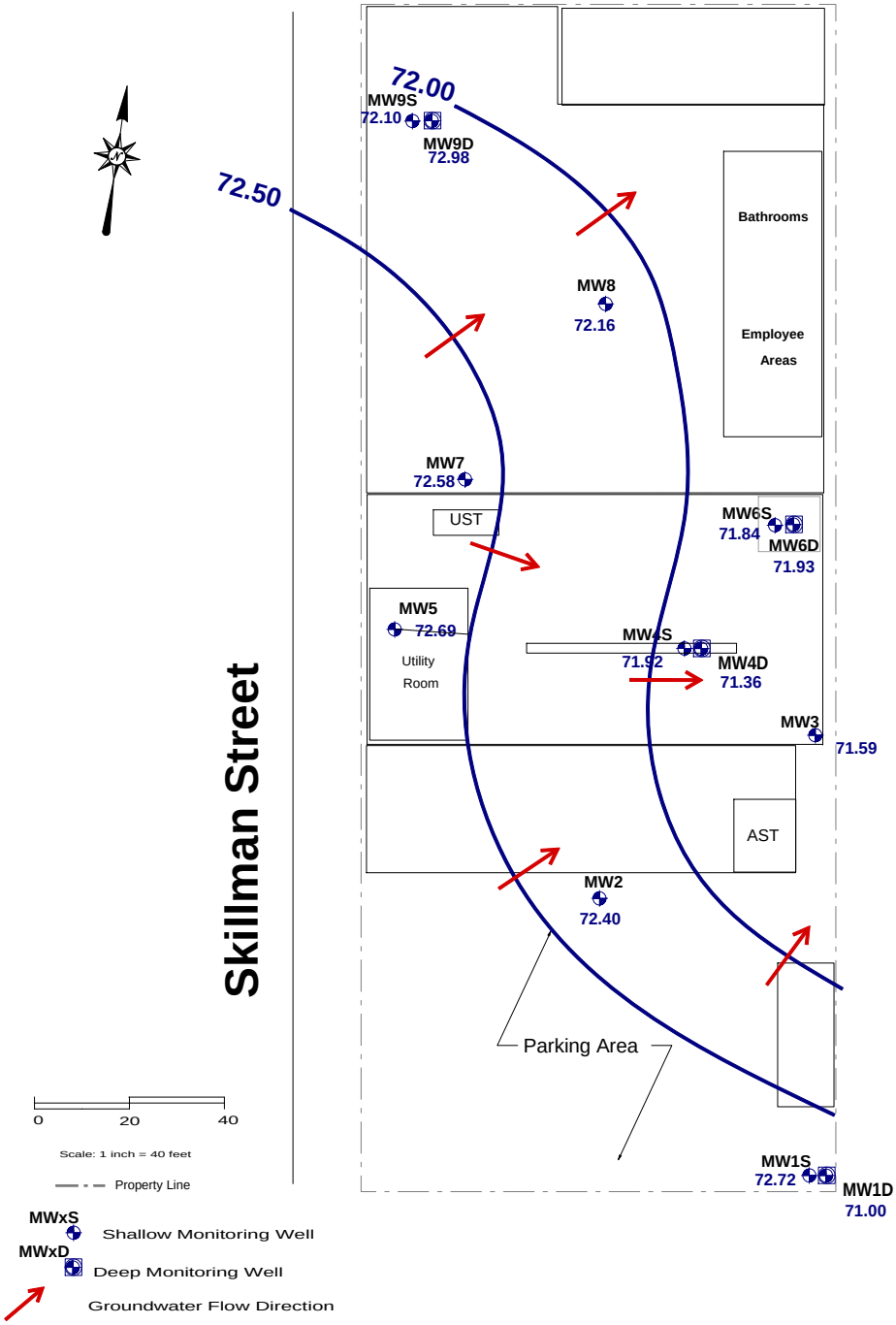
Fax 631. 924 .2870

Former East Coast Industrial Uniform Site
39 Skillman Street, Brooklyn, NY

FIGURE 3 Geologic Cross Section



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39 Skillman Street, Brooklyn, NY

FIGURE 4 Groundwater Elevation Map

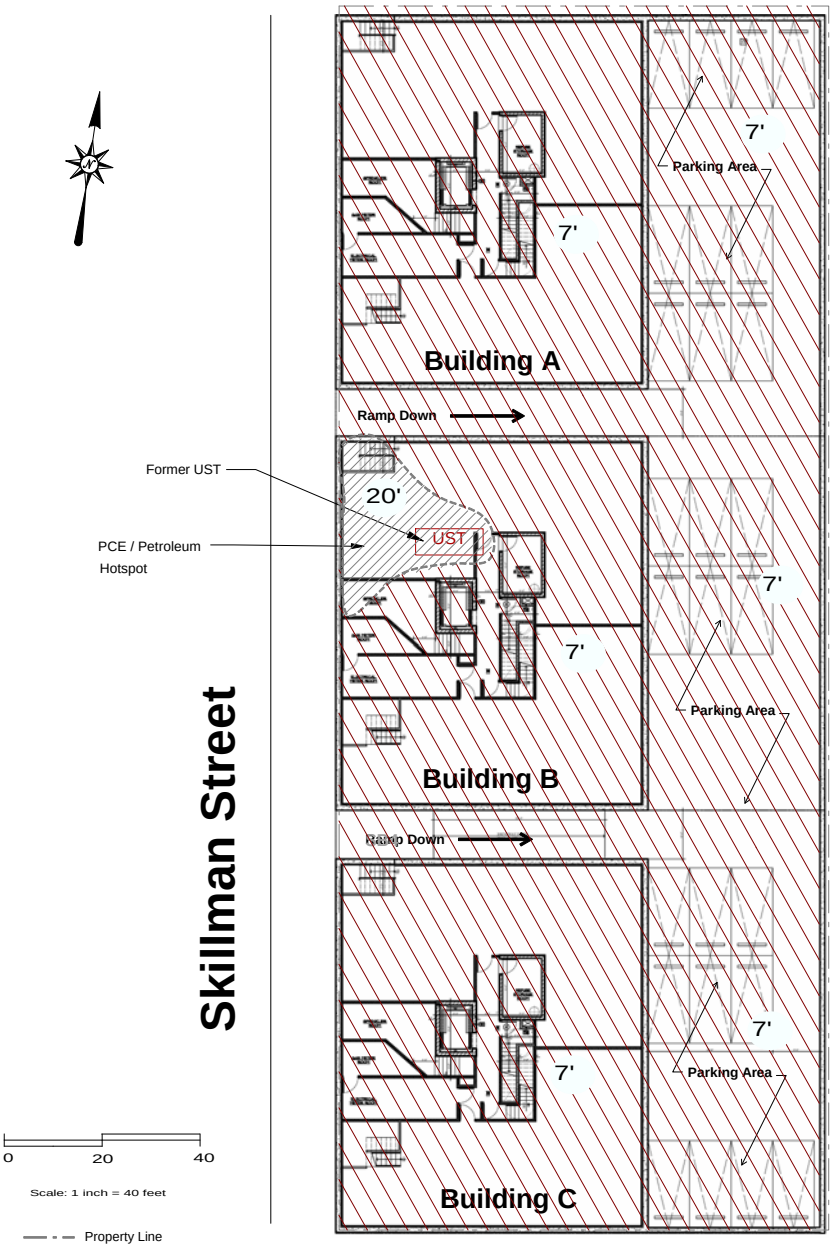

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FIGURE 5 Soil Excavation and Hotspot Locations

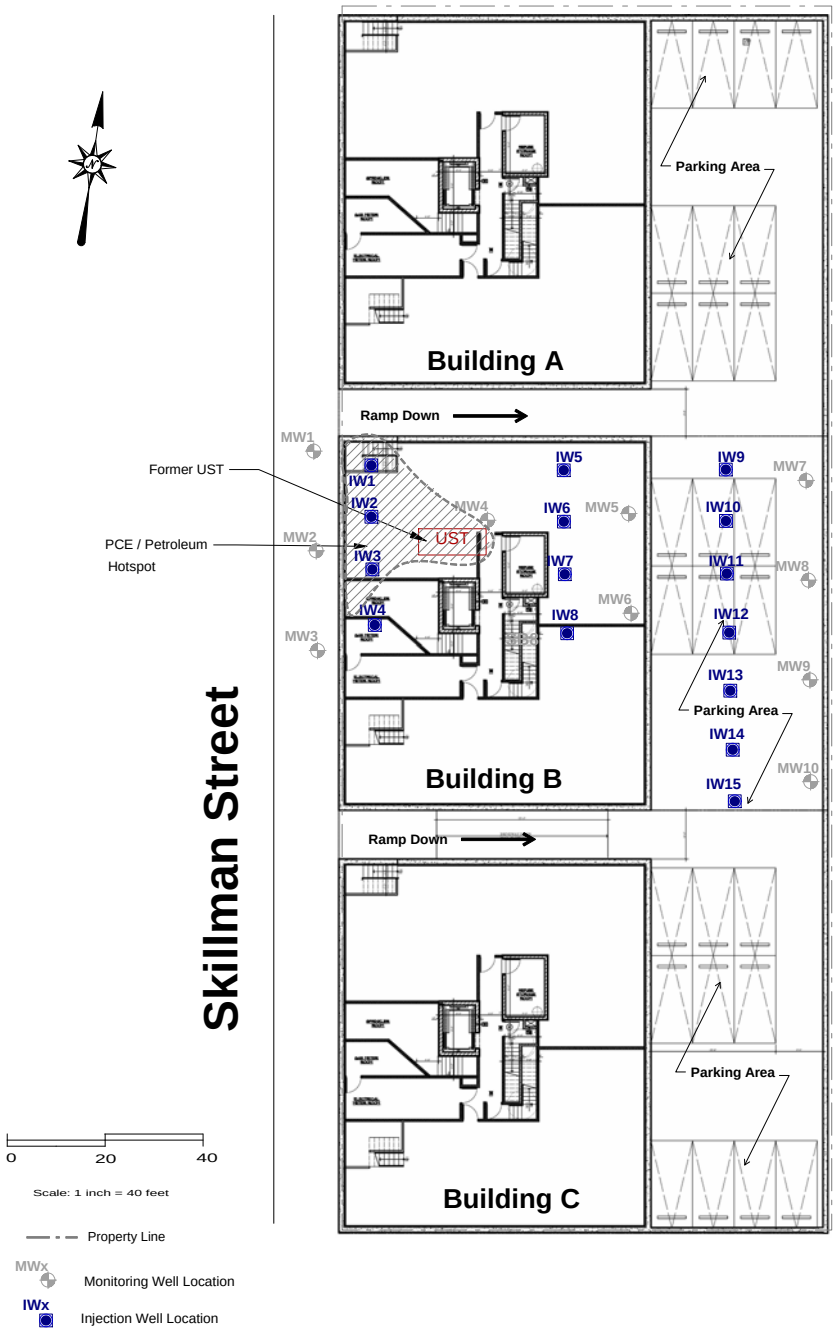

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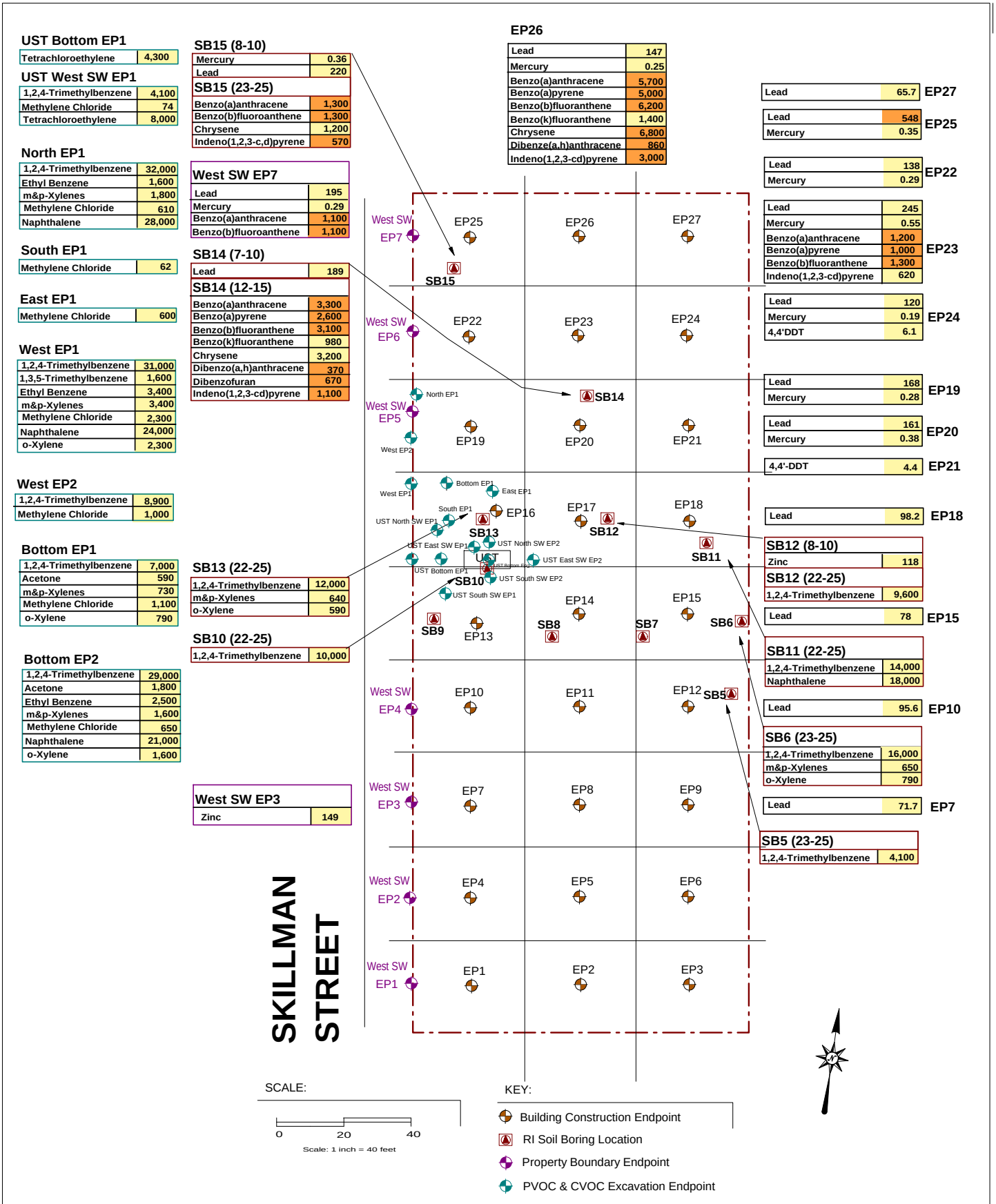
FIGURE 6 Injection Well Locations



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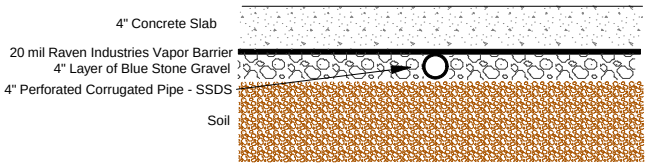
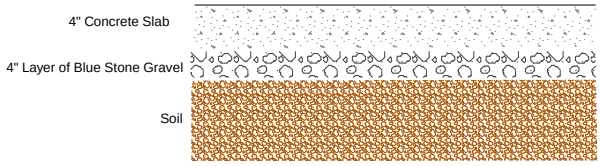
FORMER EAST COAST INDUSTRIAL UNIFORM SITE
39 SKILLMAN STREET, BROOKLYN, NY

FIGURE 7 SOIL EXCEEDENCES MAP

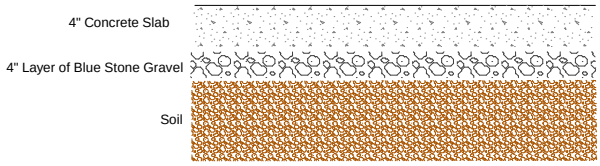
Building Slab Detail



Parking Area Detail



Ramp Detail



MWx

4" Concrete Building Slab

4" Concrete Parking Garage Slab

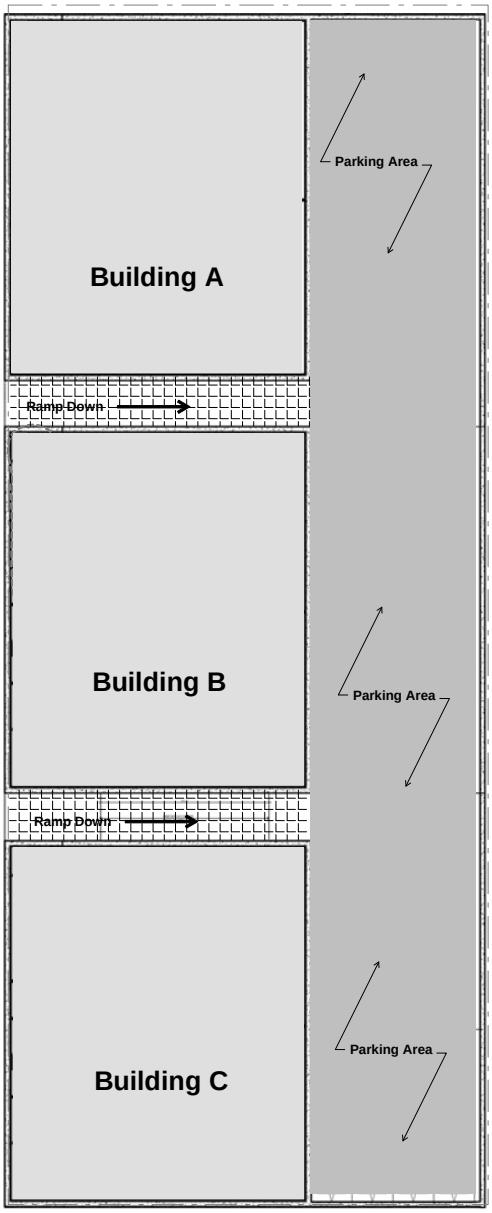
4" Concrete Entry Ramp

0 20 40

Scale: 1 inch = 40 feet

Property Line

Skillman Street



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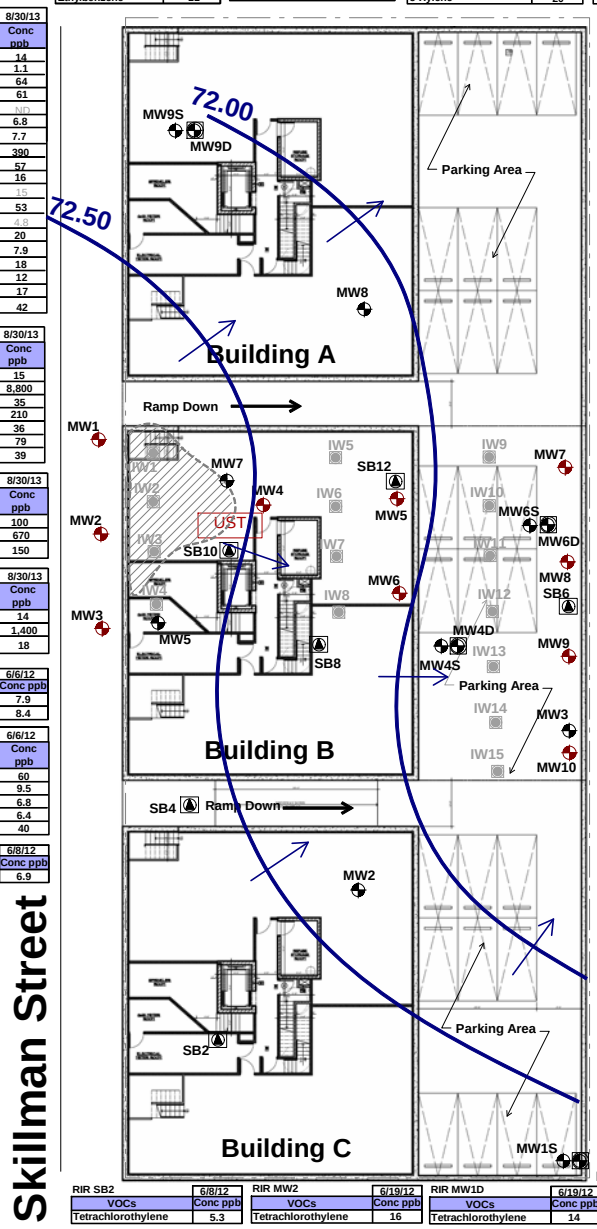
Former East Coast Industrial Uniform Site
39 Skillman Street, Brooklyn, NY

FIGURE 8 Location of Cover System Types



RIR MW9S	6/19/12
VOCs	Conc ppb
Benzene	5.8

RIR MW9D	6/19/12
VOCs	Conc ppb
Benzene	23
Chloroform	8.4
Ethylbenzene	11

RIR MW8	6/19/12
VOCs	Conc ppb
cis-1,2-Dichloroethene	24
Tetrachloroethylene	15
Trichloroethylene	53

RIR SB6	6/6/12
VOC	Conc ppb
1,2,4-Trimethylbenzene	110
1,3,5-Trimethylbenzene	27
Ethylbenzene	35
Isopropylbenzene	10
m&p-Xylene	18
n-Butylbenzene	5.6
n-Propylbenzene	16
o-Xylene	20

RIR MW4S	6/19/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	7.1
cis-1,2-Dichloroethene	6.4

RIR MW4D	6/19/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	5.8
Benzene	1.7

MW4	5/14/13	5/30/13	7/3/13	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb	Conc ppb	Conc ppb
1,2,4-Trimethylbenzene	17	12	22	16	14
1,2-Dichloroethane	ND	0.66	1.1	ND	1.1
Acetone	160	88	140	96	64
Benzene	4.3	9.3	42	62	61
Bromomethane	4.4	11	9.1	3.1	ND
Chloroethane	5	9.5	10	7.3	6.8
Chloromethane	130	120	63	33	7.7
cis-1,2-Dichloroethene	5.1	11	18	62	390
Ethylbenzene	15	43	56	47	57
Isopropylbenzene	7.1	13	19	14	16
Methyl Ethyl Ketone	95	36	25	16	15
Naphthalene	53	45	80	62	53
n-butylbenzene	5.5	4.9	8.1	4.9	4.8
n-propylbenzene	11	18	28	19	20
sec-butylbenzene	6.5	7.2	11	7.5	7.9
Tetrachloroethylene	1.8	4.2	4.2	5.3	18
trans-1,2-Dichloroethene	1.1	4.9	4.9	6	12
Trichloroethene	0.92	2.2	2.2	2.3	17
Vinyl Chloride	ND	1.6	4.3	13	42

RIR MW7	6/19/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	59
1,3,5-Trimethylbenzene	11
cis-1,2-Dichloroethene	54
Ethylbenzene	10
Isopropylbenzene	6
m&p-Xylenes	6.3
n-Butylbenzene	5.1
n-Propylbenzene	9.2
o-Xylene	6.8
Tetrachloroethylene	540
Trichloroethylene	53

RIR MW5	6/19/12
VOCs	Conc ppb
cis-1,2-Dichloroethene	8.5
Tetrachloroethylene	18
Trichloroethylene	15

RIR SB12	6/6/12
VOC	Conc ppb
1,2,4-Trimethylbenzene	63
1,3,5-Trimethylbenzene	6.5
Benzene	27
Ethylbenzene	66
Isopropylbenzene	14
n-Propylbenzene	17

MW1	8/30/13
VOC	Conc ppb
1,2,4-Trimethylbenzene	15
cis-1,2-Dichloroethene	8,800
Naphthalene	35
Tetrachloroethylene	210
trans-1,2-Dichloroethene	36
Trichloroethene	79
Vinyl Chloride	39

MW2	8/30/13
VOC	Conc ppb
cis-1,2-Dichloroethene	100
Tetrachloroethylene	670
Trichloroethene	150

MW3	8/30/13
VOC	Conc ppb
cis-1,2-Dichloroethene	14
Tetrachloroethylene	1,400
Trichloroethene	18

RIR SB8	6/6/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	7.9
Tetrachloroethylene	8.4

RIR SB10	6/6/12
VOC	Conc ppb
1,2,4-Trimethylbenzene	60
1,3,5-Trimethylbenzene	9.5
cis-1,2-Dichloroethene	6.8
n-Propylbenzene	6.4
Tetrachloroethylene	40

RIR SB4	6/8/12
VOCs	Conc ppb
Tetrachlorothylene	6.9

MW5	5/14/13	5/30/13	7/3/13	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb	Conc ppb	Conc ppb
1,2,4-Trimethylbenzene	16	20	ND	ND	ND
1,2-Dichloroethane	ND	ND	1.4	ND	2.1
1,3,5-Trimethylbenzene	16.1	6.9	ND	ND	ND
Acetone	4.7	28	380	320	730
Benzene	3.1	2.8	4.1	2.6	2
Bromomethane	ND	6.2	30	49	110
Chloroethane	ND	5.8	6.6	8.3	21
Chloromethane	0.58	83	150	270	310
cis-1,2-Dichloroethene	5.4	13	7.6	4.6	37
Ethylbenzene	63	69	12	4.7	7
Isopropylbenzene	21	27	5	2.3	ND
Methyl Ethyl Ketone	ND	ND	56	45	92
Naphthalene	41	2.3	11	13	5.9
n-butylbenzene	13	14	1.8	ND	ND
n-propylbenzene	29	40	5.8	2.6	ND
p-isopropyltoluene	9.8	11	ND	ND	ND
sec-butylbenzene	12	19	3.2	1.7	ND
Tetrachloroethylene	50	36	70	74	57
Trichloroethene	2.1	1.2	4.3	3.4	5.8
Vinyl Chloride	1.5	0.85	ND	ND	2.3

MW6	5/14/13	5/30/13	7/3/13	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb	Conc ppb	Conc ppb
1,2,4-Trimethylbenzene	11	ND	1.3	ND	ND
cis-1,2-Dichloroethene	11	15	8.7	1.6	5.9
Ethylbenzene	7.2	0.26	5.9	ND	3.2
Isopropylbenzene	5.4	0.45	3.9	ND	2.7
Naphthalene	42	0.35	47	ND	ND
n-propylbenzene	7.1	0.47	4.4	ND	3.2
sec-butylbenzene	5.3	1.2	3	ND	3.6
Tetrachloroethylene	4	2.7	7.3	4.6	7.3

MW7	7/3/13	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb
Acetone	64	9.4	13
Benzene	18	82	25
Chloromethane	20	2.9	3.3
cis-1,2-Dichloroethene	3.1	15	14
Ethylbenzene	47	35	43
Isopropylbenzene	12	21	19
Naphthalene	5.3	1.2	3
n-propylbenzene	ND	4.6	8.3
sec-butylbenzene	5.5	4	6.1
Tetrachloroethylene	2.3	3	8.4
Trichloroethylene	1	1.8	5.9
Vinyl Chloride	2.2	12	4.7

RIR MW6S	6/19/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	290
1,3,5-Trimethylbenzene	35
cis-1,2-Dichloroethene	5.8
Ethylbenzene	48
Isopropylbenzene	25
m&p-Xylenes	35
n-Butylbenzene	24
n-Propylbenzene	46
o-Xylene	6.3
Tetrachloroethylene	25

RIR MW6D	6/19/12
VOCs	Conc ppb
1,2,4-Trimethylbenzene	5.2
Benzene	2.5
cis-1,2-Dichloroethene	9.5
Tetrachloroethylene	6.8

MW8	5/14/13	7/3/2013	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb	Conc ppb
1,2,4-Trimethylbenzene	5.4	ND	ND	ND
Acetone	3.7	58	17	19
Chloromethane	4.6	19	5.8	ND
cis-1,2-Dichloroethene	8.4	15	13	21
Naphthalene	10	ND	ND	ND
Tetrachloroethylene	150	820	1,700	1,200
Trichloroethylene	4.5	14	13	22

MW9	5/14/13	5/30/13	7/3/13	7/26/13	8/30/13
VOC	Conc ppb	Conc ppb	Conc ppb	Conc ppb	Conc ppb
1,2,4-Trimethylbenzene	ND	ND	28	ND	ND
Chloromethane	140	2.3	1.6	1.7	0.49
Ethylbenzene	1.4	0.35	8.2	1.8	0.91
Isopropylbenzene	5.4	0.45	3.9	ND	2.7
Naphthalene	6.9	1.1	38	5	3.2
o-Xylene	ND	ND	6.7	0.48	0.59

MW10	5/14/13
VOC	Conc ppb
Chloromethane	190

RIR MW3	6/19/12
VOCs	Conc ppb
cis-1,2-Dichloroethene	5.1
n-Propylbenzene	8.1

RIR SB2	6/8/12
VOCs	Conc ppb
Tetrachlorothylene	5.3

RIR MW2	6/19/12
VOCs	Conc ppb
Tetrachlorothylene	16

RIR MW1D	6/19/12
VOCs	Conc ppb
Tetrachlorothylene	14

SCALE:

0 20 40

Scale: 1 inch = 40 feet

KEY:

- Property Line
- MWx — Monitoring Well Location
- IWx — Injection Well Location
- RIR Shallow Monitoring Well
- RIR Deep Monitoring Well
- RIR Soil Boring Location
- Groundwater Flow Direction 6/18/2012

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Former East Coast Industrial Uniform Site

39 Skillman Street, Brooklyn, NY

FIGURE 9 Groundwater Exceedences Map

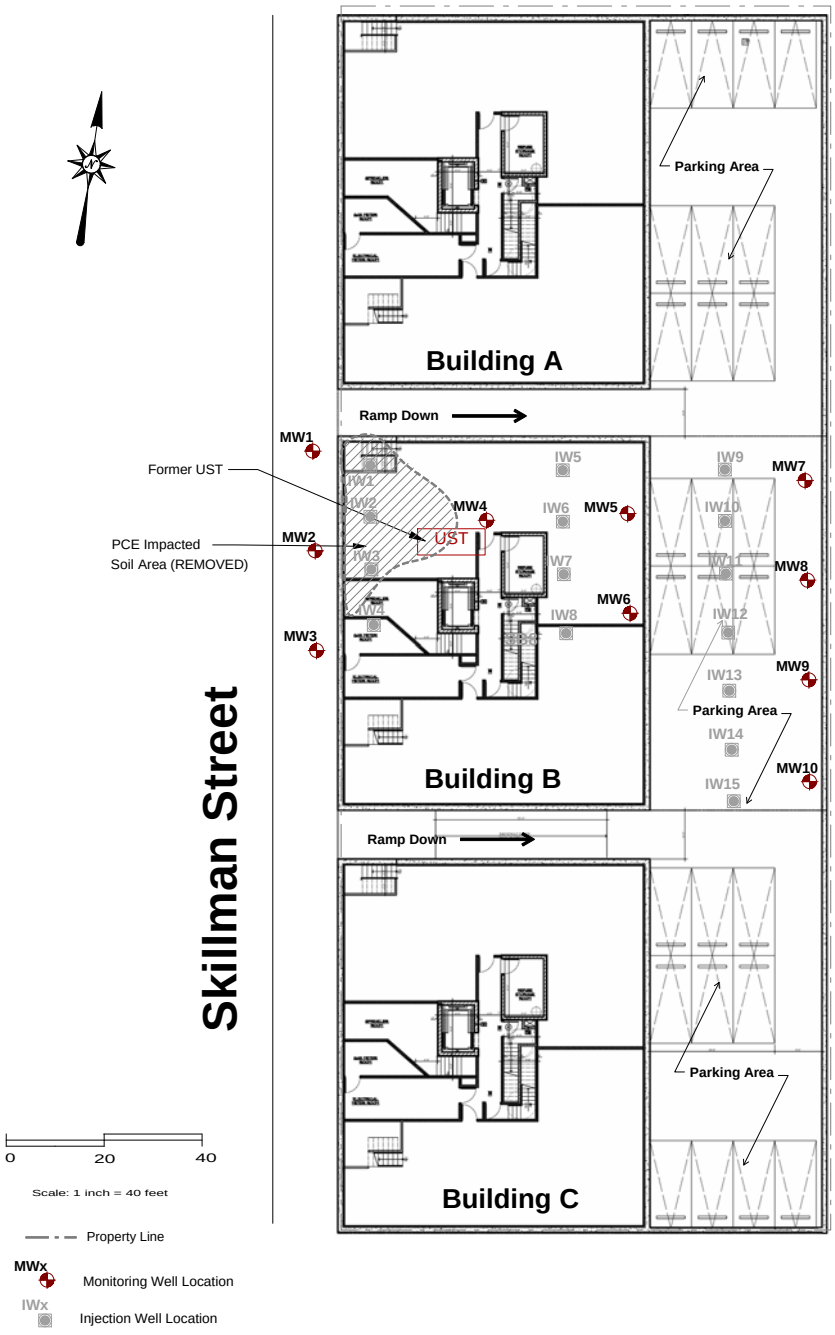

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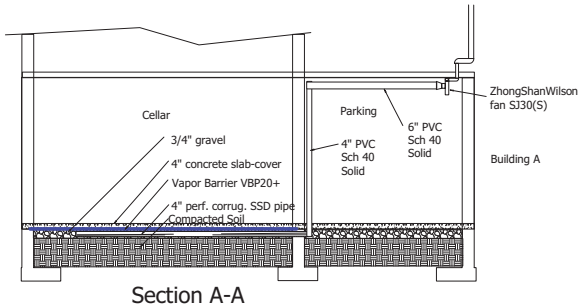
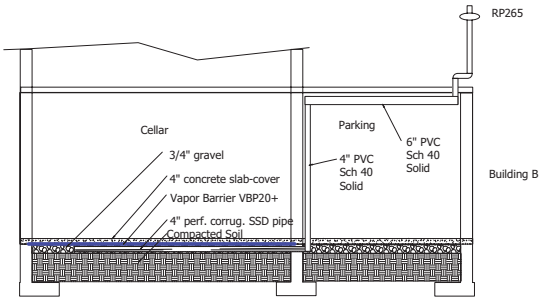
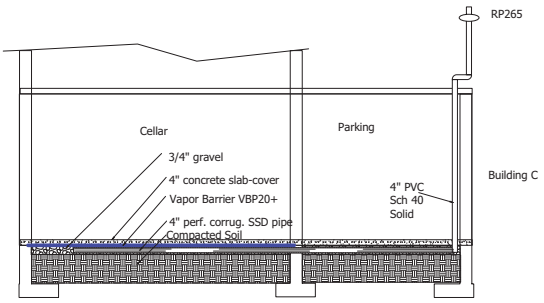
FIGURE 10 Monitoring Well Network



Section A-A

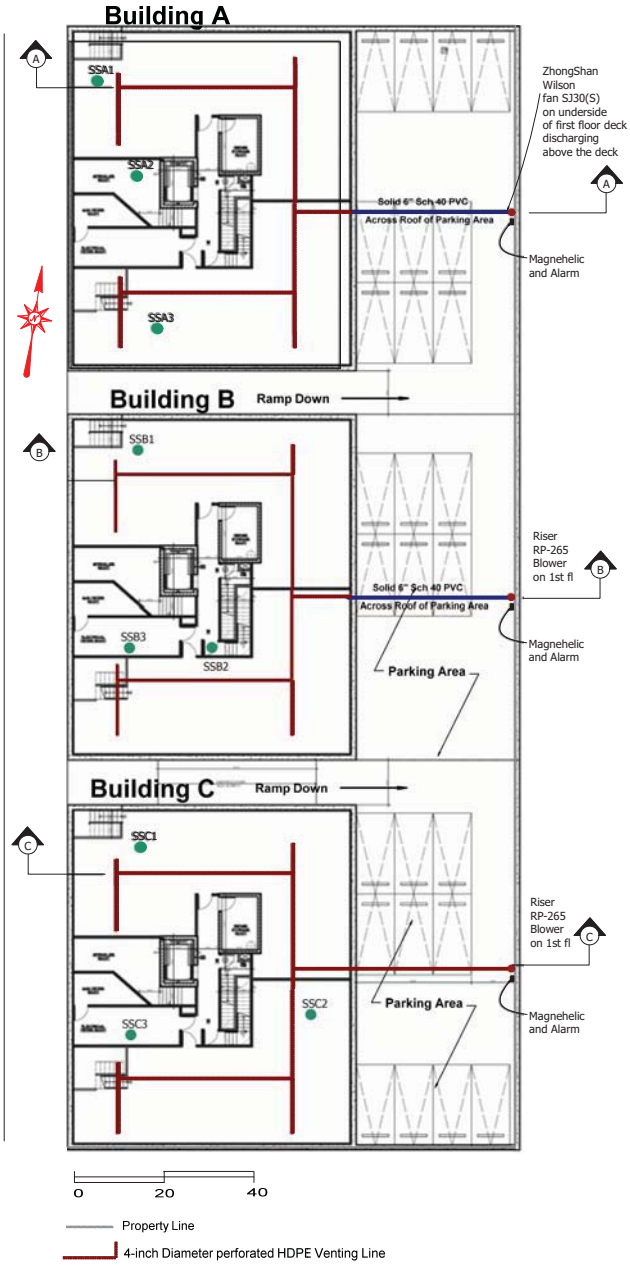


Section B-B



Section C-C

Skillman Street



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FORMER EAST COAST INDUSTRIAL UNIFORM SITE

39 SKILLMAN STREET
BROOKLYN, NY

FIGURE 11 AS BUILT EXTENT OF SUBSLAB DEPRESSURIZATION SYSTEM

12/10/13

TABLES

TABLE 1
Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
METALS							
Arsenic	7440-38 -2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39 -3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41 -7	14	72	590	2,700	10	47
Cadmium	7440-43 -9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent[h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50 -8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92 -1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96 -5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02 -0	140	310	310	10,000 [d]	30	130
Selenium	7782-49 -2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22 -4	36	180	1,500	6,800	2	8.3
Zinc	7440-66 -6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PESTICIDES / PCBs							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136
4,4'-DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71 -9	0.91	4.2	24	47	1.3	2.9
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07 -8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36 -3	1	1	1	25	1	3.2
SEMI-VOLATILES							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b) fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i) perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k) fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h) anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd) pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]

TABLE 1
Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
VOLATILES							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12
Methyl tert-butyl ether	1634-04 -4	62	100[a]	500[b]	1,000[c]	NS	0.93
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5-Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20 -7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm). NS=Not specified. See Technical Support Document (TSD). Footnotes

a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

b The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

c The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

d The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

TABLE 2
FORMER EAST COAST INDUSTRIAL UNIFOMS SITE
Brooklyn, NY
Parameters Detected Above Track 1 Soil Cleanup Objectives

COMPOUND	Range in Exceedances	Frequency of Detection	SB1	SB2	SB3		SB4		SB5				SB6			SB7
			(7-9')	(7-9')	(0-1')	(7-9')	(0-4')	(7-9')	(0-5')	(8-10')	(23-25')	(25-27')	(0-5')	(8-10')	(23-25')	(22-25')
Sample Results in µg/kg																
1,2,4-Trimethylbenzene	1,600 - 14,000	6									4,100				1,600	
Acetone	51 -690	9	53 JS	51 S		52 S		51 JS		51 JS				51 JS		
m&p-Xylenes	640-650	2													650 J	
Methylene Chloride	63-410	11									190 JS	190 JS			410 JS	100 JS
o-Xylenes	590-790	2													790 J	
Sample Results in µg/kg																
4,4-DDE	6-14	3														
4,4-DDT	4.3-55	2							4.3							
Sample Results in mg/kg																
Barium	592	1														
Cadmium	1,260-22,700	2	1,260		22,700											
Copper	65	1			65											
Mercury	0.25-1.55	5			1.55		0.25		1.52				0.42			
Lead	189-1,220	7			263		244		315				1,110			
Zinc	118-555	7			237		181		272				555			

COMPOUND	Range in Exceedances	Frequency of Detection	SB8		SB9	SB10		SB11		SB12			SB13		SB14			SB15	
			(7-10')	(22-25')	(21-24')	(19-21')	(22-25')	(0-1')	(22-25')	(0-1')	(8-10')	(22-25')	(8-10')	(22-25')	(7-10')	(12-15')	(22-25')	(8-10')	(23-25')
Sample Results in µg/kg																			
1,2,4-Trimethylbenzene	1,600 - 14,000	6					10,000		14,000			9,600		12,000					
Acetone	51 -1,300	9	56 S	690 JS													1,300 JS		
m&p-Xylenes	640-650	2												640					
Methylene Chloride	63-410	11		96 JS	63 JS	110 JS	320 JS		310 JS			300 JS	130 JS	140 JS					
Napthalene	18,000	1							18,000										
o-Xylenes	590-790	2												590					
Sample Results in µg/kg																			
Benzo(a)anthracene	1,300-3300	2														3,300			1,300
Benzo(a)pyrene	2,600	1														2,600			
Benzo(b)fluoranthene	1,300-3100	2														3,100			1,300
Benzo(k)fluoranthene	980	1														980			
Chrysene	1,200-3200	2														3,200			1,200
Dibenzo(a,h)anthracene	370	1														370			
Dibenzofuran	670	1														670			
Indeno(1,2,3-cd)pyrene	570-1100	2														1,100			570
Sample Results in µg/kg																			
4,4-DDE	6-14	3						14	6										
4,4-DDT	4.3-55	2						55	23										
Sample Results in mg/kg																			
Barium	592	1						592											
Cadmium	1,260-22,700	2																	
Copper	65	1																	
Mercury	0.25-1.55	5																0.36	
Lead	189-1,220	7						1,220 N		238 N					189 N			220 N	
Zinc	118-555	7						474		234	118								

TABLE 3
FORMER EAST COAST INDUSTRIAL UNIFORMS SITE
Brooklyn, NY
Parameters Detected Above Ambient Water Quality Standards

VOCs / SVOCs

COMPOUND	Range in Detections	MW1D	MW2	MW3	MW4S	MW4D	MW5	MW6S	MW6D	MW7	MW8	MW9S	MW9D	SB2	SB4	SB6	SB8	SB10	SB12
Sample Results in (µg/L)																			
1,2,4-Trimethylbenzene	5.2-290				7.1	5.8		290	5.2	59						110	7.9	60	63
1,3,5-Trimethylbenzene	6.5-35							35		11						27		9.5	6.5
Benzene	1.7-23					1.7			2.5			5.8 S	23						27
Chloroform	8.4												8.4 J						
cis-1,2-Dichloroethene	5.1-54			5.1	6.4		8.5	5.8	9.5	54	24							6.8	
Ethyl Benzene	10-26							48		10			11			20			66
Isopropylbenzene	6-25							25		6						10			14
m/p-Xylenes	6.3-35							35		6.3									
n-Butylbenzene	5.1-24							24		5.1						5.6			
n-Propylbenzene	6.4-46			8.1				46		9.2						16		6.4	17
o-Xylene	6.3-20							6.3		6.8						20			
Tetrachloroethene	6.8-540		16				18	25	6.8	540	33			5.3	6.9		8.4	40	
Trichloroethene	14-53	14					15			53	15								
2-Methylnapthalene	53-2000							2000								750		53	75
Benzo(a)anthracene	0.022-33															3.3	0.067	0.022	0.21
Benzo(b)fluoranthene	0.056-33															3.3	0.056		0.18
Benzo(k)fluoranthene	0.022-1.7															1.7	0.022		0.067
Bis(2-ethylhexyl)phthalate	9.8										9.8								
Chrysene	0.022-3.9															3.9	0.089	0.022	0.19
Fluorene	130							130 J											
Indeno(1,2,3-cd)pyrene	0.022-1.1															1.1	0.022		0.067
Naphthalene	290-550							550								290			
Phenanthrene	52-380							380		52						150			

Metals (dissolved)

COMPOUND	Range in Detections	MW1S	MW2	MW3	MW4S	MW5	MW6S	MW6D	MW7S	MW8	MW9S
Sample Results in (µg/L)											
Iron	510-7680	510	710	3570	6250 N	1240 N	7680	580 N	540		760
Magnesium	130000										130000
Manganese	650-9730	650	2690	1320	5970	9730	6040	3550	7860	2330	8690
Sodium	25400-116000	74700	109000	48300 N	41200 N	40700 N	54200 N	25400 N	76100	102000	116000

Metals (total)

COMPOUND	Range in Detections	MW2	MW3	MW4S	MW5	MW6S	MW6D	MW7	MW8	MW9S
Sample Results in (µg/L)										
Arsenic	33								33	
Barium	1680-4480	1680						2890	4480	
Beryllium	11-22	11						16	22	
Chromium	436-979	466						436	979	
Copper	574-1110	574						632	1110	
Iron	760-791000	362000	25400	33100	25500	19000	10300	483000	791000	760
Mercury	1.3								1.3	
Magnesium	57100-169000	86000						57100	169000	130000
Manganese	1770-49900	12600	1770	5690	10300	5610	3660	49900	32300	8690
Sodium	25400-116000	102000	47200	42200	43000	66600	25400	83800	104000	116000
Nickel	344-582	344						455	582	
Lead	47-990	368				47		272	990	
Zinc	7540									7540

ATTACHMENT A
Remedial Investigation Summary Tables

TABLE 1
SUMMARY OF
SAMPLING PROGRAM RATIONALE AND ANALYSIS

Matrix	Location	Approximate Number of Samples	Rationale for Sampling	Laboratory Analysis
Subsurface soil (0 to ? feet bgs)	15 soil borings	30-45	To supplement previous sampling and delineate affected soil and groundwater.	VOCs EPA Method 8260B, SVOCs EPA Method 8270
Subsurface soil (0 to 7 feet bgs)	15 soil borings	15	To evaluate compliance with SCOs below planned excavation depth.	Pesticides/PCBs EPA Method 8081/8082, TAL metals
Subsurface Soil (0-6 ft bgs)	Composite samples from 30 test pits	6	For waste characterization and disposal facility approval	VOCs EPA Method 8260B (grab), RCRA characteristics, RCRA metals, TCLP Metals, PCBs and PAHs
Total (Soils)		51-66		
Shallow Groundwater	From temporary probe points installed at 6 of 15 of the soil boring locations	6	Define nature and extent of impacted groundwater.	VOCs EPA Method 8260B, SVOCs EPA Method 8270
Shallow Groundwater	From nine new monitoring wells installed at 9 of the remaining boring locations and from an existing well located in the sidewalk along Skillman Street (SSMW1).	10	Define nature and extent of impacted groundwater and evaluate overall groundater quality for non-COC parameters	VOCs, SVOCs, Pesticides/PCBs EPA Method 8081/8082, TAL metals
Deep Groundwater	From four new monitoring wells installed within the former hazardous wastewater trench and along the northwest property line.	4	Evaluate chlorinated solvents deeper in the aquifer	VOCs EPA Method 8260B
Total (Groundwater)		20		
Soil Gas (7 ft below existing slab)	Five soil gas implants to be installed in south buildings and parking lot	5	Evaluate soil gas across southern 2/3rds of the site	VOCs EPA Method TO15
Soil Gas (4 ft below existing slab	Three soil gas implants to be installed in north building	3	Evaluate soil gas across north 1/3rd of site	VOCs EPA Method TO15
Total (Soil Gas)		8		
MS/MSD	Matrix spike and Matrix spike duplicates at the rate 5%	3 to 4	To meet requirements of QA / QC program	VOCs EPA Method 8260B
Trip Blanks	One laboratory prepared trip blank to accompany samples each time they are delivered to the laboratory.	2 to 4	To meet requirements of QA / QC program	VOCs EPA Method 8260B
Total (QA / QC Samples)		5 to 8		

Table 2
Former East Coast Industrial Uniforms Site
Brooklyn, NY
Monitoring Well Construction Information

Well No.	Well Diameter (in)	Total Well Depth (ft)	Screened Interval (ft)	First Reading	Second Reading	Corrected Elevation	DTW 6/13/2012	DTW 6/18/2012	GW ELV 6/13/2012	GW ELV 6/18/2012	Potentiometric Difference
MW1S	1	30	20-30	0.97		99.03	26.58	26.31	72.45	72.72	1.72
MW1D	1	40	35-40	0.95		99.05	27.98	28.05	71.07	71.00	
MW2	1	30	20-30	3.35		96.65	24.31	24.25	72.34	72.40	
MW3	1	30	20-30	3.83		96.17	24.58	24.58	71.59	71.59	
MW4S	1	30	20-30	4.79		95.21	23.37	23.29	71.84	71.92	0.56
MW4D	1	40	35-40	5.22		94.78	23.22	23.42	71.56	71.36	
MW5	1	30	20-30	4.89		95.11	22.50	22.42	72.61	72.69	
MW6S	1	30	20-30	4.46		95.54	23.73	23.70	71.81	71.84	-0.09
MW6D	1	40	35-40	5.11		94.89	23.00	22.96	71.89	71.93	
MW7	1	30	20-30	5.05	2.71	94.95	22.44	22.37	72.51	72.58	
MW8	1	30	20-30	7.25	4.92	92.75	20.67	20.59	72.08	72.16	
MW9S	2	30	20-30		5.19	91.475		19.38		72.10	-0.88
MW9D	2	40	35-40		4.56	92.105		19.13		72.98	

TABLE 3
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Groundwater Protection Soil Cleanup Objectives*	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1			SB2			SB3			SB4				SB5			
				(7-9') µg/Kg	(24-26') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(0-4') µg/Kg	(10-12') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(23-25') µg/Kg	(25-27') µg/Kg	(28-30') µg/Kg
1,1,1,2-Tetrachlorothane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	680	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	270	270	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	330	330	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	3,600	52,000	ND	ND	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	**4,100**	**130** J	ND
1,2-Dibromo-3-chloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	20	20	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	8,400	52,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**430** J	ND	ND
1,3-Dichlorobenzene	2,400	2,400	4,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	1,800	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone (Methyl Butyl Ketone)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Isopropyltoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**570**	ND	ND
4-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	50	100,000	**53 S**	ND	ND	**51 JS**	ND	ND	**52 JS**	**8.9** JS	ND	**62 S**	**62 S**	ND	ND	**51 JS**	ND	ND	ND
Acrylonitrile				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	60	60	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	760	760	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	370	370	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	250	250	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane			100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1,000	1,000	41,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**430** J	ND	ND
m&p-Xylenes	1,600	260		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone (2-Butanone)	120	120	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether (MTBE)	930	930	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	50	100,000	**2** JS	**1.7** JS	**2** JS	**2.1** JS	**1.8** JS	**1.8** JS	**2.5** JS	**2.5** JS	**1.6** JS	**3.4** JS	**3.4** JS	**1.5** JS	**2** JS	**3** JS	**190 JS**	**190 JS**	**1.7** JS
Naphthalene	12,000	12,000		ND	**1.8** J	ND	ND	ND	ND	ND	ND	ND	**ND**	ND	ND	ND	ND	**2700**	ND	ND
n-Butylbenzene		12,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3400**	**110** J	ND
n-Propylbenzene	3,900	3,900	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1100**	ND	ND
o-Xylene	1,600	260	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2500**	ND	ND
sec-Butylbenzene	11,000	11,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3300**	**1200**	**6.8**
Styrene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	5,900	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1,300	1,300	19,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3** J	**1.6** J	ND	ND	ND	ND
Tetrahydrofuran (THF)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	700	700	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	190	190	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	470	470	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	20	20	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX Concentration				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2500**	**0**	**0**
Total VOCs Concentration				**55**	**3.5**	**2**	**53.1**	**1.8**	**1.8**	**54.5**	**11.4**	**1.6**	**65.4**	**65.4**	**2.8**	**3.6**	**54**	**18720**	**1630**	**8.5**

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

S - This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

N - The concentration is based on the response fo the nearest internal. This flag is used on the TIC form for all compounds identified.

Bold/highlighted- Indicated exceedance of the NYSDEC PGWSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Groundwater Protection Soil Cleanup Objectives*	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB6			SB7			SB8			SB9			SB10			
				(8-10') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(7-10') µg/Kg	(22-25') µg/Kg	(25-30') µg/Kg	(7-9') µg/Kg	(21-24') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(19-21') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg
1,1,1,2-Tetrachlorothane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	680	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	270	270	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	330	330	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	3,600	52,000	ND	16,000	ND	ND	2700	ND	ND	130 J	ND	ND	220 J	ND	ND	2700	10,000	ND
1,2-Dibromo-3-chloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	20	20	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	8,400	52,000	ND	4100	ND	ND	370	ND	ND	ND	ND	ND	52 J	ND	ND	480	2200	ND
1,3-Dichlorobenzene	2,400	2,400	4,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	1,800	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone (Methyl Butyl Ketone)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Isopropyltoluene				ND	ND	ND	ND	190 J	ND	ND	51 J	ND	ND	44 J	ND	ND	120 J	340 J	ND
4-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	50	100,000	51 JS	ND	ND	32 JS	ND	ND	56 S	690 JS	ND	26 JS	ND	ND	ND	ND	ND	ND
Acrylonitrile				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	60	60	4,800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	760	760	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	370	370	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	250	250	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane			100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1,000	1,000	41,000	ND	680 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene				ND	970 J	ND	ND	110 J	ND	ND	ND	ND	ND	ND	ND	ND	110 J	640 J	ND
m&p-Xylenes	1,600	260		ND	650 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone (2-Butanone)	120	120	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether (MTBE)	930	930	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	50	100,000	4.1 JS	410 JS	1.9 JS	3.5 JS	100 JS	1.9 JS	3.1 JS	96 JS	1.5 JS	4.0 JS	63 JS	1.7 JS	3.5 JS	110 JS	320 JS	1.7 JS
Naphthalene	12,000	12,000		ND	12000	ND	ND	2200	ND	ND	320	ND	ND	290	1.9 JS	ND	2100	7500	ND
n-Butylbenzene		12,000	100,000	ND	2500	ND	ND	ND	ND	ND	200 J	ND	ND	150 J	ND	ND	630	1800	ND
n-Propylbenzene	3,900	3,900	100,000	ND	2200	ND	ND	270 J	ND	ND	ND	ND	ND	63 J	ND	ND	200 J	1300 J	ND
o-Xylene	1,600	260	100,000	ND	790 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene				ND	1500	ND	ND	410	ND	ND	110 J	ND	ND	60 J	ND	ND	420	1100 J	ND
sec-Butylbenzene	11,000	11,000	100,000	ND	2500	ND	ND	1100	ND	ND	250 J	ND	ND	280 J	ND	ND	630	1800	ND
Styrene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	5,900	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1,300	1,300	19,000	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	640	ND	ND
Tetrahydrofuran (THF)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	700	700	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130 J	ND	ND	69 J	ND	ND
trans-1,2-Dichloroethene	190	190	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	470	470	21,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	20	20	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX Concentration				0	2970	0	0	410	0	0	110	0	0.0	410.0	0.0	0.0	3189.0	11100.0	0.0
Total VOCs Concentration				56.4	44300	1.9	35.5	7450	1.9	59.1	1847	1.5	30	1352	3.6	3.5	8209	27000	1.7

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				(7-9') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(7-10') µg/Kg	(12-15') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(19-20') µg/Kg	(20-23') µg/Kg	(23-25') µg/Kg	(25-27') µg/Kg	(27-29') µg/Kg
1,1,1,2-Tetrachlorothane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	680	680	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	270	270	26,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	330	330	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	**83** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	3,600	52,000	ND	**14,000**	ND	ND	**9,600**	**28**	**65** J	**12,000**	**1.1** J	ND	**3.2** J	ND	ND	**7.6**	**3.2** J	**190**	ND	ND
1,2-Dibromo-3-chloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	20	20	3,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8,400	8,400	52,000	ND	**880** J	ND	ND	**1800**	**9.1**	ND	**2700**	ND	ND	ND	ND	ND	**1.5** J	ND	**36**	ND	ND
1,3-Dichlorobenzene	2,400	2,400	4,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1,800	1,800	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone (Methyl Butyl Ketone)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Isopropyltoluene				ND	**460** J	ND	ND	**560** J	**2** J	ND	**390** J	ND	ND	ND	ND	ND	ND	ND	**2** J	ND	ND
4-Chlorotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	50	100,000	**47** JS	ND	ND	**9.1** JS	ND	ND	ND	ND	**17** JS	**22** JS	**15** JS	**1,300 JS**	ND	**44** JS	**10** JS	**9.2** JS	**20** JS	**33** JS
Acrylonitrile				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	60	60	4,800	ND	ND	ND	ND	ND	**3** J	ND	ND	ND	ND	ND	ND	ND	**1.5** J	**2.6** J	**4.6** J	ND	ND
Bromobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.1** J	ND	**2.2** J	**1.3** J	ND
Carbon tetrachloride	760	760	2,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1,100	1,100	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	370	370	49,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	250	250	100,000	ND	ND	ND	ND	ND	**1.4** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane			100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	1,000	1,000	41,000	ND	**700** J	ND	ND	**1400** J	**14**	ND	**730**	ND	ND	ND	ND	ND	**2.1** J	**1.2** J	**110**	ND	ND
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene				ND	**880** J	ND	ND	**1300** J	**7**	ND	**910**	ND	ND	ND	ND	ND	ND	ND	**93**	ND	ND
m&p-Xylenes	1,600	260		ND	ND	ND	ND	ND	**6**	ND	**640**	ND	ND	ND	ND	ND	ND	ND	**130**	ND	ND
Methyl Ethyl Ketone (2-Butanone)	120	120	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether (MTBE)	930	930	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	50	50	100,000	**3.8** JS	**310 JS**	**1.8** JS	**7.2** S	**300 JS**	**1.8** JS	**130 JS**	**140 JS**	**3.1** JS	**9.1** S	**39** S	2.8 JS	**1.8** JS	**1.7** JS	**1.4** JS	**1.6** JS	**18** S	**18** S
Naphthalene	12,000	12,000		ND	**18,000**	**3.7** JS	ND	**11000**	**450**	**98** J	**12000**	**2.9** J	ND	**2100**	3.1 J	**2.6** J	**860**	**3.5** J	**810**	ND	**1.8** JS
n-Butylbenzene		12,000	100,000	ND	**2700**	ND	ND	**3300**	**6.9**	ND	**2400**	ND	ND	ND	ND	ND	ND	ND	**9.3**	ND	ND
n-Propylbenzene	3,900	3,900	100,000	ND	**2100**	ND	ND	ND	**9.3**	ND	**1800**	ND	ND	ND	ND	ND	**1.4** J	ND	**45**	ND	ND
o-Xylene	1,600	260	100,000	ND	ND	ND	ND	ND	**9.1**	ND	**590**	ND	ND	ND	ND	ND	ND	ND	**34**	ND	ND
p-Isopropyltoluene				ND	**1700**	ND	ND	**2000**	**3.1** J	ND	**1400**	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND
sec-Butylbenzene	11,000	11,000	100,000	ND	**2400**	ND	ND	**3100**	**8.6**	ND	**2500**	ND	ND	ND	ND	ND	**1.4** J	ND	**4.1** J	ND	ND
Styrene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5,900	5,900	100,000	ND	ND	ND	ND	ND	ND	ND	**130** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	1,300	1,300	19,000	ND	ND	ND	**1.6** J	ND	**120**	ND	**140** J	ND	ND	ND	ND	ND	**1.8** J	ND	**2** J	ND	ND
Tetrahydrofuran (THF)				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	700	700	100,000	ND	ND	**0.98** JS	ND	ND	**5.5** J	ND	ND	ND	ND	**1.1** J	ND	**5** J	**5.2** J	**0.92** J	**6.9**	ND	ND
trans-1,2-Dichloroethene	190	190	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-dichloro-2-butene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	470	470	21,000	ND	ND	ND	ND	ND	**1.3** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	20	20	900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX Concentration				**0**	**2400**	**0.98**	**0**	**3400**	**31.7**	**0**	**2720**	**0**	**0**	**1.1**	**0**	**5**	**7.3**	**2.12**	**163.9**	**0**	**0**
Total VOCs Concentration				**50.8**	**44130**	**6.48**	**17.9**	**34360**	**686.1**	**293**	**38553**	**24.1**	**31.1**	**2158.3**	**1305.9**	**9.4**	**930.3**	**22.82**	**1502.9**	**39.3**	**52.8**

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

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J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

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Bold/highlighted- Indicated exceedance of the NYSDEC PGWSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Groundwater Protection Soil Cleanup Objectives*	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1			SB2			SB3			SB4			SB5			
				(7-9') µg/Kg	(24-26') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(10-12') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(23-25') µg/Kg	(25-27') µg/Kg	(28-30') µg/Kg
1,2-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14000**	ND	ND
2-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	98,000	20,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	107,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1100** J	ND	ND
Anthracene	1,000,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	22,000	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,700	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	1,700	800	3,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	3,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1,000,000	330	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1,000,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	386,000	30,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2400** J	ND
Hexachlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	8,200	500	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12,000	12,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2200** J	ND	ND
Nitrobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	1,000,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11000**	ND	ND
Pyrene	1,000,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Groundwater Protection Soil Cleanup Objectives*	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB6			SB7			SB8			SB9			SB10			
				(8-10') µg/Kg	(23-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(7-10') µg/Kg	(22-25') µg/Kg	(25-30') µg/Kg	(7-9') µg/Kg	(21-24') µg/Kg	(28-30') µg/Kg	(7-9') µg/Kg	(19-21') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg
1,2-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene				ND	**39000**	ND	ND	**7000**	ND	ND	ND	ND	ND	ND	ND	ND	**11,000**	**17000**	ND
2-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	98,000	20,000	100,000	ND	**2000** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	107,000	100,000	100,000	ND	ND	ND	ND	**390**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**810** J	ND
Anthracene	1,000,000	100,000	100,000	ND	ND	ND	ND	**270** J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	22,000	1,000	1,000	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1,700	1,000	1,000	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	1,700	800	3,900	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1,000	1,000	3,900	ND	ND	ND	**ND**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1,000,000	330	330	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	1,000,000	100,000	100,000	ND	ND	ND	**ND**	**170** J	ND	ND	ND	ND	ND	**140** J	ND	ND	ND	ND	ND
Fluorene	386,000	30,000	100,000	ND	**3800**	ND	ND	ND	ND	ND	ND	ND	ND	**580**	ND	ND	**2,000**	**2100**	ND
Hexachlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	8,200	500	500	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12,000	12,000	100,000	ND	**11000**	ND	ND	**740**	ND	ND	ND	ND	ND	ND	ND	ND	**1500** J	**4000**	ND
Nitrobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	1,000,000	100,000	100,000	ND	**9000**	ND	**ND**	**3500**	ND	ND	**2200** J	ND	ND	**3600**	ND	ND	**4600**	**5500**	ND
Pyrene	1,000,000	100,000	100,000	ND	ND	ND	**ND**	**300** J	ND	ND	ND	ND	ND	**330** J	ND	ND	ND	ND	ND

Notes:

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Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Groundwater Protection Soil Cleanup Objectives*	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB11			SB12		SB13			SB14			SB15					
				(7-9') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(8-10') µg/Kg	(22-25') µg/Kg	(28-30') µg/Kg	(7-10') µg/Kg	(12-15') µg/Kg	(22-25') µg/Kg	(8-10') µg/Kg	(19-20') µg/Kg	(20-23') µg/Kg	(23-25') µg/Kg	(25-27') µg/Kg	(27-29') µg/Kg
1,2-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-Diphenylhydrazine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,3-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,4-Dichlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2,4-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2,6-Dinitrotoluene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-Chloronaphthalene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-Methylnaphthalene				ND	44000	ND	59000	480	ND	26000	ND	ND	360 J	ND	ND	170 J	ND	830		
2-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
3,3'-Dichlorobenzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
3-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4,6-Dinitro-2-methylphenol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4-Bromophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4-Chloroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4-Chlorophenyl phenyl ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4-Nitroaniline				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Acenaphthene	98,000	20,000	100,000	ND	ND	ND	4600	130 J	ND	ND	ND	ND	770	ND	ND	ND	ND	240 J	ND	ND
Acenaphthylene	107,000	100,000	100,000	ND	ND	ND	ND	340 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	190 J	ND	ND
Anthracene	1,000,000	100,000	100,000	ND	ND	ND	1300 J	450	ND	ND	ND	ND	1800	ND	ND	ND	ND	470	330	ND
Benzo(a)anthracene	1,000	1,000	1,000	ND	ND	ND	ND	630	ND	ND	ND	260 J	3,300	ND	150 J	270 J	160 J	1,300	1000	ND
Benzidine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Benzo(a)pyrene	22,000	1,000	1,000	ND	ND	ND	ND	810	ND	ND	ND	210 J	2,600	ND	140 J	280 J	150 J	1000	810	ND
Benzo(b)fluoranthene	1,700	1,000	1,000	ND	ND	ND	ND	630	ND	ND	ND	250 J	3,100	ND	170 J	350 J	190 J	1,300	930	ND
Benzo(g,h,i)perylene	100,000	100,000	100,000	ND	ND	ND	ND	410	ND	ND	ND	160 J	1300	ND	ND	180 J	ND	610	420	ND
Benzo(k)fluoranthene	1,700	800	3,900	ND	ND	ND	ND	220 J	ND	ND	ND	ND	980	ND	ND	ND	ND	550	400	ND
Benzoic Acid				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Benzyl alcohol				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Butyl benzyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Bis(2-chloroethoxy)methane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Bis(2-chloroethyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	170 J	ND	ND	ND		
Bis(2-chloroisopropyl)ether				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150 J	ND	ND	ND		
Bis(2-ethylhexyl)phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Chrysene	1,000	1,000	3,900	ND	ND	ND	ND	680	ND	ND	ND	260 J	3,200	ND	ND	260 J	150 J	1,200	960	ND
Dibenzo(a,h)anthracene	1,000,000	330	330	ND	ND	ND	ND	120 J	ND	ND	ND	ND	370	ND	ND	ND	ND	190 J	ND	ND
Dibenzofuran				ND	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	ND	ND	ND	ND		
Diethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Dimethyl phthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Di-n-butylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Di-n-octylphthalate				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Fluoranthene	1,000,000	100,000	100,000	ND	ND	ND	3100 J	720	ND	ND	ND	600	9700	ND	310 J	520	330 J	2100	1800	ND
Fluorene	386,000	30,000	100,000	ND	4200	ND	5400	240 J	ND	2700 J	ND	ND	930	ND	ND	ND	ND	280 J	ND	ND
Hexachlorobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Hexachlorobutadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Hexachlorocyclopentadiene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Hexachloroethane				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Indeno(1,2,3-cd)pyrene	8,200	500	500	ND	ND	ND	ND	310 J	ND	ND	ND	120 J	1,100	ND	ND	150 J	ND	570	350	ND
Isophorone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Naphthalene	12,000	12,000	100,000	ND	11000	ND	3200 J	460	ND	4700	ND	ND	1600	ND	ND	760	250 J	1700	510	ND
Nitrobenzene				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
N-Nitrosodimethylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
N-Nitrosodi-n-propylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
N-Nitrosodiphenylamine				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Phenanthrene	1,000,000	100,000	100,000	110 J	11000	ND	18000	1600	240 J	8200	ND	490	6600	ND	230 J	230 J	140 J	1300	950	ND
Pyrene	1,000,000	100,000	100,000	ND	1300 J	ND	2700 J	1900	130 J	ND	ND	510	8400	ND	290 J	470	280 J	2000	1700	ND

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

S - This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

N - The concentration is based on the response fo the nearest internal. This flag is used on the TIC form for all compounds identified.

Bold/highlighted- Indicated exceedance of the NYSDEC PGWSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Pesticides / PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1	SB2	SB3		SB4		SB5		SB6		SB7
			(7-9') µg/Kg	(7-9') µg/Kg	(0-1') µg/Kg	(7-9') µg/Kg	(0-4') µg/Kg	(10-12') µg/Kg	(0-5') µg/Kg	(8-10') µg/Kg	(0-5') µg/Kg	(8-10') µg/Kg	(8-10') µg/Kg
PCB-1016	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1254	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1262	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1268	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDD	3.3	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDE	3.3	8,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDT	3.3	7,900	ND	ND	ND	ND	ND	ND	**4.3**	ND	ND	ND	ND
a-BHC	20	480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
a-Chlordane			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	5	97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
b-BHC	36	360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	94	4,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
d-BHC	40	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	5	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	14	11,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
g-Chlordane			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	42	2,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

S - This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

N - The concentration is based on the response fo the nearest internal. This flag is used on the TIC form for all compounds identified.

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results
Pesticides / PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB8	SB9	SB10	SB11		SB12		SB13		SB14	SB15
			(7-10') µg/Kg	(7-9') µg/Kg	(7-9') µg/Kg	(0-1') µg/Kg	(7-9') µg/Kg	(0-1') µg/Kg	(8-10') µg/Kg	(8-10') µg/Kg	(15-20') µg/Kg	(7-10') µg/Kg	(8-10') µg/Kg
PCB-1016	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1254	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1262	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1268	1,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDD	3.3	13,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDE	3.3	8,900	ND	ND	ND	**14**	ND	**5.6**	ND	ND	ND	ND	ND
4,4-DDT	3.3	7,900	ND	ND	ND	**55**	ND	**23**	ND	ND	ND	ND	ND
a-BHC	20	480	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
a-Chlordane			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	5	97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
b-BHC	36	360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	94	4,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
d-BHC	40	100,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	5	200	ND	ND	ND	**2.9**	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	2,400	24,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	14	11,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
g-Chlordane			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	42	2,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

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N - The concentration is based on the response fo the nearest internal. This flag is used on the TIC form for all compounds identified.

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
FOERM EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB1	SB2	SB3		SB4		SB5		SB6		SB7	SB8
			(7-9') mg/Kg	(7-9') mg/Kg	(0-1') mg/Kg	(7-9') mg/Kg	(0-4') mg/Kg	(10-12') mg/Kg	(0-5') µg/Kg	(8-10') µg/Kg	(0-5') µg/Kg	(8-10') µg/Kg	(8-10') µg/Kg	(7-10') mg/Kg
Silver	2	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum			3680 N	2950 N	7850 N	3679 N	5230 N	4220 N	5330 N	4720 N	5770 N	3430 N	4000 N	3420 N
Arsenic	13	16	1.01	1.01	4.54	1.05	4.04	1.21	3.67	1.35	3.87	1.15	1.41	1.05
Barium	350	400	29.8	22.8	208	21.4	157	30	148	25.6	747	22.2	27.4	25.2
Beryllium	7.2	72	0.31	ND	0.44	0.35	ND	0.3	0.37	0.33	0.44	0.32	0.33	0.31
Calcium			0.37 N	566 N	0.41	753 N	70200 N	1090 N	24700 N	1150 N	22100	1130 N	1050 N	945 N
Cadmium	2.5 c	4.3	1,260	ND	22,700	ND	0.37	ND	0.43	ND	0.7	ND	ND	ND
Cobalt			8.34	4.43	25.7	4.21	3.91	4.07	4.46	5	7.26	3.99	5.72	4.85
Chromium	30 c	180 - trivalent	4.94	7.9	6.17	12.6	21.1	10.4	18.7	12.7	29.7	10.6	10.4	9.19
Copper	50	270	11.8	9.04	65	10.9	36.2	10.3	41.3	17.2	41.5	10.4	14	13.9
Iron			16500 N	11300 N	19700 N	14300 N	14200 N	13000 N	14700 N	17000 N	19600 N	14300 N	16300 N	15700
Mercury	0.18 c	0.81	ND	ND	1.55	ND	0.25	ND	1.52	ND	0.42	ND	ND	ND
Potassium			683	512	2290	858	845	819	940	847	1320	803	944	859
Magnesium			1190 N	1040 N	11600 N	1410 N	13000 N	1490 N	4410 N	1860 N	6880 N	1270 N	1470 N	1480 N
Manganese	1600 c	2,000	307	365	355	348	284	321	314	293	394	253	378	294 N
Sodium			106 N	44 N	480 N	51 N	258 N	195 N	113 N	131 N	351 N	89 N	92 N	708 N
Nickel	30	310	9.2	7.01	19.5	9	14.1	9.87	12.3	10.8	13.6	8.49	8.71	8.87
Lead	63 c	400	ND	ND	263	ND	244	7.13	315	ND	1,110	1.13	ND	0.358 B
Antimony			1.8	ND	ND	ND	ND	ND	ND	ND	3.6	ND	ND	ND
Selenium	3.9c	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium			23.8	11.8	30.1	18.3	21.4	16.1	22.7	22.5	27.9	19	23.7	22.4
Zinc	109 c	10,000	20.6	17.5	237	20.2	181	19	272	88.4	555	19.5	22.5	27.8

Notes:

* - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

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Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
FOERM EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Soil Analytical Results

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives*	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	SB9	SB10	SB11		SB12		SB13		SB14	SB15
			(7-9') mg/Kg	(7-9') mg/Kg	(0-1') mg/Kg	(7-9') mg/Kg	(0-1') mg/Kg	(8-10') mg/Kg	(8-10') mg/Kg	(15-20') mg/Kg	(7-10') mg/Kg	(8-10') mg/Kg
Silver	2	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aluminum			3,940	4410	6920	4240	7640	8760	5830	4660	6990	7910
Arsenic	13	16	1.16	1.29	3.17	1.43	3.07	2.29	1.42	1.4	2.43	2.84
Barium	350	400	31.7	32.3	592	38.1	162	49.7	40.1	49.5	150	97.1
Beryllium	7.2	72	0.271 B	0.32	0.44	0.41	0.41	0.58	0.4	0.39	0.38	0.35
Calcium			875	953	12500	1050	39800	872	1110	1530	4980	11600
Cadmium	2.5 c	4.3	ND	ND	0.54	ND	0.5	ND	ND	ND	ND	ND
Cobalt			3.95	4.64	5.86	5.68	4.07	7.59	5.68	6.32	5.51	4.94
Chromium	30 c	180 - trivalent	11.9	11.8	19.8	11.7	13.1	17.8	14.8	13.4	16.3	13.4
Copper	50	270	12.4	15.2	28	16.3	34.3	34.5	19.1	22.7	16.5	19.8
Iron			ND	14,800	18800	16500	19600	21100	16800	22500	13700	13600
Mercury	0.18 c	0.81	ND	ND	0.12	ND	0.13	ND	ND	ND	ND	0.36
Potassium			1140 N	1470 N	1930 N	1100 N	1030 N	1440 N	1410 N	1310 N	1020 N	1130 N
Magnesium			1560	1620	2960	1680	3360	2250	2270	1700	3420	2840
Manganese	1600 c	2,000	177	298	366	459	372	468	451	317	242	228
Sodium			1.17 N	115 N	177 N	119 N	549 N	102 N	169 N	173 N	157 N	409 N
Nickel	30	310	7.86	9.4	11.6	13	10.9	14.6	11.5	18	22.3	14.9
Lead	63 c	400	2.47	4	1,220 N	5.14	238 N	16.1	2.51	4.08	189 N	220 N
Antimony			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	3.9c	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium			19.3	23.1	28.9	20.5	20.2	31.8	29.1	30	14.1	15.4
Zinc	109 c	10,000	29.2	24.3	474	27.2	234	118	31.5	31.3	57.9	87.1

Notes:

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Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 7
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, New York
Groundwater Analytical Results
Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards µg/L	MW1S µg/L	MW1D µg/L	MW2 µg/L	MW3 µg/L	MW4S µg/L	MW4D µg/L	MW5 µg/L	MW6S µg/L	MW6D µg/L	MW7 µg/L	MW8 µg/L	MW9S µg/L	MW9D µg/L	SB2 µg/L	SB4 µg/L	SB6 µg/L	SB8 µg/L	SB10 µg/L	SB12 µg/L
1,1,1,2-Tetrachlorothane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.39 J	ND	ND	ND	ND	ND	ND	ND	0.29 J
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	7.1	5.8	0.91 J	290	5.2	59	ND	ND	3	0.75 J	ND	110	7.9	60	63
1,2-Dibromo-3-chloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	0.53 J	0.33 J	0.66 J		35	0.61 J	11	ND	ND	0.54 J	ND	ND	27	1.8	9.5	6.5
1,3-Dichlorobenzene		0.25 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J
2,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone (Methyl Butyl Ketone)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Isopropyltoluene		ND	ND	ND	3	0.53 J	ND	1	4.4 J	0.4 J	1.3 J	ND	ND	ND	ND	ND	1.9 J	0.52 J	0.77 J	1.9
4-Chlorotoluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		12 S	ND	13 S	ND	ND	18 S	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND
Acrylonitrile		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND J	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	1.7	ND	ND	2.5	ND	0.99	5.8 S	23	ND	ND	ND	ND	ND	27
Bromobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	0.49 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND	0.54 J	ND	ND	0.39 J	1.2 J	2.2	ND	1.2 J	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82 J
Chloroform	7	0.53 J	0.38 J	ND	ND	ND	0.38 J	ND	ND	ND	ND	0.24 J	ND	8.4 J	0.53 J	0.28 J	ND	2.7 J	2.1 J	ND
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	0.46 J	5	5
cis-1,2-Dichloroethene	5	ND	0.96 J	ND	5.1	6.4	1.2	8.5	5.8	9.5	54	24	0.59 J	ND	ND	ND	3.4	0.32 J	6.8	0.91 J
cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromoethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	0.22 J	1.1	ND	ND	48	1.2	10	0.43 J	0.25 J	11	ND	ND	20	0.21 J	2.6	66
Hexachlorobutadiene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	4.8	1.9	0.53 J	ND	25	1	6	ND	ND	ND	ND	ND	10	0.34 J	4.6	14
m&p-Xylenes	5	ND	ND	ND	ND	0.69 J	ND	ND	35	0.74 J	6.3	ND	ND	4.2	ND	ND	18	ND	4.4	9.9
Methyl Ethyl Ketone (2-Butanone)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl t-butyl ether (MTBE)		ND	ND	0.21 J	ND	ND	0.86 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND	ND	0.42 JS	ND	ND	ND	ND	ND	ND
Naphthalene		0.22 J	ND	0.26 J	3.6	54	7	2.1	390	10	59	34	1.5	15	1	0.81 J	110	9	48	70
n-Butylbenzene	5	ND	ND	ND	3.4	1.5	0.36 J	1.4	24	0.99 J	5.1	ND	ND	ND	ND	ND	5.6	1.1	1.9	2.9
n-Propylbenzene	5	ND	ND	ND	8.1	2.7	0.57 J	ND	46	1.4	9.2	ND	ND	ND	ND	ND	16	0.8 J	6.4	17
o-Xylene	5	ND	ND	ND	ND	0.49 J	ND	ND	6.3	0.94 J	6.8	ND	ND	3.3	ND	ND	20	ND	2.1	ND
p-Isopropyltoluene		ND	ND	ND	5.2	0.95 J	ND	0.95 J	14	0.48 J	4.6 J	ND	ND	ND	ND	ND	4.8	0.91 J	2.1	3.1
sec-Butylbenzene		ND	ND	ND	11	3.1	0.78 J	4.1	16	1.8	8.3 J	ND	ND	ND	ND	ND	8.7	2.3	3.4	6
Styrene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene		ND	ND	ND	1.5	0.46	ND	0.56 J	1.8 J	0.24 J	ND	ND	ND	ND	ND	ND	0.94 J	0.23 J	0.3 J	0.81 J
Tetrachloroethene	5	0.46 J	13	16	ND	2.4	1.2	18	25	6.8	540	33	2.3	0.96 J	5.3	6.9	4.4	8.4	40	1.5
Tetrahydrofuran (THF)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	0.29 J	ND	ND	0.24 J	ND	ND	ND	ND	0.3 J	0.68 J	2.1 J	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene		ND	ND	ND	0.35 J	0.38 J	ND	0.27 J	7.2 J	2.3 J	1.1 J	1.1 J	ND	ND	ND	ND	2.5 J	ND	2 J	10
trans-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trabs-1,4-dichloro-2-butene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	14	0.7 J	2	0.67 J	1.7	15	1.9 J	2	53	15	0.74 J	ND	ND	0.19 J	0.9 J	1.6	1.7	0.25 J
Trichlorofluoromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorotrifluoroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	1.3 J	0.56 J	1.7 J	12 J	ND	ND	ND	ND	0.46 J	ND	0.29 J	1.8
TOTAL PVOCs		0.0	0.0	0.8	41.4	74.4	18.5	8.9	929.2	24.1	185.3	35.7	8.2	62.1	1.8	0.8	332.9	25.1	146.1	288.1
TOTAL CVOCs		0.7	28.0	16.7	7.5	9.9	4.1	41.8	39.9	20.6	648.1	73.1	3.6	1.0	5.3	7.1	11.2	10.3	50.5	12.7

Notes:
ND - Not detected
J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 8
FORMER EAST COAST INDSUSTRIAL UNIFORMS SITE
Brooklyn, NY
Groundwater Analytical Results
Semi-Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards µg/L	MW2 µg/L	MW3 µg/L	MW4S µg/L	MW5 µg/L	MW6S µg/L	MW6D µg/L	MW7 µg/L	MW8 µg/L	MW9S µg/L	SB2 µg/L	SB4 µg/L	SB6 µg/L	SB8 µg/L	SB10 µg/L	SB12 µg/L
1,2,4,5-Tetrachlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	50	ND	ND	ND	ND	**2000**	**8**	ND	ND	ND	**13**	ND	**750**	**18**	**53**	**75**
2-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND	**7.4**	ND	ND	ND	ND	ND	ND	**5.2**
Acenaphthylene		ND	ND	ND	ND	ND	ND	**4.8**	ND	ND	ND	ND	ND	**0.73**	**0.61**	**0.74**
Anthracene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Azobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.3**	**0.067**	**0.022**	**0.21**
Benzidine	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	**0.044**	ND	**0.12**
Benzo(b)fluoranthene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.3**	**0.056**	ND	**0.18**
Benzo(g,h,i)perylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.7**	**0.022**	ND	**0.067**
Benzoic Acid		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethoxy)methane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroethyl)ether	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisopropyl)ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalate	5	ND	ND	ND	ND	ND	ND	ND	**9.8**	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.9**	**0.089**	**0.022**	**0.19**
Dibenzo(a,h)anthracene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.022**
Dibenzofuran		ND	ND	ND	ND	ND	ND	ND	**1.7** J	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND	ND	ND	**3.5** J	ND	ND	ND	ND	ND	ND	ND
Fluorene	50	ND	**31** J	ND	**2.1** J	**130** J	ND	ND	**4.1** J	ND	ND	ND	ND	**4.1**	**4.1**	**5.3**
Hexachlorobenzene	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1**	**0.022**	ND	**0.067**
Isophorone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	**550**	**4.9** J	ND	**2.9** J	ND	**3.6** J	ND	**290**	**10**	**35**	**48**
Nitrobenzene	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodi-n-propylamine		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50	ND	**36**	ND	ND	**380**	ND	**52**	**4.2**	ND	**2.2**	ND	**150**	**6.2**	**6.8**	**7.5**
Pyrene	50	ND	ND	ND	ND	ND	ND	ND	**3.3** J	ND	ND	ND	ND	ND	ND	ND
TOTAL SVOCS		**0**	**67**	**0**	**2**	**3060**	**13**	**57**	**37**	**0**	**19**	**0**	**1206**	**39**	**100**	**143**

Notes:

ND - Not detected

J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 9
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Groundwater Results - Pesticieds / PCBs

Compound	NYSDEC Groundwater Quality Standards µg/L	MW2 µg/L	MW3 µg/L	MW4S µg/L	MW5 µg/L	MW6S µg/L	MW7 µg/L	MW8 µg/L	MW9S µg/L
PCB-1016	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1221	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1232	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1242	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1248	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1254	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1260	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1262	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
PCB-1268	**0.09**	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDD	**0.3**	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDE	**0.2**	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDT	**0.11**	ND	ND	ND	ND	ND	ND	ND	ND
a-BHC	**0.94**	ND	ND	ND	ND	ND	ND	ND	ND
Alachlor		ND	ND	ND	ND	ND	ND	ND	ND
Aldrin		ND	ND	ND	ND	ND	ND	ND	ND
b-BHC	**0.04**	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	**0.05**	ND	ND	ND	ND	ND	ND	ND	ND
d-BHC	**0.04**	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	**0.004**	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I		ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II		ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate		ND	ND	ND	ND	ND	ND	ND	ND
Endrin		ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	**5**	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone		ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	**0.05**	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	**0.04**	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	**0.03**	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	**35**	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene		ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ND - Non-detect
J - The value is estimated. This flag is used: a) on form 1 when the compound is reported above the MDL, but below the PQL, and b) on the Tentatively Identified Compounds (TIC) form for all compounds identif
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 10
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Groundwwater Results - Metals

Compound	NYSDEC Groundwater	MW1	MW2		MW3		MW4S		MW5		MW6S		MW6D		MW7		MW8		MW9S	
		Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered	Total	Filtered
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Silver	50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.8 B	<5.0	<5.0	2.1 B	0.5 B
Aluminum	NS	790	134,000	650	3,030	230 N	2,730	210 N	5,260	210 N	1,900	160 N	3,190	400 N	155,000	500	289,000	400	1,350,000	260
Arsenic	25	<3.0	11	<3.0	<3.0	3	4	<3.0	<3.0	<3.0	4	<3.0	<3.0	<3.0	20	<3.0	33	<3.0	166	<3.0
Barium	1000	49	1,680	59	214	156	465	396	286	210	184	185	100	72	2,890	86	4,480	112	7,460	235
Beryllium	3	<1.0	11	<1.0	<1.0	<1.0	<1.0	<1.0	0.03 B	<1.0	<1.0	<1.0	<1.0	<1.0	16	<0.001	22	<1.0	61	<1.0
Calcium	NS	39,600	106,000	79,000	95,100	91,900 N	77,500	75,800 N	79,200	77,500 N	52,300	49,000 N	48,700	47,500 N	73,000	34,000	288,000	74,200	958,000	397,000
Cadmium	5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	3.5 B	<0.004	<4.0	<4.0	<4.0	<4.0
Cobalt	NS	<5.0	166	3.3 B	2.9	<5.0	11	7	15	6	5	4 B	8	3.6 B	494	21	314	<5.0	831,000	<5.0
Chromium	50	0.9 B	466	1	13	<1.0	9	<1.0	18	<1.0	8	<1.0	18	1	436	<1.0	979	<1.0	1,600	<1.0
Copper	200	2.8 B	574	3.2 B	21	2.1 B	22	1 B	31	1.3 B	10	1.1 B	16	2.4 B	632	1.9 B	1,110	1.5 B	3,780	2.6 B
Iron	500	510	362,000	710	25,400	3,570	33,100	6,250 N	25,500	1,240 N	19,000	7,680	10,300	580 N	483,000	540	791,000	330	3,000,000	760
Mercury	0.7	<0.2	<2.0	<2.0	<2.0	<2.0	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	0.5	<0.2	1.3	<0.2	9.3	<0.2
Potassium	NS	6,100	56,000	6,400	17,400	16,500 N	16,400	16,100 N	10,800	10,000 N	8,900	9,400 N	8,000	7,600 N	43,700	8,700	80,200	16,800	220,000	25,700
Magnesium	35000	12,200	86,000	29,000	19,100	17,700 N	13,600	12,300 N	12,500	10,400 N	11,600	9,410 N	10,400	9,230 N	57,100	6,950	169,000	30,100	546,000	130,000
Manganese	300	650	12,600	2,690	1,770	1,320	5,690	5,970	10,300	9,730	5,610	6,040	3,660	3,550	49,900	7,860	32,300	2,330	92,300	8,690
Sodium	2000	74,700	102,000	109,000	47,200	48,300 N	42,200	41,200 N	43,000	40,700 N	66,600	54,200 N	25,400	25,400 N	83,800	76,100	104,000	102,000	71,100	116,000
Nickel	100	5	344	12	18	2.5 B	17	5	23	3.6 B	8	2.2 B	22	13	455	13	582	3.4 B	1,320	1.6 B
Lead	25	5	368	<2.0	16	<2.0	5	<2.0	6	2 B	47	<2.0	15	5	272	3	990	<0.002	7,070	<0.002
Antimony	3	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Selenium	10	<4.0	<4.0	6	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Thallium	0.5	<2.0	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	NS	0.8 B	390	<10	10	<10	9.5 B	<10	20	<10	6.3 B	0.4 B	10	1.8 B	520	<10	710	<10	3,270	<10
Zinc	2000	5.8 B	938	5.1 B	30	6.3 B	23	8 B	41	6.8 B	55	34	37	5.9 B	845	4.8 B	1,550	2.4 B	7,540	3.2 B

TABLE 11
FORMER EAST COAST
INDUSTRIAL UNIFORMS SITE
Brooklyn, NY
Soil Gas - Volatile Organic Compounds

COMPOUNDS	NYSDOH Outdoor Background Levels (µg/m³) [a]	SG1 (µg/m³)	SG2 (µg/m³)	SG4 (µg/m³)	SG5 (µg/m³)	SG6 (µg/m³)	SG7 (µg/m³)	SG8 (µg/m³)	OA1 (µg/m³)
1,1,1,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	<2.0 - 2.8	ND	ND	**7.74**	**32.2**	**6.22**	**2.51**	ND	ND
1,1,2,2-Tetrachloroethane	<1.5	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	<1.0	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	<1.0	ND	ND	1.09	1.94	ND	ND	ND	ND
1,1-Dichloroethene	<1.0	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	<1.0	**1.82**	**6.34**	**1.38**	**1.82**	**1.42**	**1.47**	**1.33**	ND
1,2-Dibromoethane	<1.5	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	<2.0	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	<1.0	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorotetrafluoroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	<1.0	ND	**2.31**	ND	ND	**1.62**	**1.77**	ND	ND
1,3-Butadiene	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	<2.0	**181**	**78.1**	**63.7**	**108**	**151**	**108**	**144**	ND
1,4-Dichlorobenzene	NA	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane		ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone		ND	ND	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	NA	ND	**2.26**	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene		ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone		ND	ND	ND	ND	ND	ND	ND	ND
Acetone	NA	**261**	**560**	**180**	**311**	**306**	**261**	**259**	**10.7**
Acrylonitrile		ND	ND	ND	ND	ND	ND	ND	ND
Benzene	<1.6 - 4.7	ND	**0.99**	**1.12**	ND	ND	**1.05**	ND	ND
Benzyl Chloride	NA	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	<5.0	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	<1.0	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	<1.0	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	NA	ND	ND	**3.33**	ND	ND	**2.24**	ND	ND
Carbon Tetrachloride	<3.1	**0.314**	**0.44**	**0.503**	**0.44**	**0.44**	**0.314**	**0.503**	**0.566**
Chlorobenzene	<2.0	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	<2.4	**1.8**	ND	**17**	**9.03**	**10.2**	**1.27**	**1.37**	ND
Chloromethane	<1.0 - 1.4	ND	ND	ND	ND	ND	ND	ND	**1.2**
cis-1,2-Dichloroethene	<1.0	ND	ND	**73.3**	**22.7**	ND	ND	ND	ND
cis-1,3-Dichloropropene	NA	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	NA	**1.68**	**3.3**	**1.79**	**2.3**	**1.17**	**1.2**	ND	ND
Dibromochloromethane	<5.0	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluromethane	NA	**2.27**	**2.32**	**2.87**	**2.42**	**2.57**	**2.47**	**2.62**	**2.62**
Ethanol		E **1,710**	E **1,830**	**1,300**	**1,840**	E **1,570**	E **1,430**	E **1,020**	**15.6**
Ethyl Acetate	NA	**5.33**	**8.72**	**4.9**	**7.24**	**4.93**	**4.79**	**4**	ND
Ethylbenzene	<4.3	**5.94**	**15.7**	**1.87**	**3.86**	**2.91**	**2.82**	**2.82**	ND
Heptane	NA	**1.35**	**3.4**	ND	**1.52**	**1.02**	**1.27**	ND	ND
Hexachlorobutadiene	NA	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	<1.5	**4.12**	**7.5**	**7.43**	**4.79**	**5.14**	**5.64**	**5.04**	**4.02**
Isopropylalcohol	NA	E **2,280**	E **2,500**	**1,690**	**2,580**	E **2,280**	E **2,040**	E **1,620**	**6.22**
Isopropylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
Xylene (m&p)	<4.3	**14.6**	**52.9**	**5.29**	**10.7**	**8.38**	**7.64**	**7.77**	ND
Methyl Ethyl Ketone		**48.9**	**124**	**46.9**	**70.7**	**54.2**	**51**	**41.6**	ND
MTBE	NA	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	<3.4	**2.57**	**1.6**	**10.8**	**7.95**	**1.6**	**1.6**	**1.53**	**1.6**
n-Butylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
Xylene (o)	<4.3	**4.6**	**13.8**	**2.17**	**4.51**	**3.25**	**2.95**	**3.04**	ND
Propylene	NA	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene		ND	ND	ND	ND	ND	ND	ND	ND
Styrene	<1.0	**2**	**1.23**	ND	**1.58**	**1.36**	**1.06**	**1.32**	ND
Tetrachloroethene		**69.1**	**72.5**	**3,510**	**2,610**	**271**	**929**	**140**	ND
Tetrahydrofuran	NA	**43.6**	**51.3**	**35.4**	**59.8**	**44.5**	**37.7**	**36.5**	ND
Toluene	1.0 - 6.1	**96.4**	**273**	**4.14**	**6.21**	**4.86**	**15**	**4.86**	**1.62**
trans-1,2-Dichloroethene	NA	ND	ND	**7.21**	**3.6**	ND	ND	ND	ND
trans-1,3-Dichloropropene	NA	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	<1.7	**1.56**	**1.66**	**687**	**508**	**0.913**	**5.91**	**0.591**	ND
Trichlorofluoromethane	NA	**1.35**	**1.68**	**3.42**	**1.24**	**1.18**	**1.4**	**1.35**	**1.24**
Trichlorotrifluoroethane		ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	<1.0	ND	ND	ND	**0.306**	ND	ND	ND	ND
*Total PVOCs**		132.5	381.7	24.1	37.3	31.1	40.8	26.2	5.6
*Total CVOCs***		70.7	74.2	4,204.7	3,150.2	278.1	938.9	140.6	ND
*Total VOCs****		4,741.3	5,615.1	7,670.4	8,213.9	4,735.9	4,921.1	3,299.2	45.4

Notes:
NA No guidance value or standard available
(a) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Summary of Background Levels for Selected Compounds (NYSDOH Database, Outdoor values)
* Petroleum Volatile Organic Compounds
** Chlorinated Volatile Organic Compounds
*** Volatile Organic Compounds

TABLE 12
FORMER EAST COAST INDUSTRIAL UNIFOMS SITE
Brooklyn, NY
Parameters Detected Above Track 1 Soil Cleanup Objectives

COMPOUND	Range in Exceedances	Frequency of Detection	SB1	SB2	SB3		SB4		SB5				SB6			SB7
			(7-9')	(7-9')	(0-1')	(7-9')	(0-4')	(7-9')	(0-5')	(8-10')	(23-25')	(25-27')	(0-5')	(8-10')	(23-25')	(22-25')
Sample Results in µg/kg																
1,2,4-Trimethylbenzene	1,600 - 14,000	6									4,100				1,600	
Acetone	51 -690	9	53 JS	51 S		52 S		51 JS		51 JS				51 JS		
m&p-Xylenes	640-650	2													650 J	
Methylene Chloride	63-410	11									190 JS	190 JS			410 JS	100 JS
o-Xylenes	590-790	2													790 J	
Sample Results in µg/kg																
4,4-DDE	6-14	3														
4,4-DDT	4.3-55	2							4.3							
Sample Results in mg/kg																
Barium	592	1														
Cadmium	1,260-22,700	2	1,260		22,700											
Copper	65	1			65											
Mercury	0.25-1.55	5			1.55		0.25		1.52				0.42			
Lead	189-1,220	7			263		244		315				1,110			
Zinc	118-555	7			237		181		272				555			

COMPOUND	Range in Exceedances	Frequency of Detection	SB8		SB9	SB10		SB11		SB12			SB13		SB14			SB15	
			(7-10')	(22-25')	(21-24')	(19-21')	(22-25')	(0-1')	(22-25')	(0-1')	(8-10')	(22-25')	(8-10')	(22-25')	(7-10')	(12-15')	(22-25')	(8-10')	(23-25')
Sample Results in µg/kg																			
1,2,4-Trimethylbenzene	1,600 - 14,000	6					10,000		14,000			9,600		12,000					
Acetone	51 -1,300	9	56 S	690 JS													1,300 JS		
m&p-Xylenes	640-650	2												640					
Methylene Chloride	63-410	11		96 JS	63 JS	110 JS	320 JS		310 JS			300 JS	130 JS	140 JS					
Napthalene	18,000	1							18,000										
o-Xylenes	590-790	2												590					
Sample Results in µg/kg																			
Benzo(a)anthracene	1,300-3300	2														3,300			1,300
Benzo(a)pyrene	2,600	1														2,600			
Benzo(b)fluoranthene	1,300-3100	2														3,100			1,300
Benzo(k)fluoranthene	980	1														980			
Chrysene	1,200-3200	2														3,200			1,200
Dibenzo(a,h)anthracene	370	1														370			
Dibenzofuran	670	1														670			
Indeno(1,2,3-cd)pyrene	570-1100	2														1,100			570
Sample Results in µg/kg																			
4,4-DDE	6-14	3						14	6										
4,4-DDT	4.3-55	2						55	23										
Sample Results in mg/kg																			
Barium	592	1						592											
Cadmium	1,260-22,700	2																	
Copper	65	1																	
Mercury	0.25-1.55	5																0.36	
Lead	189-1,220	7						1,220 N		238 N					189 N			220 N	
Zinc	118-555	7						474		234	118								

TABLE 13
FORMER EAST COAST INDUSTRIAL UNIFORMS SITE
Brooklyn, NY
Parameters Detected Above Ambient Water Quality Standards

VOCs / SVOCs

COMPOUND	Range in Detections	MW1D	MW2	MW3	MW4S	MW4D	MW5	MW6S	MW6D	MW7	MW8	MW9S	MW9D	SB2	SB4	SB6	SB8	SB10	SB12
Sample Results in (µg/L)																			
1,2,4-Trimethylbenzene	5.2-290				7.1	5.8		290	5.2	59						110	7.9	60	63
1,3,5-Trimethylbenzene	6.5-35							35		11						27		9.5	6.5
Benzene	1.7-23					1.7			2.5			5.8 S	23						27
Chloroform	8.4												8.4 J						
cis-1,2-Dichloroethene	5.1-54			5.1	6.4		8.5	5.8	9.5	54	24							6.8	
Ethyl Benzene	10-26							48		10			11			20			66
Isopropylbenzene	6-25							25		6						10			14
m/p-Xylenes	6.3-35							35		6.3									
n-Butylbenzene	5.1-24							24		5.1						5.6			
n-Propylbenzene	6.4-46			8.1				46		9.2						16		6.4	17
o-Xylene	6.3-20							6.3		6.8						20			
Tetrachloroethene	6.8-540		16				18	25	6.8	540	33			5.3	6.9		8.4	40	
Trichloroethene	14-53	14					15			53	15								
2-Methylnapthalene	53-2000							2000								750		53	75
Benzo(a)anthracene	0.022-33															3.3	0.067	0.022	0.21
Benzo(b)fluoranthene	0.056-33															3.3	0.056		0.18
Benzo(k)fluoranthene	0.022-1.7															1.7	0.022		0.067
Bis(2-ethylhexyl)phthalate	9.8										9.8								
Chrysene	0.022-3.9															3.9	0.089	0.022	0.19
Fluorene	130							130 J											
Indeno(1,2,3-cd)pyrene	0.022-1.1															1.1	0.022		0.067
Naphthalene	290-550							550								290			
Phenanthrene	52-380							380		52						150			

Metals (dissolved)

COMPOUND	Range in Detections	MW1S	MW2	MW3	MW4S	MW5	MW6S	MW6D	MW7S	MW8	MW9S
Sample Results in (µg/L)											
Iron	510-7680	510	710	3570	6250 N	1240 N	7680	580 N	540		760
Magnesium	130000										130000
Manganese	650-9730	650	2690	1320	5970	9730	6040	3550	7860	2330	8690
Sodium	25400-116000	74700	109000	48300 N	41200 N	40700 N	54200 N	25400 N	76100	102000	116000

Metals (total)

COMPOUND	Range in Detections	MW2	MW3	MW4S	MW5	MW6S	MW6D	MW7	MW8	MW9S
Sample Results in (µg/L)										
Arsenic	33								33	
Barium	1680-4480	1680						2890	4480	
Beryllium	11-22	11						16	22	
Chromium	436-979	466						436	979	
Copper	574-1110	574						632	1110	
Iron	760-791000	362000	25400	33100	25500	19000	10300	483000	791000	760
Mercury	1.3								1.3	
Magnesium	57100-169000	86000						57100	169000	130000
Manganese	1770-49900	12600	1770	5690	10300	5610	3660	49900	32300	8690
Sodium	25400-116000	102000	47200	42200	43000	66600	25400	83800	104000	116000
Nickel	344-582	344						455	582	
Lead	47-990	368				47		272	990	
Zinc	7540									7540

ATTACHMENT B
Excavation Work Plan

EXCAVATION WORK PLAN

B-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination (excavation 15 or more below the surface), the site owner or their representative will notify the Department. Currently, this notification will be made to:

Jane O'Connell

Regional Hazardous Waste Remediation Engineer

NYSDEC Region 2

47-40 21st Street

Long Island City, NY 11101

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix D of this document,
- Identification of disposal facilities for potential waste streams,

- Identification of sources of any anticipated backfill, along with all required chemical testing results.

B-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

B-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

B-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

The qualified environmental professional will be responsible for ensuring that all outbound trucks will be cleaned as needed before leaving the site until the activities performed under this section are complete. Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

B-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with covers. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be inspected prior to leaving the site. Trucks will be dry brushed when possible to remove collected soil.

Truck transport routes are as follows: Head east on Jamaica Avenue to the Van Wyck Expressway. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site

queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; (g) community input.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

B-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

B-7 MATERIALS REUSE ON-SITE

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in **Table 1**. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

B-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

B-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the RAWP. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), as shown on **Figure 8**, this will constitute a modification of the cover element of the remedy and the

upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

B-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in **Table 1**. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Fill and stone materials which can be certified as virgin mined material will not require testing assuming adequate documentation is obtained and submitted to the NYSDEC for approval. Under no circumstances will fill materials be imported to the site without prior approval from the NYSDEC Project Manager. If sufficient documentation is not obtained, fill materials will be tested at the in accordance with NYSDEC CP51 recommended frequency. Sample analysis will include TCL VOCs, TCL SVOCs, PCBs, Pesticides and TAL metals. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC.

Trucks entering the site with imported soils will be securely covered with covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

B-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

B-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

B-13 COMMUNITY AIR MONITORING PLAN

The CAMP provides measures for protection for the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in the remedial work) from potential airborne contaminant releases resulting from remedial activities at construction sites.

The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that the remedial work did not spread contamination off-site through the air. The primary concerns for this site are nuisance odors and dust particulates.

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report. The complete CAMP developed for this site is included in **Attachment D** of the project RAWP.

B-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous

soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

B-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

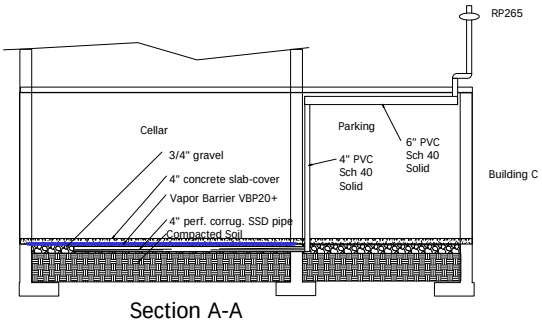
- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

B-16 OTHER NUISANCES

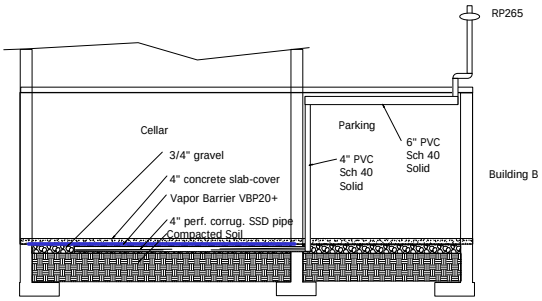
A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all excavation work.

A plan will be developed and utilized by the contractor for all excavation work to ensure compliance with local noise control ordinances.

ATTACHMENT C
SSD System Details



Section A-A



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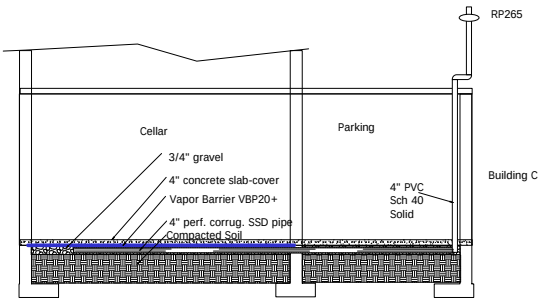

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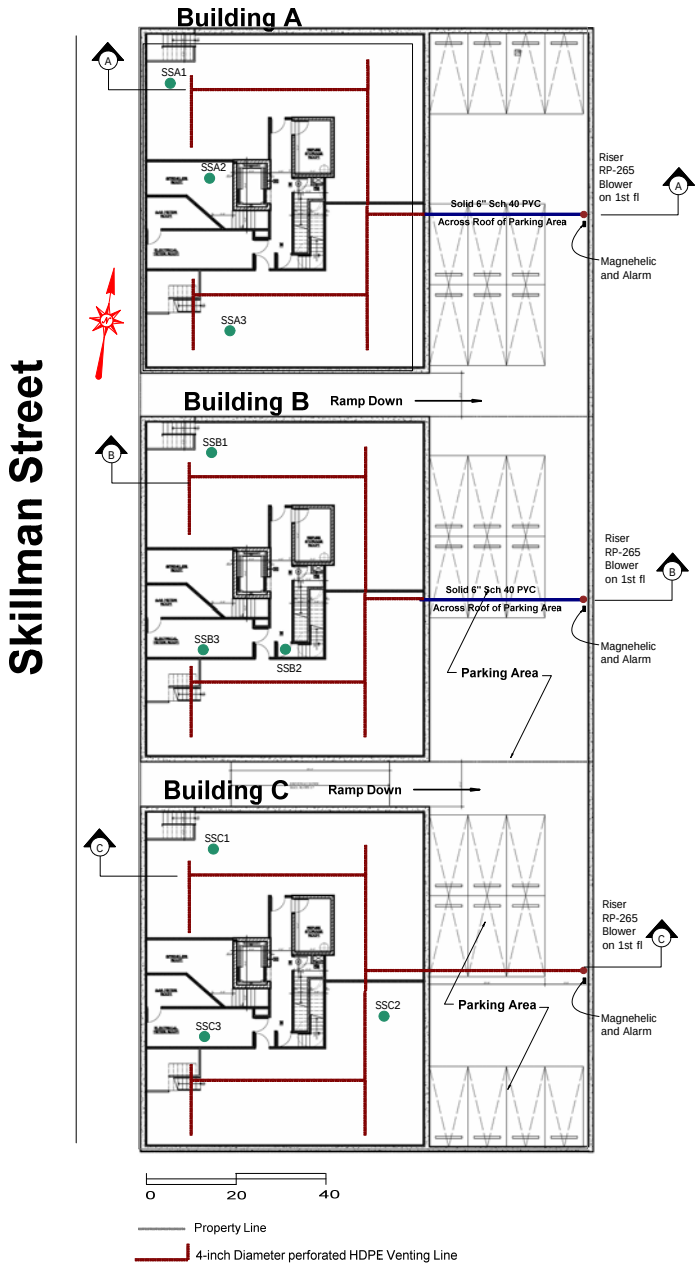


AMC Engineering PLLC
99 Jericho Turnpike
Suite 300J
Jericho, NY 11753
516 417-8588

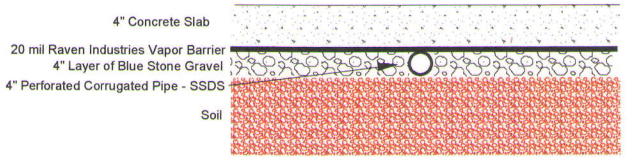
FORMER EAST COAST INDUSTRIAL UNIFORM SITE

39 SKILLMAN STREET
BROOKLYN, NY

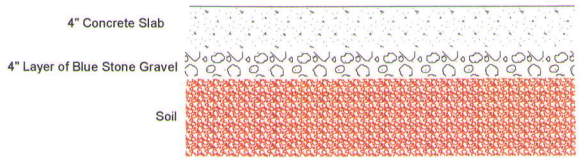
FIGURE 14 AS BUILT EXTENT OF SUBSLAB DEPRESSURIZATION SYSTEM

12/2/13

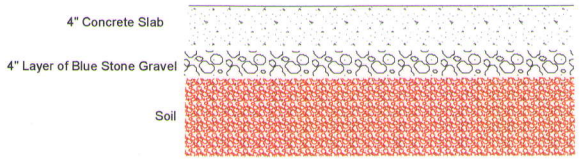
Building Slab Detail



Parking Area Detail



Ramp Detail



MWx

4" Concrete Building Slab

4" Concrete Parking Garage Slab

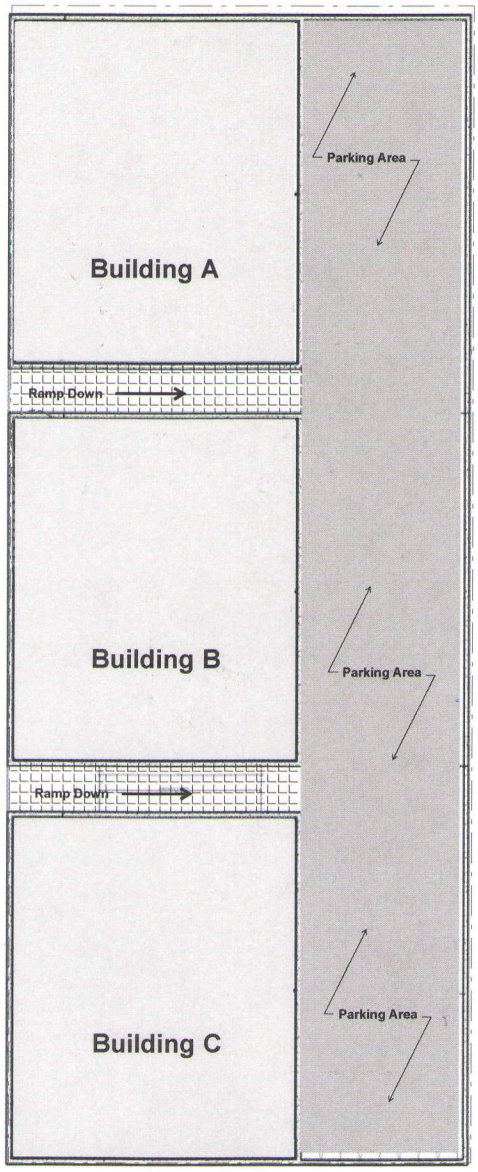
4" Concrete Entry Ramp

0 20 40

Scale: 1 inch = 40 feet

Property Line

Skillman Street

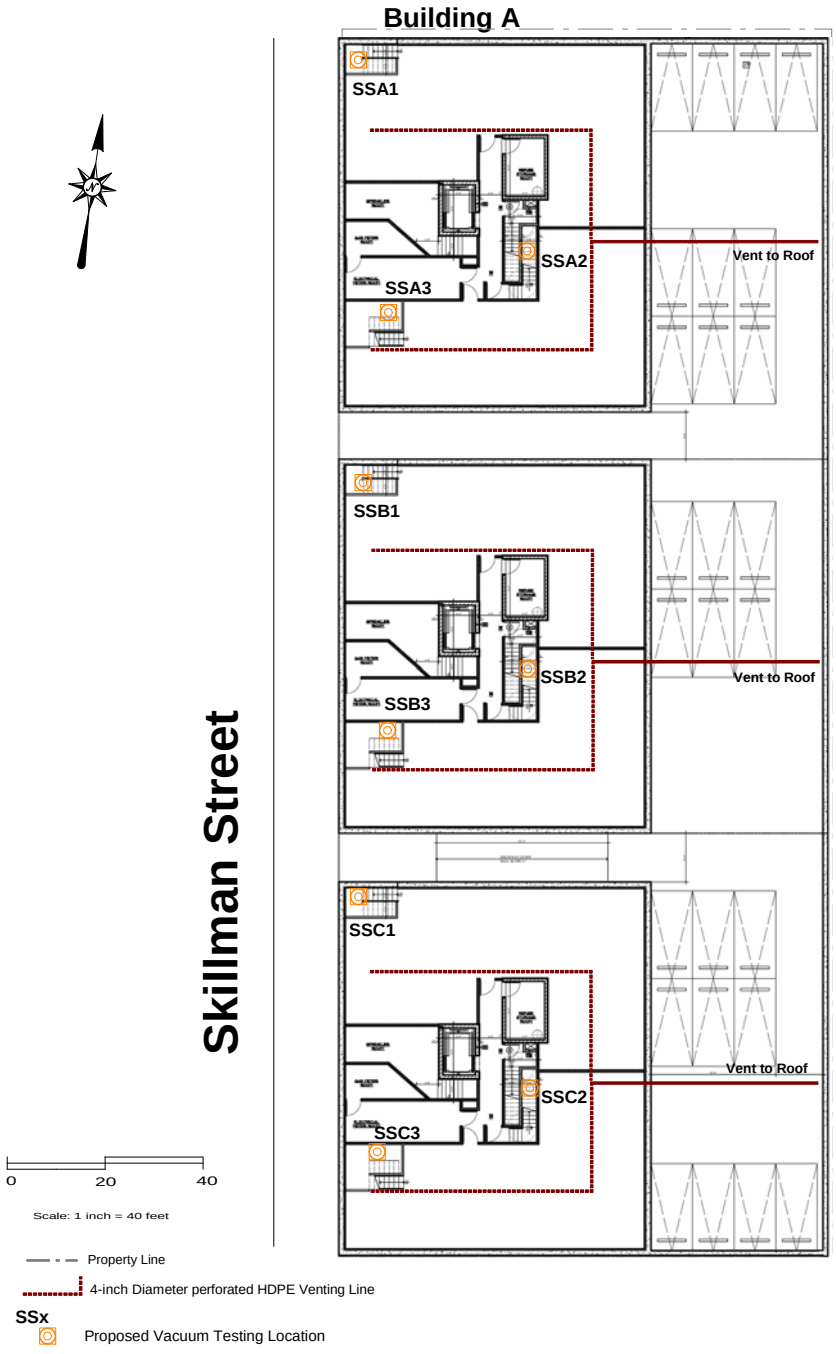


STATE OF NEW YORK
ARIEL CZEMERINSKI
LICENSED PROFESSIONAL ENGINEER
076508

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631.924.2870

FORMER EAST COAST INDUSTRIAL UNIFORM SITE
39 SKILLMAN STREET, BROOKLYN, NY

FIGURE 13 LOCATION OF COVER SYSTEM TYPES



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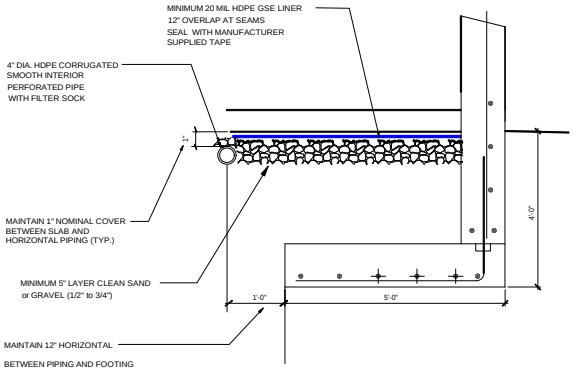
Former East Coast Industrial Uniform Site
39 Skillman Street, Brooklyn, NY

FIGURE 11 SSDS Test Locations

NOTES:

1. FAN TO BE RADONAWAY HIGH-FLOW IN-LINE FAN, MODEL RP 265, OR APPROVED EQUAL.
2. FAN AND ON/OFF SWITCH TO BE HARD-WIRED TOGETHER TO 115 VOLT CIRCUIT.
3. SECURE RUBBER COUPLING WITH SCREW TO PREVENT FAN ASSEMBLY FROM SLIPPING DOWN VERTICAL PIPE.
4. DWYER MAGNAHELIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
5. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
6. HIGH DENSITY POLYETHYLENE CORRUGATED PERFORATED PIPE WITH SMOOTH INTERIOR WATERWAY. ADS N-12 OR APPROVED EQUAL.
7. WRAP 4" HDPE PIPE WITH GEOTEXTILE FABRIC, GSE NW4 OR APPROVED EQUAL.
8. CHECKPOINT IIA MITIGATION SYSTEM ALARM , RADONAWAY, OR APPROVED EQUAL.
9. EBC MUST PRE-APPROVE ALL FILLMATERIAL BEFORE DELIVERY TO SITE.

Detail A



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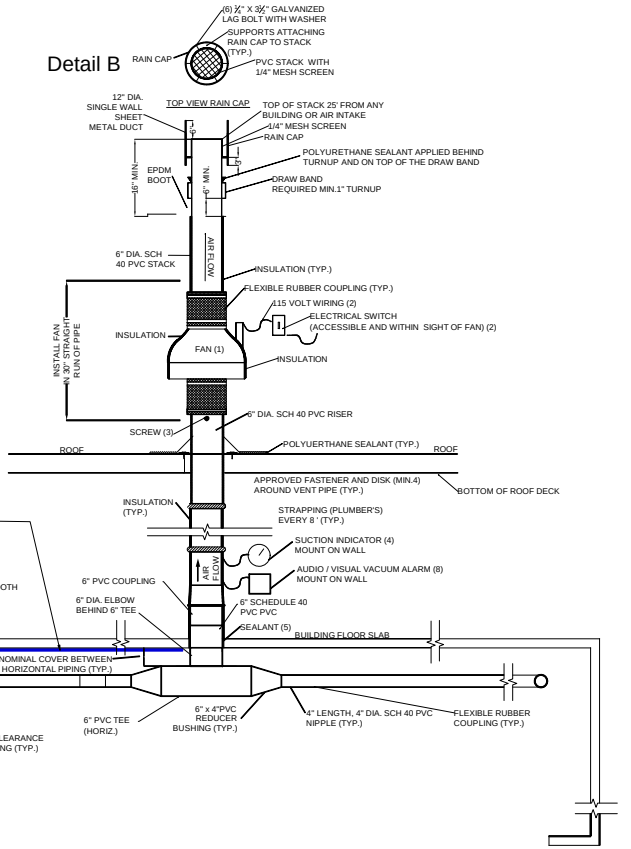
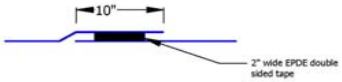
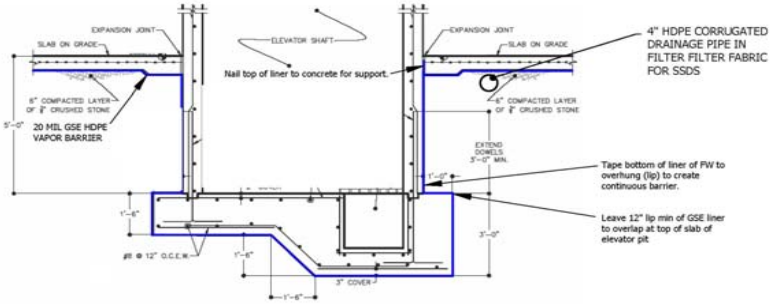


Detail C



20 mil HDPE liner Overlap Detail

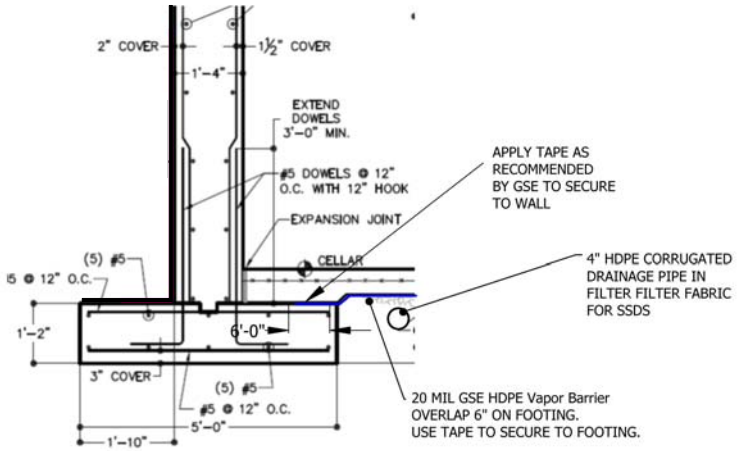
N.T.S.



EVEVATOR PIT DETAIL

Detail D

Detail E



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FORMER EAST COAST INDUSTRIAL UNIFORMS SITE
39 SKILLMAN STREET, BROOKLYN, NY

SUB SLAB DEPRESSURIZATION SYSTEM DETAILS

SITE INSPECTION CHECKLIST

Site Inspection Checklist - Subslab Depressurization System
39 Skillman Street
Brooklyn, NY

Date: _____ Time: _____

Inspector Name/Organization: _____

Physical Inspection of Fans

Fan 1 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Fan 2 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Fan 3 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Repairs Needed and / or Maintenance at this time?

Signature: _____ Date: _____

SITE INSPECTION CHECKLIST

Site Inspection Checklist - Cover System
39 Skillman Street
Brooklyn, NY

Date: _____ Time: _____

Inspector Name/Organization: _____

Visual Inspection of Concrete Slabs

Building 1 Inspect concrete slab for cracks, perforations and patching

Describe General Condition of Slab _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Building 2 Inspect for cracks, perforations and patching

Describe General Condition of Slab _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Exterior Impervious Cap Areas (Driveway, Parking areas and Walkways) Inspect for cracks, perforations and patching

Describe General Condition of Impervious Cap _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Exterior Green Areas Inspect for signs of disturbance

Describe General Condition of Soil Cover _____

_____

Describe any Indications of Recent Disturbance _____

_____

Repairs Needed and / or Maintenance at this time?

_____

_____

_____

_____

Signature: _____ Date: _____

NOTES:

1. FAN TO BE RADONAWAY HIGH-FLOW IN-LINE FAN, MODEL RP 265, OR APPROVED EQUAL.
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4. DWYER MAGNAHELIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
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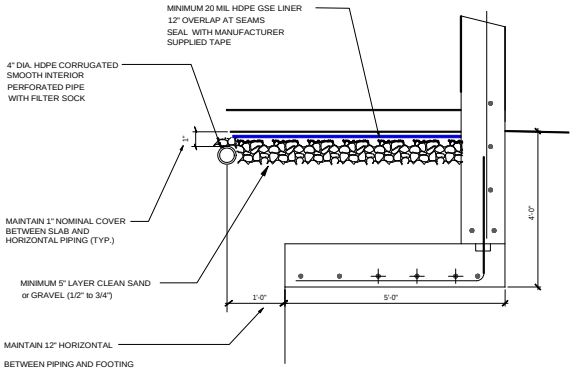
Detail A



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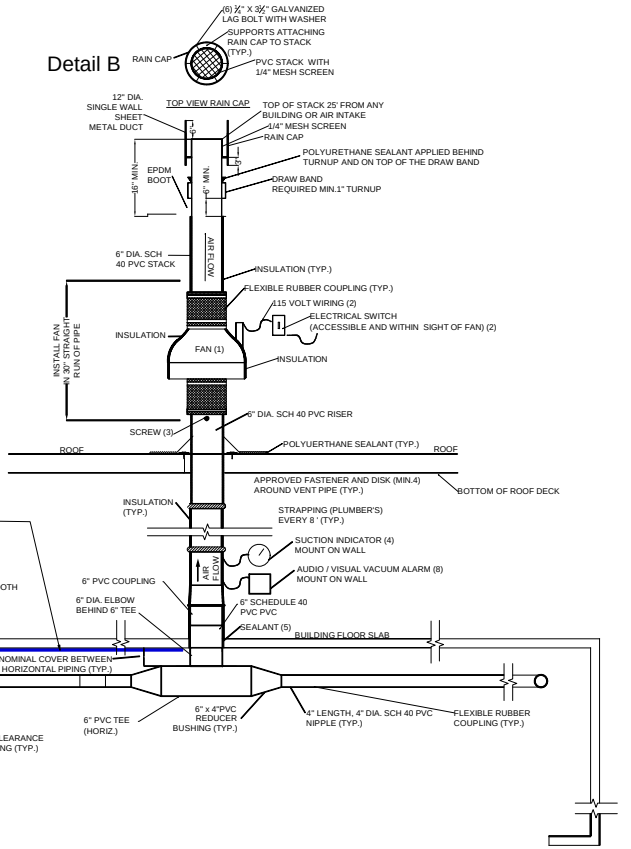

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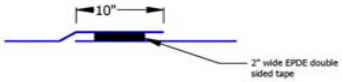
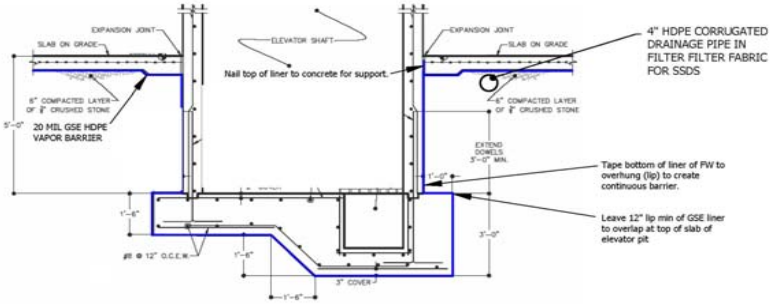


20 mil HDPE liner Overlap Detail

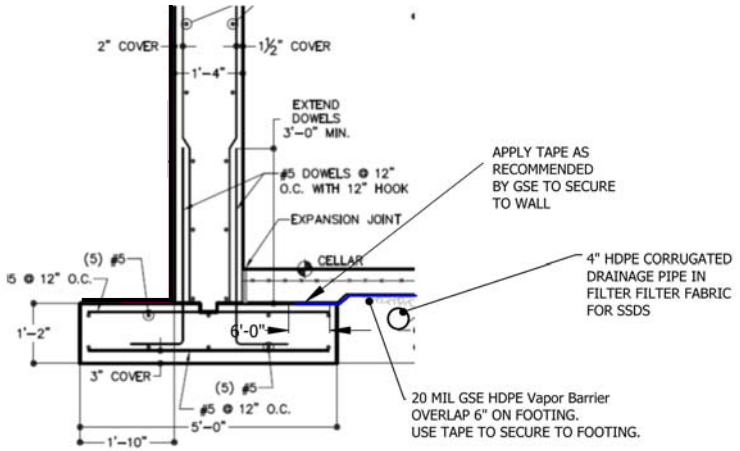
N.T.S.



EVEVATOR PIT DETAIL

Detail D

Detail E



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FORMER EAST COAST INDUSTRIAL UNIFORMS SITE
39 SKILLMAN STREET, BROOKLYN, NY

SUB SLAB DEPRESSURIZATION SYSTEM DETAILS

RadonAway™
The world's leading radon fan manufacturer

RP Series

Radon Mitigation Fan

All RadonAway™ fans are specifically designed for radon mitigation. RP Series Fans provide superb performance, run ultra-quiet and are attractive. They are ideal for most sub-slab radon mitigation systems.

Features

- Energy efficient
- Ultra-quiet operation
- Meets all electrical code requirements
- Water-hardened motorized impeller
- Seams sealed to inhibit radon leakage (RP140 & RP145 double snap sealed)
- RP140 and RP260 Energy Star® Rated
- ETL Listed - for indoor or outdoor use
- Thermally protected motor
- Rated for commercial and residential use

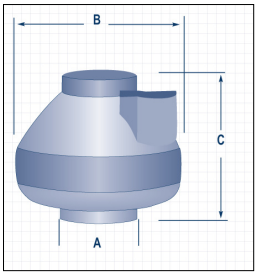
MODEL	P/N	FAN DUCT DIAMETER	WATTS	MAX. PRESSURE"WC	TYPICAL CFM vs. STATIC PRESSURE WC				
					0"	.5"	1.0"	1.5"	2.0"
RP140*	23029-1	4"	15-21	0.8	135	70	-	-	-
RP145	23030-1	4"	41-72	2.1	166	126	82	41	3
RP260*	23032-1	6"	50-75	1.6	272	176	89	13	-
RP265	23033-1	6"	91-129	2.3	334	247	176	116	52
RP380*	28208	8"	95-152	2.3	497	353	220	130	38

*Energy Star® Rated

Made in USA with US and imported parts

ETL Listed

All RadonAway inline radon fans are covered by our 5-year, hassle-free warranty



Model	A	B	C
RP140	4.5"	9.7"	8.5"
RP145	4.5"	9.7"	8.5"
RP260	6"	11.75"	8.6"
RP265	6"	11.75"	8.6"
RP380	8"	13.41"	10.53"

For Further Information Contact

9/12
P/N 02008

RadonAway™

The World's Leading
Radon Fan Manufaturer



RP Series
Installation Instructions

RadonAway
3 Saber Way | Ward Hill, MA 01835
www.radonaway.com

P/N IN020-REV K 4/11

Series Fan Installation Instructions

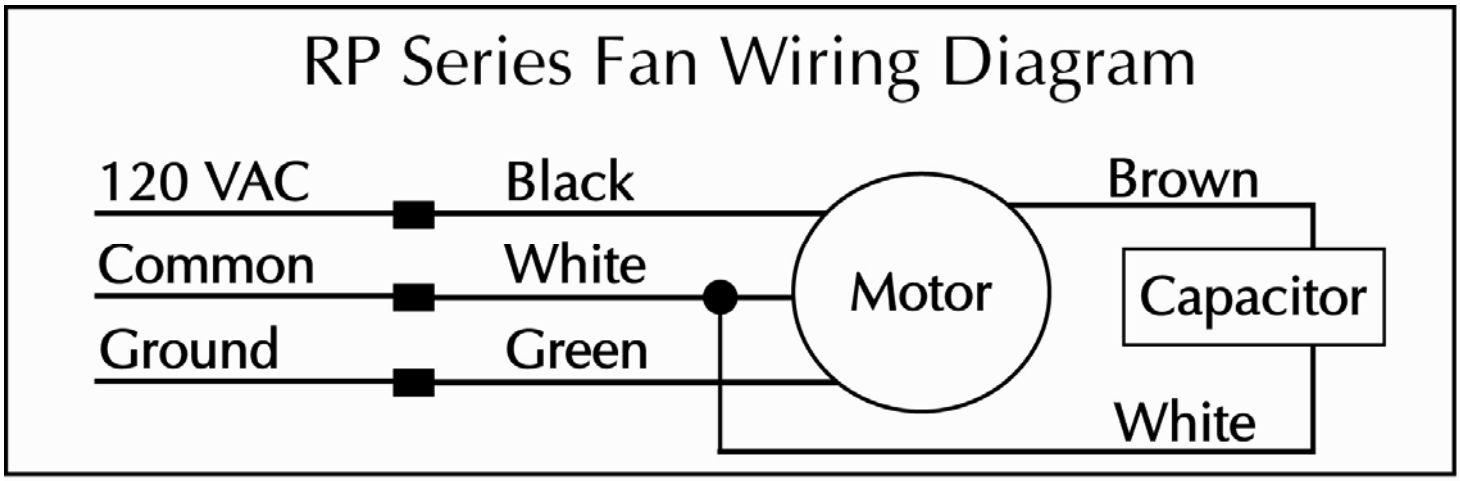
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED.
MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION.
DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible or flammable materials.
2. **WARNING!** Do not use fan to pump explosive or corrosive gases.
3. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
4. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
5. **NOTICE!** There are no user serviceable parts located inside the fan unit.
   Do NOT attempt to open. Return unit to the factory for service.
6. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician
7. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
8. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

   a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.

   b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.



1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP Series Radon Fans are intended for use by trained, professional Radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of an RP Series Fan. This instruction should be considered as a supplement to EPA standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

1.2 ENVIRONMENTALS

The RP Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F. or more than 100 degrees F.

1.3 ACOUSTICS

The RP Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of ENERGY STAR qualified in-line and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan).

1.4 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes thus blocking air flow to the RP Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes allowing for return to normal operation.

1.5 SLAB COVERAGE

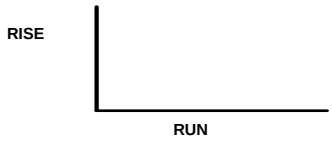
The RP Series Fan can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP Series Fan best suited for the sub-slab material can improve the slab coverage. The RP140/145/155 are best suited for general purpose use. The RP260 can be used where additional airflow is required and the RP265/380 is best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.6 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP Series Fan **MUST** be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP Series Fans are **NOT** suitable for underground burial.

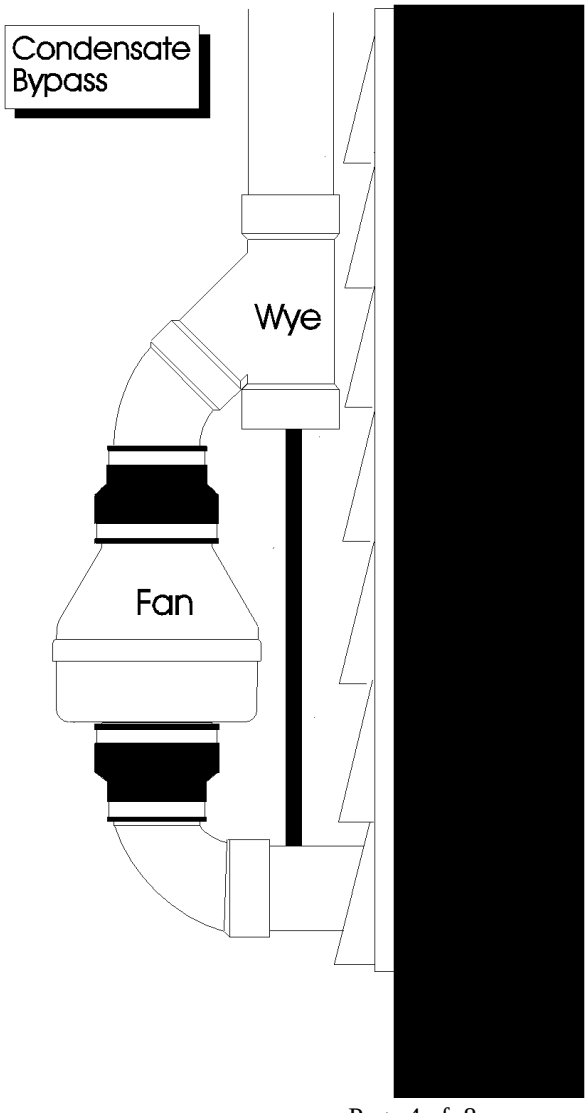
For RP Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Dia.	Minimum Rise per Ft of Run*				
	@25 CFM	@50 CFM	@100 CFM	@200 CFM	@300 CFM
6"	-	3/16	1/4	3/8	3/4
4"	1/8	1/4	3/8	2 3/8	-
3"	1/4	3/8	1 1/2	-	-



*Typical RP1xx/2xx Series Fan operational flow rate is 25 - 90 CFM 0n 3" and 4" pipe. (For more precision, determine flow rate by measuring Static Pressure, in WC, and correlate pressure to flow in the performance chart in the addendum.)

Under some circumstances in an outdoor installation a condensate bypass should be installed in the outlet ducting as shown. This may be particularly true in cold climate installations which require long lengths of outlet ducting or where the outlet ducting is likely to produce large amounts of condensation because of high soil moisture or outlet duct material. Schedule 20 piping and other thin-walled plastic ducting and Aluminum downspout will normally produce much more condensation than Schedule 40 piping.



The bypass is constructed with a 45 degree Wye fitting at the bottom of the outlet stack. The bottom of the Wye is capped and fitted with a tube that connects to the inlet piping or other drain. The condensation produced in the outlet stack is collected in the Wye fitting and drained through the bypass tube. The bypass tubing may be insulated to prevent freezing.

1.7 "SYSTEM ON" INDICATOR

A properly designed system should incorporate a "System On" Indicator for affirmation of system operation. A manometer, such as a U-Tube, or a vacuum alarm is recommended for this purpose.

1.8 ELECTRICAL WIRING

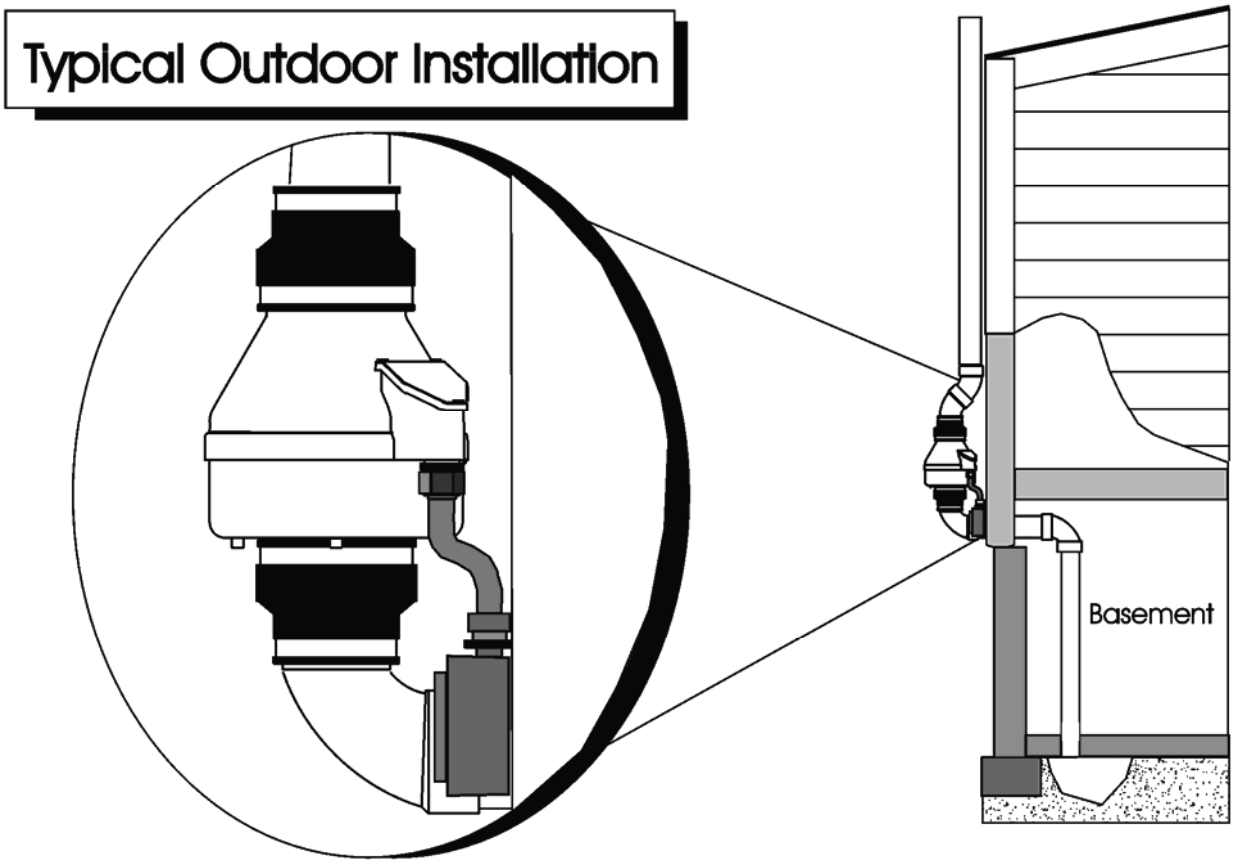
The RP Series Fans operate on standard 120V 60 Hz. AC. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a U.L. listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.

1.9 SPEED CONTROLS

The RP Series Fans are rated for use with electronic speed controls, however, they are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control Cat. No. 94601-I.

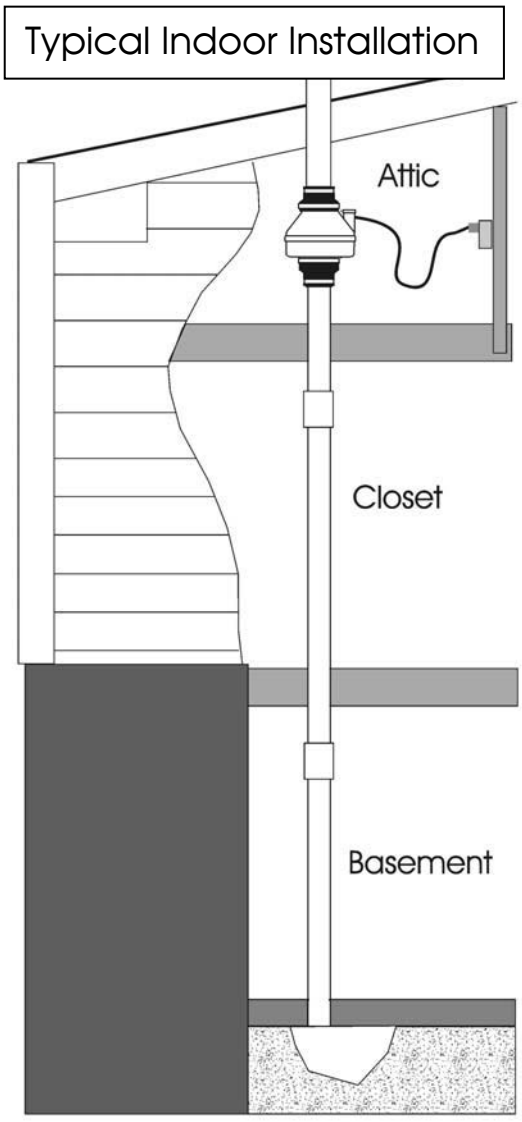
2.0 INSTALLATION

The RP Series Fan can be mounted indoors or outdoors. (It is suggested that EPA recommendations be followed in choosing the fan location.) The RP Series Fan may be mounted directly on the system piping or fastened to a supporting structure by means of optional mounting bracket.



2.1 MOUNTING

Mount the RP Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.



2.2 MOUNTING BRACKET (optional)

The RP Series Fan may be optionally secured with the RadonAway P/N 25007-2 (25033 for RP385) mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as means of disconnect for servicing the unit and vibration isolation.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.8):

Fan Wire	Connection
Green	Ground
Black	AC Hot
White	AC Common

2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS

_____ **Verify** all connections are tight and **leak-free**.

_____ **Insure** the RP Series Fan and all ducting is secure and vibration-free.

_____ **Verify** system vacuum pressure with manometer. **Insure** vacuum pressure is **less than** maximum recommended operating pressure

(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 Feet.)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments)
See Product Specifications. If this is exceeded, increase the number of suction points.

_____ **Verify Radon levels by testing to EPA protocol.**

RP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the RP Series Fan:

Typical CFM Vs Static Pressure "WC									
	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	-
RP145	166	146	126	104	82	61	41	21	3
RP260	272	220	176	138	103	57	13	-	-
RP265	334	291	247	210	176	142	116	87	52
RP380*	497	401	353	281	220	176	130	80	38

* Tested with 6" inlet and discharge pipe.

Power Consumption 120 VAC, 60Hz 1.5 Amp Maximum		Maximum Recommended Operating Pressure* (Sea Level Operation)**	
RP140	17 - 21 watts	RP140	0.8" W.C.
RP145	41 - 72 watts	RP145	1.7" W.C.
RP260	52 - 72 watts	RP260	1.5" W.C.
RP265	91 - 129 watts	RP265	2.2" W.C.
RP380	95 - 152 watts	RP380	2.0" W.C.

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

	Size	Weight	Inlet/Outlet
RP140	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP145	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP260	8.6H" x 11.75" Dia.	5.5 lbs.	6.0" OD
RP265	8.6H" x 11.75" Dia.	6.5 lbs.	6.0" OD
RP380	10.53H" x 13.41" Dia.	11.5 lbs.	8.0" OD

Recommended ducting: 3" or 4" RP1xx/2xx, 6" RP380, Schedule 20/40 PVC Pipe
Mounting: Mount on the duct pipe or with optional mounting bracket.
Storage temperature range: 32 - 100 degrees F.
Normal operating temperature range: -20 - 120 degrees F.
Maximum inlet air temperature: 80 degrees F.
Continuous Duty
Class B Insulation
Thermally Protected
3000 RPM
Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL® 77728 Tested to UL Std. 507

ENERGY STAR **RP140 and RP260 Only.**

TESTED/CERTIFIED HOME VENTILATING INSTITUTE® DIVISION OF AMCA

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GP/XP/XR/RP Series Fan for shipping damage within 15 days of receipt. Notify **RadonAway of any damages immediately**. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open.** Return unit to factory for service.

Install the GP/XP/XR/RP Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

WARRANTY

Subject to any applicable consumer protection legislation, RadonAway warrants that the GPX01/XP/XR/RP Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway will replace any Fan which fails due to defects in materials or workmanship. The Fan must be returned (at Owner's cost) to the RadonAway factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway.

5 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway will extend the Warranty Term of the fan to 5 years from date of manufacture if the Fan is installed in a professionally designed and professionally installed radon system or installed as a replacement fan in a professionally designed and professionally installed radon system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. Outside the Continental United States and Canada the extended Warranty Term is limited to one (1) year from the date of manufacture.

RadonAway is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE GPx01/XP/XR/RP SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping cost to and from factory.

RadonAway
3 Saber Way
Ward Hill, MA 01835
TEL. (978) 521-3703
FAX (978) 521-3964

Record the following information for your records:

Serial No._____
Purchase Date_____

INSTALLATION & OPERATING INSTRUCTIONS
Instruction P/N IN015 Rev E
FOR *CHECKPOINT IIa*™ P/N 28001-2 & 28001-3
RADON SYSTEM ALARM

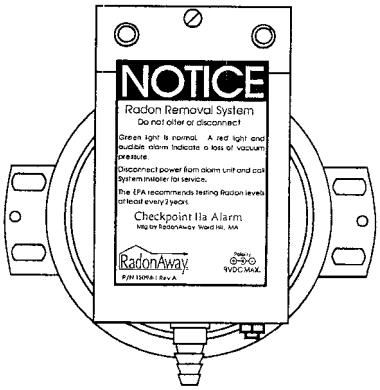
INSTALLATION INSTRUCTIONS
(WALL MOUNTING)

Select a suitable wall location near a vertical section of the suction pipe. The unit should be mounted about four or five feet above the floor and as close to the suction pipe as possible. Keep in mind that with the plug-in transformer provided, the unit must also be within six feet of a 120V receptacle. **NOTE: The Checkpoint IIa is calibrated for vertical mounting, horizontal mounting will affect switchpoint calibration.**

Drill two ¼" holes 4" apart horizontally where the unit is to be mounted.

Install the two ¼" wall anchors provided.

Hang the CHECKPOINT IIa from the two mouting holes located on the mounting bracket. Tighten the mounting screws so the unit fits snugly and securely against the wall.



Drill a 5/16" hole into the side of the vent pipe about 6" higher than the top of the unit.

Insert the vinyl tubing provided about 1" inside the suction pipe.

Cut a suitable length of vinyl tubing and attach it to the pressure switch connector on the CHECKPOINT IIa.

CALIBRATION AND OPERATION.

The CHECKPOINT IIa units are calibrated and sealed at the factory to alarm when the vacuum pressure falls below the factory setting and should not normally require field calibration. Factory Settings are:
28001-2 -.25" WC Vacuum
28001-3 -.10" WC Vacuum

To Verify Operation:

With the exhaust fan off or the pressure tubing disconnected and the CHECKPOINT IIa plugged in, both the red indicator light and the audible alarm should be on.

Turn the fan system on or connect the pressure tubing to the fan piping. The red light and the audible alarm should go off. The green light should come on.

Now turn the fan off. The red light and audible alarm should come on in about two or three seconds and the green light should go out.

WARRANTY INFORMATION

Subject to applicable consumer protection legislation, RadonAway warrants that the CHECKPOINT IIa will be free from defective material and workmanship for a period of (1) year from the date of purchase. Warranty is contingent on installation in accordance with the instructions provided. This warranty does not apply where repairs or alterations have been made or attempted by others; or the unit has been abused or misused. Warranty does not include damage in shipment unless the damage is due to the negligence of RadonAway. All other warranties, expressed or written, are not valid. To make a claim under these limited warranties, you must return the defective item to RadonAway with a copy of the purchase receipt. RadonAway is not responsible for installation or removal cost associated with this warranty. In no case is RadonAway liable beyond the repair or replacement of the defective product FOB RadonAway.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO WARRANTY OF MERCHANTIBILITY. ALL OTHER WARRANTIES, EXPRESSED OR WRITTEN, ARE NOT VALID.

For service under these warranties, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. **No returns can be accepted without an RMA.** If factory return is required, the customer assumes all shipping costs to and from factory.

Manufactured by:
RadonAway
Ward Hill, MA
(978)-521-3703

ATTACHMENT D
Health and Safety Plan

FORMER EAST COAST INDUSTRIAL UNIFORMS SITE

39 SKILLMAN STREET
BROOKLYN, NEW YORK
Block 1886 Lot 10

CONSTRUCTION HEALTH AND SAFETY PLAN

March 2012

Prepared for:
39 Skillman Street LLC
331 Rutledge Street, Suite 209
Brooklyn, NY 11211

Prepared By:

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961

HEALTH AND SAFETY PLAN

Site:	**Former East Coast Industrial Uniforms Site**
Location:	**39 Skillman Street, Brooklyn, New York**
Prepared By:	**ENVIRONMENTAL BUSINESS CONSULTANTS**
Date Prepared:	**March - 2012**
Version:	**1**
Revision:	**0**
Project Description:	**INTERIM REMEDIAL MEASURE**
Waste types:	Solid
Characteristics:	Volatile Organic Compounds - Gasoline related hydrocarbons, Chlorinated Solvents. Semi-Volatile Organic Compounds - Fuel oil related hydrocarbons
Overall Hazard:	Low to Moderate

ENVIRONMENTAL BUSINESS CONSULTANTS (EBC) AND EBC'S SUBCONTRACTORS DO NOT GUARANTEE THE HEALTH OR SAFETY OF ANY PERSON ENTERING THIS SITE. DUE TO THE NATURE OF THIS SITE AND THE ACTIVITY OCCURRING THEREON, IT IS NOT POSSIBLE TO DISCOVER, EVALUATE, AND PROVIDE PROTECTION FOR ALL POSSIBLE HAZARDS WHICH MAY BE ENCOUNTERED. STRICT ADHERENCE TO THE HEALTH AND SAFETY GUIDELINES SET FORTH HEREIN WILL REDUCE, BUT NOT ELIMINATE, THE POTENTIAL FOR INJURY AT THIS SITE. THE HEALTH AND SAFETY GUIDELINES IN THIS PLAN WERE PREPARED SPECIFICALLY FOR THIS SITE AND SHOULD NOT BE USED ON ANY OTHER SITE WITHOUT PRIOR RESEARCH AND EVALUATION.

CONSTRUCTION HEALTH AND SAFETY PLAN
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EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY11961
Phone 631.604.4000
Fax 631.924.2870

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FIGURES

APPENDICES

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY11961
PHONE 631.604.4000
FAX 631.924.2870

STATEMENT OF COMMITMENT

This Construction Health and Safety Plan (CHASP) has been prepared to ensure that workers are not exposed to risks from hazardous materials during the Interim Remedial Measure (IRM) activities planned for 39 Skillman Street Brooklyn, New York.

This CHASP, which applies to persons present at the site actually or potentially exposed to hazardous materials, describes emergency response procedures for actual and potential chemical hazards. This CHASP is also intended to inform and guide personnel entering the work area or exclusion zone. Persons are to acknowledge that they understand the potential hazards and the contents of this Health and Safety policy by signing off on receipt of their individual copy of the document. The Environmental Contractor and Excavation Contractor, its subcontractors and suppliers are retained as independent contractors and are responsible for ensuring the health and safety of their own employees. The Environmental Contractor and Excavation Contractor have the option of adopting this CHASP or providing its own for the planned scope of work under the IRMWP.

1.0 INTRODUCTION

This document describes the health and safety guidelines developed by Environmental Business Consultants (EBC) for implementation of a Remedial Investigation at the site located at 39 Skillman Street, Brooklyn NY, to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes during the investigative activities. In accordance with the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1910.120 Hazardous Waste Operations and Emergency Response Final rule, this CHASP, including the attachments, addresses safety and health hazards related to Interim Remedial Measure activities and is based on the best information available. The CHASP may be revised by EBC at the request of 39 Skillman Street LLC, ("the owner") and/or the New York State Department of Environmental Conservation (NYSDEC) or the New York State Department of Health (NYSDOH) upon receipt of new information regarding site conditions. Changes will be documented by written amendments signed by EBC's Project Manager, Site Safety Officer and/or the EBC Health and Safety Consultant.

1.1 Scope

This CHASP addresses the potential hazards related to the site Interim Remedial Measure (IRM). The IRM activities include three distinct stages as described below:

1) Site mobilization of 40HR HAZWOPER trained Environmental Remediation Contractor (EnvRC).
    a) Expose, remove, clean and dispose of One 2,000 gallon above ground storage tank and one 2,000 gallon underground storage tank.
    b) Excavate, load and transport for disposal, soil contaminated with petroleum hydrocarbons or chlorinated solvents (if encountered) by EnvRCS.
    c) Collect verification (endpoint) soil samples.
    d) Demobilization of EnvRC
2) Site mobilization of 24HR HAZWOPER trained Excavation Contractor (ExC).
    a) Excavate, load and transport for disposal, historic fill soil and uncontaminated native soil (if encountered) by ExC.
    b) Collect verification (endpoint) soil samples.
    c) Demobilization of ExC

1.2 Application

The CHASP applies to all personnel involved in the above tasks who wish to gain access to active work areas, including but not limited to:

- IRM Remedial Contractor
- IRM Excavation Contractor
- EBC - AMC employees and subcontractors;
- Client representatives; and
- Federal, state or local representatives.

1.3 Site Safety Plan Acceptance, Acknowledgment and Amendments

The project superintendent and the site safety officer are responsible for informing personnel (EBC employees and/or owner or owners representatives) entering the work area of the contents of this plan and ensuring that each person signs the safety plan acknowledging the on-site

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

hazards and procedures required to minimize exposure to adverse effects of these hazards. A copy of the Acknowledgement Form is included in **Appendix A**. Site conditions may warrant an amendment to the CHASP. Amendments to the CHASP are acknowledged by completing forms included in **Appendix B**.

1.4 Key Personnel - Roles and Responsibilities

Personnel responsible for implementing this Investigation Health and Safety Plan are:

Name	Title	Address	Contact Numbers
Mr. Charles B. Sosik	EBC Principal	1808 Middle Country Road Ridge, NY 11961	(631) 504-6000 Cell (631) 357-4927
Mr. Kevin Brussee	EBC Project Manager	1808 Middle Country Road Ridge, NY 11961	(631) 504-6000 Cell (631) 338-1749
Mr. Kevin Waters	EBC Site Safety Officer	1808 Middle Country Road Ridge, NY 11961	(631) 504-6000

The project manager is responsible for overall project administration and, with guidance from the site safety officer, for supervising the implementation of this CHASP. The site safety officer will conduct daily (tail gate or tool box) safety meetings at the project site and oversee daily safety issues. Each subcontractor and supplier (defined as an OSHA employer) is also responsible for the health and safety of its employees. If there is any dispute about health and safety or project activities, on-site personnel will attempt to resolve the issue. If the issue cannot be resolved at the site, then the project manager will be consulted.

The site safety officer is also responsible for coordinating health and safety activities related to hazardous material exposure on-site. The site safety officer is responsible for the following:

1. Educating personnel about information in this CHASP and other safety requirements to be observed during site operations, including, but not limited to, decontamination procedures, designation of work zones and levels of protection, air monitoring, fit testing, and emergency procedures dealing with fire and first aid.

2. Coordinating site safety decisions with the project manager.

3. Designating exclusion, decontamination and support zones on a daily basis.

4. Monitoring the condition and status of known on-site hazards and maintaining and implementing the air quality monitoring program specified in this CHASP.

5. Maintaining the work zone entry/exit log and site entry/exit log.

6. Maintaining records of safety problems, corrective measures and documentation of chemical exposures or physical injuries (the site safety officer will document these conditions in a bound notebook and maintain a copy of the notebook on-site).

The person who observes safety concerns and potential hazards that have not been addressed in the daily safety meetings should immediately report their observations/concerns to the site safety officer or appropriate key personnel.

2.0 SITE BACKGROUND AND SCOPE OF WORK

The address for the subject property is 39 Skillman Street, Brooklyn, New York 11205. The subject property is designated as Block 1886, Lot 10 by the New York City Department of Assessment. The subject property is located in the City of New York and Borough of Brooklyn (Kings County). The lot has 250 feet of frontage on Skillman Street and is 100 feet deep for a total lot area of 25,000 square feet.

The lot is developed with three attached buildings and a parking area formerly used by the East Coast Industrial Uniform laundry facility. All buildings are currently vacant. The parking area is located on the southern end of the lot and consists of an asphalt cover. A one-story brick building is located north of the parking area. The building contains an aboveground 2,000-gallon No. 2 fuel oil storage tank in the rear and a boiler room (empty) in the front of the building.

A second one-story brick building is located north of the first, and consists of open space with several concrete lined trenches cut through the southeast end of the building. The trenches were likely used to contain wash water from numerous washing machines prior to discharge through the small aboveground oil water separator located in the southeast corner and finally to public sewer. An area in the northeastern part of this building is labeled with signage as a "hazardous waste storage". An underground storage tank (abandoned-in-place) is located near the roll-up gate entrance to the building. The underground storage tank is believed to be the 3,000-gallon No. 2 fuel oil tank identified on the NYSDEC PBS database.

The environmental history of the subject lots was investigated through the review of Sanborn Fire Insurance maps, NYC Department of Building records and the NYC Department of Finance databases.

The environmental history of the Site was previously investigated through the review of Federal and State Environmental databases, Environmental Sanborn Fire Insurance maps, NYC Department of Building records and the NYC Department of Finance databases.

The Site was developed prior to 1887 with a Brooklyn Union Gas "Gasometer" in the northern third of the property and multiple residential homes and stores on the southern portion. By 1935, the Gasometer is gone and that area of the site is now vacant. The southern portion is unchanged. A small storage building is added to the northern lot in 1947. By 1965 the houses are gone from the southern portion of the property and the north lot is now labeled as a furniture/frame company.

By 1977 property is shown in its current configuration with two attached buildings in the northern area and a small parking lot in the southern portion of the lot. The property is labeled as East Coast Industrial Uniform Company.

An underground storage tank (abandoned-in-place) is located near the roll-up gate entrance to the south building. The property is registered under the NYSDEC Petroleum Bulk Storage (PBS) program as Facility No.2-055468. According to PBS records, a 3,000 gallon underground fuel oil tank and a 2,000 gallon aboveground fuel oil tank are registered to the property. The underground tank is listed as being closed-in-place on 6/1/98. The installation date is unknown.

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Petroleum contamination was observed in soil and groundwater during the installation of soil borings at the site in September 2011. The NYSDEC was notified of these conditions and Spill No. 11-08026 was assigned.

According to the NYSDEC spills database, there are two previous spills associated with the Site: Spill No. 87-07894 which was reported on December 12, 1987, and Spill No. 98-00638 which was reported on April 14, 1998. Both spills are listed as a tank test failure. The 1987 spill was closed on October 2, 1992. The 1998 Spill was closed on May 16, 2006, though there is no record of remedial activity being completed at the site.

The property is know to have elevated concentrations of petroleum VOCs in soil and groundwater and elevated levels of SVOCs and chlorinated VOCs in groundwater. Elevated levels of chlorinated VOCs and SVOCs in soil are suspected. In addition, historic fill at the site may contain elevated levels of heavy metals and pesticides.

2.1 Redevelopment Plans

Redevelopment plans for the Site include demolishing the existing 26,000 square foot (combined) buildings and replacing them with three new 6-story residential apartment buildings. Current plans call for each building to have 16 apartments with a mix of 3, 4 and 5 bedroom units to better serve the needs of the community. Each building will feature a full basement level with utility rooms, residential living space, and 8-9 parking spaces and outdoor recreation areas on the roof.

2.2 Description of Interim Remedial Measure

Site activities associated with the IRM that are included within the scope of this CHASP include the following:

1. Empty and Clean 2,000 gallon aboveground fuel oil tank
2. Excavate 3,000 gallon underground fuel oil tank
3. Cut tanks and ship off-site as scrap metal
4. Excavation, segregation and off-site disposal of any petroleum VOC or SVOC impacted soil encountered in the tank area following tank removal.
5. Excavation, segregation and off-site disposal of CVOC impacted soil from hot-spot areas, if encountered.
6. Excavation, segregation and off-site disposal of historic fill materials.
7. Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during all intrusive Site work.
8. Site Monitoring of airborne VOCs and particulates in accordance with a NYSDEC and NYSDOH approved Community Air Monitoring Plan (CAMP) and Health and Safety Plan during all intrusive and soil handling activities.
9. Implementation of proper dust and odor suppression techniques during all intrusive and soil handling activities.
10. Collection of verification (end-point) soil samples from as required from excavations.

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3.0 HAZARD ASSESSMENT

This section identifies the hazards associated with the proposed scope of work, general physical hazards that can be expected at most sites; and presents a summary of documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those that cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

3.1 Physical Hazards

3.1.1 Tripping Hazards

An area of risk associated with on-site activities are presented by uneven ground, concrete, curbstones or equipment which may be present at the site thereby creating a potential tripping hazard. During intrusive work, care should be taken to mark or remove any obstacles within the exclusion zone.

3.1.2 Climbing Hazards

During site activities, workers may have to work on excavating equipment by climbing. The excavating contractor will conform with any applicable NIOSH and OSHA requirements or climbing activities.

3.1.3 Cuts and Lacerations

Field activities that involve excavating activities usually involve contact with various types of machinery. A first aid kit approved by the American Red Cross will be available during all intrusive activities.

3.1.4 Lifting Hazards

Improper lifting by workers is one of the leading causes of industrial injuries. Field workers in the excavation program may be required to lift heavy objects. Therefore, all members of the field crew should be trained in the proper methods of lifting heavy objects. All workers should be cautioned against lifting objects too heavy for one person.

3.1.5 Utility Hazards

Before conducting any excavation, the excavation contractor will be responsible for locating and verifying all existing utilities at each excavation.

3.1.6 Traffic Hazards

All traffic, vehicular and pedestrian, shall be maintained and protected at all times consistent with local, state and federal agency regulations regarding such traffic and in accordance with NYCDOT guidelines. The excavation contractor shall carry on his operations without undue interference or delays to traffic. The excavation contractor shall furnish all labor, materials, guards, barricades, signs, lights, and anything else necessary to maintain traffic and to protect his work and the public, during operations.

3.2 Work in Extreme Temperatures

Work under extremely hot or cold weather conditions requires special protocols to minimize the chance that employees will be affected by heat or cold stress.

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3.2.1 Heat Stress

The combination of high ambient temperature, high humidity, physical exertion, and personal protective apparel, which limits the dissipation of body heat and moisture, can cause heat stress.

The following prevention, recognition and treatment strategies will be implemented to protect personnel from heat stress. Personnel will be trained to recognize the symptoms of heat stress and to apply the appropriate treatment.

1. Prevention
    a. Provide plenty of fluids. Available in the support zone will be a 50% solution of fruit punch and water or plain water.
    b. Work in Pairs. Individuals should avoid undertaking any activity alone.
    c. Provide cooling devices. A spray hose and a source of water will be provided to reduce body temperature, cool protective clothing and/or act as a quick-drench shower in case of an exposure incident.
    d. Adjustment of the work schedule. As is practical, the most labor-intensive tasks should be carried out during the coolest part of the day.

2. Recognition and Treatment
    a Heat Rash (or prickly heat):
        Cause: Continuous exposure to hot and humid air, aggravated by chafing clothing.
        Symptoms: Eruption of red pimples around sweat ducts accompanied by intense itching and tingling.
        Treatment: Remove source or irritation and cool skin with water or wet cloths.

    b. Heat Cramps (or heat prostration)
        Cause: Profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.
        Symptoms: Muscular weakness, staggering gait, nausea, dizziness, shallow breathing, pale and clammy skin, approximately normal body temperature.
        Treatment: Perform the following while making arrangement for transport to a medical facility. Remove the worker to a contamination reduction zone. Remove protective clothing. Lie worker down on back in a cool place and raise feet 6 to 12 inches. Keep warm, but loosen all clothing. If conscious, provide sips of salt-water solution, using one teaspoon of salt in 12 ounces of water. Transport to a medical facility.
    c. Heat Stroke
        Cause: Same as heat exhaustion. This is also an extremely serious condition.
        Symptoms: Dry hot skin, dry mouth, dizziness, nausea, headache, rapid pulse.
        Treatment: Cool worker immediately by immersing or spraying with cool water or sponge bare skin after removing protective clothing. Transport to hospital.

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3.2.2 Cold Exposure

Exposure to cold weather, wet conditions and extreme wind-chill factors may result in excessive loss of body heat (hypothermia) and /or frostbite. To guard against cold exposure and to prevent cold injuries, appropriate warm clothing should be worn, warm shelter must be readily available, rest periods should be adjusted as needed, and the physical conditions of on-site field personnel should be closely monitored. Personnel and supervisors working on-site will be made aware of the signs and symptoms of frost bite and hypothermia such as shivering, reduced blood pressure, reduced coordination, drowsiness, impaired judgment, fatigue, pupils dilated but reactive to light and numbing of the toes and fingers.

3.3 Chemical Hazards

Soil collected from the site as part of several subsurface investigations performed at the site have revealed significant concentrations of volatile organic compounds (VOCs) associated with gasoline or "Stoddard Solvent". Chlorinated VOCs and petroleum related volatile and semi-volatile organic compounds are also present in groundwater may be encountered in soil and or vapors excavation and intrusive activities. Elevated levels of metals may also be present in historic fill at the site.

Volatile organic compounds reported to be present at elevated concentrations in soil and /or groundwater include the following:

Ethylbenzene	Napthalene	sec-Butylbenzene	Tetrachloroethene
1,2,4-Trimethylbenzene	Xylenes		

Semi-volatile organic compounds which may be present in soil / historic fill and /or groundwater at the Site include the following:

Anthracene	Ancenaphthene	Benzo(b)fluoranthene	Phenanthrene
Benzo(a)anthracene	Pyrene	Indeno(1,2,3-cd)pyrene	Benzo(a)pyrene
Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluorene
Benzo(k)fluoranthene	Fluoranthene		

Metals which have not been confirmed but which may be encountered in historic fill materials at the Site include the following:

Chromium	Copper	Lead	Nickel
Mercury	Zinc	Barium	Arsenic

The source of the VOCs and SVOCs detected within the soil and / or groundwater are unknown at this time.

The primary routes of exposure to identified contaminants in soil and groundwater to on-site excavation personnel is through inhalation, ingestion and absorption.

Appendix C includes information sheets for the known and suspected chemicals that may be encountered at the site.

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3.3.1 Respirable Dust

Dust may be generated from vehicular traffic and/or excavation activities. If visible observation detects elevated levels of dust, a program of wetting will be employed by the site safety officer. If elevated dust levels persist, the site safety office will employ dust monitoring using a particulate monitor (Miniram or equivalent). If monitoring detects concentrations greater than 150 µg/m3 over daily background, the site safety officer will take corrective actions as defined herein, including the use of water for dust suppression and if this is not effective, requiring workers to wear APRs with efficiency particulate air (HEPA) cartridges.

Absorption pathways for dust and direct contact with soils or groundwater will be mitigated with the implementation of latex gloves, hand washing and decontamination exercises when necessary.

3.3.2 Dust Control and Monitoring During Excavation

Dust generated during excavation activities may contain contaminants identified in soils at the site or associated with historic fill material present at the site. Dust will be controlled by wetting the working surface with water. Calcium chloride may be used if the problem cannot be controlled with water. Air monitoring and dust control techniques are specified in a site specific Dust Control Plan (if applicable). Site workers will not be required to wear APR's unless dust concentrations are consistently over 150 µg/m3 over site-specific background in the breathing zone as measured by a dust monitor unless the site safety officer directs workers to wear APRs. The site safety officer will use visible dust as an indicator to implement the dust control plan.

3.3.3 Organic Vapors

Elevated levels of VOCs were detected in both soil and groundwater samples collected during previous investigations at the site. Therefore, excavation activities may cause the release of organic vapors to the atmosphere. The site safety officer will periodically monitor organic vapors with a Photoionization Detector (PID) during excavation and intrusive activities to determine whether organic vapor concentrations exceed action levels shown in Section 5 and/or the Community Air Monitoring Plan.

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4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) shall be selected in accordance with the site air monitoring program, OSHA 29 CFR 1910.120(c), (g), and 1910.132. Protective equipment shall be NIOSH approved and respiratory protection shall conform to OSHA 29 CFR Part 1910.133 and 1910.134 specifications; head protection shall conform to 1910.135; eye and face protection shall conform to 1910.133; and foot protection shall conform to 1910.136. The only true difference among the levels of protection from D thru B is the addition of the type of respiratory protection. **It is anticipated that work will be performed in Level D PPE.**

4.1 Level D

Level D PPE shall be donned when the atmosphere contains no known hazards and work functions preclude splashes, immersion, or the potential for inhalation of, or contact with, hazardous concentrations of harmful chemicals. Level D PPE consists of:

- standard work clothes, coveralls, or tyvek, as needed;
- steel toe and steel shank work boots;
- hard hat;
- gloves, as needed;
- safety glasses;
- hearing protection;
- equipment replacements are available as needed.

4.2 Level C

Level C PPE shall be donned when sustained concentrations of measured total organic vapors in the breathing zone exceed background concentrations (using a portable OVA, or equivalent), by more than 5 ppm. The specifications on the APR filters used must be appropriate for contaminants identified or expected to be encountered. Level C PPE shall be donned when the identified contaminants have adequate warning properties and criteria for using APR have been met. Level C PPE consists of:

- chemical resistant or coated tyvek coveralls;
- steel-toe and steel-shank workboots;
- chemical resistant overboots or disposable boot covers;
- disposable inner gloves (surgical gloves);
- disposable outer gloves;
- full face APR fitted with organic vapor/dust and mist filters or filters appropriate for the identified or expected contaminants;
- hard hat;
- splash shield, as needed; and,
- ankles/wrists taped with duct tape.

The site safety officer will verify if Level C is appropriate by checking organic vapor concentrations using compound and/or class-specific detector tubes.

The exact PPE ensemble is decided on a site-by-site basis by the Site Safety Officer with the intent to provide the most protective and efficient worker PPE.

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4.3 Activity-Specific Levels of Personal Protection

The required level of PPE is activity-specific and is based on air monitoring results (Section 4.0) and properties of identified or expected contaminants. **It is expected that site work will be performed in Level D.** If air monitoring results indicate the necessity to upgrade the level of protection, engineering controls (i.e. Facing equipment away from the wind and placing site personnel upwind of excavations, active venting, etc.) will be implemented before requiring the use of respiratory protection.

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5.0 AIR MONITORING AND ACTION LEVELS

29 CFR 1910.120(h) specifies that monitoring shall be performed where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits, or published exposure levels if there are no permissible exposure limits, for hazardous substances.

5.1 Air Monitoring Requirements

Air will be monitored for VOCs with a portable ION Science 3000EX photoionization detector, or the equivalent. If necessary, Lower Explosive Limit (LEL) and oxygen will be monitored with a Combustible Gas Indicator (CGI). If appropriate, fugitive dust will be monitored using a MiniRam Model PDM-3 aerosol monitor. Air will be monitored when any of the following conditions apply:

- initial site entry;
- during any work where a potential IDLH condition or flammable atmosphere could develop;
- excavation work begins on another portion of the site;
- contaminants, other than those previously identified, have been discovered;
- each time a different task or activity is initiated;
- during trenching and/or excavation work.

The designated site safety officer will record air monitoring data and ensure that air monitoring instruments are calibrated and maintained in accordance with manufacturer's specifications. Instruments will be zeroed daily and checked for accuracy. Monitoring results will be recorded in a field notebook and will be transferred to instrument reading logs.

5.2 Work Stoppage Responses

The following responses will be initiated whenever one or more of the action levels necessitating a work stoppage are exceeded:

1 The SSO will be consulted immediately
2 All personnel (except as necessary for continued monitoring and contaminant migration, if applicable) will be cleared from the work area (eg from the exclusion zone).
3 Monitoring will be continued until intrusive work resumes.

5.3 Action Levels During Excavation and Intrusive Activities

Instrument readings will be taken in the breathing zone unless otherwise noted. Each action level is independent of all other action levels in determining responses.

Organic Vapors (PID)	LEL %	Responses
0-1 ppm above background	0%	• Continue excavation • Level D protection • Continue monitoring every 10 minutes
1-5 ppm Above Background, Sustained Reading	1-10%	• Continue excavation • Go to Level C protection or employ

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		engineering controls • Continue monitoring every 10 minutes
5-25 ppm Above Background, Sustained Reading	10-20%	• Discontinue excavation, unless PID is only action level exceeded. • Level C protection or employ engineering controls • Continue monitoring for organic vapors 200 ft downwind • Continuous monitoring for LEL at excavation pit
>25 ppm Above Background, Sustained Reading	>20%	• Discontinue excavation • Withdraw from area, shut off all engine ignition sources. • Allow pit to vent • Continuous monitoring for organic vapors 200 ft downwind.

Notes: Air monitoring will occur in the breathing zone 30 inches above the surface.

If action levels for any one of the monitoring parameters are exceeded, the appropriate responses listed in the right hand column should be taken. If instrument readings do not return to acceptable levels after the area has been vented for a period of greater than one-half hour, a decision will then be made whether or not to continue working.

If, during excavation activities, downwind monitoring PID readings are greater than 5 ppm above background for more than one-half hour, excavation will stop until sustained levels are less then 5 ppm (see Community Air Monitoring Plan).

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6.0 SITE CONTROL

6.1 Work Zones

The primary purpose of site controls is to establish the perimeter of a hazardous area, to reduce the migration of contaminants into clean areas, and to prevent access or exposure to hazardous materials by unauthorized persons. When operations are to take place involving hazardous materials, the site safety officer will establish an exclusion zone, a decontamination zone, and a support zone. These zones "float" (move around the site) depending on the tasks being performed on any given day. The site safety officer will outline these locations before work begins and when zones change. The site safety officer records this information in the site log book.

Due to the dimensions of the Site and the work area, it is expected that an exclusion zone, if needed, will be limited to the immediate area around the excavation area. A support zone if needed will be located outside of the excavation area. An environmental remediation contractor with appropriate hazardous material handling experience and training is required to perform the tank removal and excavation of petroleum and chlorinated solvent impacted soil during this IRM. All onsite workers must provide evidence of OSHA 40-hour Hazardous Waste Operations and Emergency Response Operations training to conduct work within the exclusion zone established by the site safety officer. Gross decontamination (as determined by the site Health and Safety Officer) is conducted in the exclusion zone; all other decontamination is performed in the decontamination zone or trailer, if provided. After the contaminated soil is removed and the remediation contractor has demobilized from the Site, an excavation contractor will remove historic fill and uncontaminated soil. The excavation contractor's on-site personnel will have a minimum of 24 hour Hazardous Waste Operations and Emergency Response Operations training.

Protective equipment is removed in the decontamination zone. Disposable protective equipment is stored in receptacles staged in the decontamination zone, and non-disposable equipment is decontaminated. All personnel and equipment exit the exclusion zone through the decontamination zone. If a decontamination trailer is provided the first aid equipment, an eye wash unit, and drinking water are kept in the decontamination trailer.

The support zone is used for vehicle parking, daily safety meetings, and supply storage. Eating, drinking, and smoking are permitted only in the support zone. When a decontamination trailer is not provided, the eye wash unit, first aid equipment, and drinking water are kept at a central location designated by the site safety officer.

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7.0 CONTINGENCY PLAN/EMERGENCY RESPONSE PLAN

Site personnel must be prepared in the event of an emergency. Emergencies can take many forms: illnesses, injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

Emergency telephone numbers and a map to the hospital will be posted in the command post. Site personnel should be familiar with the emergency procedures, and the locations of site safety, first aid, and communication equipment.

7.1 Emergency Equipment On-site

Private telephones:	Site personnel.
Two-way radios:	Site personnel where necessary.
Emergency Alarms:	On-site vehicle horns*.
First aid kits:	On-site, in vehicles or office.
Fire extinguisher:	On-site, in office or on equipment.

* Horns: Air horns will be supplied to personnel at the discretion of the project superintendent or site safety officer.

7.2 Emergency Telephone Numbers

General Emergencies	911
Suffolk County Police	911
NYC Fire Department	911
Jamaica Hospital Medical Center	(718) 206-6000
NYSDEC Spills Hotline	1-800-457-7362
NYSDEC Project Manager	(718) 482-4010
NYC Department of Health	(212) 676-2400
National Response Center	1-800-424-8802
Poison Control	1-800-222-1222
Project Manager	1-631-504-6000
Site Safety Officer	1-631-504-6000

7.3 Personnel Responsibilities During an Emergency

The project manager is primarily responsible for responding to and correcting any emergency situations. However, in the absence of the project manager, the site safety officer shall act as the project manager's on-site designee and perform the following tasks:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone, evacuate and secure the site, or upgrade/downgrade the level of protective clothing and respiratory protection;

- Ensure that appropriate federal, state, and local agencies are informed and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. If toxic materials are released to the air, the local authorities should be informed in order to assess the need for evacuation;

- Ensure appropriate decontamination, treatment, or testing for exposed or injured

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personnel;

- Determine the cause of incidents and make recommendations to prevent recurrence; and,

- Ensure that all required reports have been prepared.

The following key personnel are planned for this project:

- Project Manager — Mr. Kevin Brussee (631) 504-6000
- Site Safety Officer — Mr. Kevin Waters (631) 504-6000

7.4 Medical Emergencies

A person who becomes ill or injured in the exclusion zone will be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination will be completed and first aid administered prior to transport. First aid will be administered while waiting for an ambulance or paramedics. A Field Accident Report (**Appendix D**) must be filled out for any injury.

A person transporting an injured/exposed person to a clinic or hospital for treatment will take the directions to the hospital (**Appendix D**).and information on the chemical(s) to which they may have been exposed (**Appendix C**).

7.5 Fire or Explosion

In the event of a fire or explosion, the local fire department will be summoned immediately. The site safety officer or his designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on-site. If it is safe to do so, site personnel may:

- use fire fighting equipment available on site; or,
- remove or isolate flammable or other hazardous materials that may contribute to the fire.

7.6 Evacuation Routes

Evacuation routes established by work area locations for each site will be reviewed prior to commencing site operations. As the work areas change, the evacuation routes will be altered accordingly, and the new route will be reviewed.

Under extreme emergency conditions, evacuation is to be immediate without regard for equipment. The evacuation signal will be a continuous blast of a vehicle horn, if possible, and/or by verbal/radio communication. When evacuating the site, personnel will follow these instructions:

- Keep upwind of smoke, vapors, or spill location.

- Exit through the decontamination corridor if possible.
- If evacuation through the decontamination corridor is not possible, personnel should remove contaminated clothing once they are in a safe location and leave it near the exclusion zone or in a safe place.

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- The site safety officer will conduct a head count to ensure that all personnel have been evacuated safely. The head count will be correlated to the site and/or exclusion zone entry/exit log.

- If emergency site evacuation is necessary, all personnel are to escape the emergency situation and decontaminate to the maximum extent practical.

7.7 Spill Control Procedures

Spills associated with site activities may be attributed to project equipment and include gasoline, diesel and hydraulic oil. In the event of a leak or a release, site personnel will inform their supervisor immediately, locate the source of spillage and stop the flow if it can be done safely. A spill containment kit including absorbent pads, booms and/or granulated speedy dry absorbent material will be available to site personnel to facilitate the immediate recovery of the spilled material. Daily inspections of site equipment components including hydraulic lines, fuel tanks, etc. will be performed by their respective operators as a preventative measure for equipment leaks and to ensure equipment soundness. In the event of a spill, site personnel will immediately notify the NYSDEC (1-800-457-7362), and a spill number will be generated.

7.8 Vapor Release Plan

If work zone organic vapor (excluding methane) exceeds 5 ppm, then a downwind reading will be made either 200 feet from the work zone or at the property line, whichever is closer. If readings at this location exceed 5 ppm over background, the work will be stopped.

If 5 ppm of VOCs are recorded over background on a PID at the property line, then an off-site reading will be taken within 20 feet of the nearest residential or commercial property, whichever is closer. If efforts to mitigate the emission source are unsuccessful for 30 minutes, then the designated site safety officer will:

- contact the local police;
- continue to monitor air every 30 minutes, 20 feet from the closest off-site property. If two successive readings are below 5 ppm (non-methane), off-site air monitoring will be halted.
- All property line and off site air monitoring locations and results associated with vapor releases will be recorded in the site safety log book.

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APPENDIX A

SITE SAFETY ACKNOWLEDGEMENT FORM

DAILY BREIFING SIGN-IN SHEET

Date:_____ Person Conducting Briefing:_____

Project Name and Location:_____

1. AWARENESS (topics discussed, special safety concerns, recent incidents, etc…):

_____

_____

_____

_____

2. OTHER ISSUES (HASP changes, attendee comments, etc…):

_____

_____

_____

3. ATTENDEES (Print Name):

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

APPENDIX B

SITE SAFETY PLAN AMENDMENTS

SITE SAFETY PLAN AMENDMENT FORM

Site Safety Plan Amendment #: _____

Site Name: _____

Reason for Amendment: _____

_____

_____

_____

Alternative Procedures: _____

_____

_____

_____

Required Changes in PPE: _____

_____

_____

_____

_____ _____

Project Superintendent (signature) **Date**

_____ _____

Health and Safety Consultant (signature) **Date**

_____ _____

Site Safety Officer (signature) **Date**

APPENDIX C

CHEMICAL HAZARDS

CHEMICAL HAZARDS

The attached International Chemical Safety Cards are provided for contaminants of concern that have been identified in soils and/or groundwater at the site.

International Chemical Safety Cards

ETHYLBENZENE

ICSC: 0268

Ethylbenzol
Phenylethane
EB
C_8H_{10} / $C_6H_5C_2H_5$
Molecular mass: 106.2

ICSC # 0268
CAS # 100-41-4
RTECS # DA0700000
UN # 1175
EC # 601-023-00-4
March 13, 1995 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Highly flammable.	NO open flames, NO sparks, and NO smoking.	Powder, AFFF, foam, carbon dioxide.
EXPLOSION	Vapour/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		PREVENT GENERATION OF MISTS!	
•**INHALATION**	Cough. Dizziness. Drowsiness. Headache.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•**SKIN**	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•**EYES**	Redness. Pain. Blurred vision.	Face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•**INGESTION**	(Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Ventilation. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Personal protection: A filter respirator for organic gases and vapours.	Fireproof. Separated from strong oxidants.	F symbol Xn symbol R: 11-20 S: 2-16-24/25-29 UN Hazard Class: 3 UN Packing Group: II

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0268

International Chemical Safety Cards

ETHYLBENZENE

ICSC: 0268

IMPORTANT DATA	**PHYSICAL STATE; APPEARANCE:** COLOURLESS LIQUID , WITH AROMATIC ODOUR. **PHYSICAL DANGERS:** The vapour mixes well with air, explosive mixtures are easily formed. **CHEMICAL DANGERS:** Reacts with strong oxidants. Attacks plastic and rubber. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 100 ppm as TWA 125 ppm as STEL A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued (ACGIH 2005). MAK: skin absorption (H); Carcinogen category: 3A; (DFG 2004). OSHA PEL†: TWA 100 ppm (435 mg/m^3) NIOSH REL: TWA 100 ppm (435 mg/m^3) ST 125 ppm (545 mg/m^3) NIOSH IDLH: 800 ppm 10%LEL See: 100414	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion. **INHALATION RISK:** A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance is irritating to the eyes the skin and the respiratory tract Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. The substance may cause effects on the central nervous system Exposure far above the OEL could cause lowering of consciousness. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis.
PHYSICAL PROPERTIES	Boiling point: 136°C Melting point: -95°C Relative density (water = 1): 0.9 Solubility in water, g/100 ml at 20°C: 0.015 Vapour pressure, kPa at 20°C: 0.9 Relative vapour density (air = 1): 3.7	Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02 Flash point: 18°C c.c. Auto-ignition temperature: 432°C Explosive limits, vol% in air: 1.0-6.7 Octanol/water partition coefficient as log Pow: 3.2
ENVIRONMENTAL DATA	The substance is harmful to aquatic organisms. 	

N O T E S

The odour warning when the exposure limit value is exceeded is insufficient.

Transport Emergency Card: TEC (R)-30S1175 or 30GF1-I+II
NFPA Code: H2; F3; R0

ADDITIONAL INFORMATION

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

1,2,4-TRIMETHYLBENZENE

ICSC: 1433

Pseudocumene

C_9H_{12}

Molecular mass: 120,2

ICSC # 1433
CAS # 95-63-6
RTECS # DC3325000
UN # 1993
EC # 601-043-00-3
March 06, 2002 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Flammable.	NO open flames, NO sparks, and NO smoking.	Alcohol-resistant foam, dry powder, carbon dioxide.
EXPLOSION	Above 44°C explosive vapour/air mixtures may be formed.	Above 44°C use a closed system, ventilation, and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		PREVENT GENERATION OF MISTS!	
•INHALATION	Confusion. Cough. Dizziness. Drowsiness. Headache. Sore throat. Vomiting.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Redness. Dry skin.	Protective gloves.	Rinse skin with plenty of water or shower.
•EYES	Redness. Pain.	Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	(See Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Personal protection: filter respirator for organic gases and vapours.	Fireproof. Separated from strong oxidants. Well closed. Keep in a well-ventilated room.	Xn symbol N symbol R: 10-20-36/37/38-51/53 S: 2-26-61 UN Hazard Class: 3 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

ICSC: 1433

International Chemical Safety Cards

1,2,4-TRIMETHYLBENZENE

ICSC: 1433

IMPORTANT DATA	**PHYSICAL STATE; APPEARANCE:** COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR. **PHYSICAL DANGERS:** **CHEMICAL DANGERS:** The substance decomposes on burning producing toxic and irritating fumes Reacts violently with strong oxidants causing fire and explosion hazard. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (as mixed isomers) 25 ppm as TWA (ACGIH 2004). MAK: (as mixed isomers) 20 ppm 100 mg/m³ Peak limitation category: II(2) Pregnancy risk group: C (DFG 2004). OSHA PEL†: none NIOSH REL: TWA 25 ppm (125 mg/m^3) NIOSH IDLH: N.D. See: IDLH INDEX	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation. **INHALATION RISK:** A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance is irritating to the eyes the skin and the respiratory tract If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** The liquid defats the skin. Lungs may be affected by repeated or prolonged exposure , resulting in chronic bronchitis The substance may have effects on the central nervous system blood See Notes.
PHYSICAL PROPERTIES	Boiling point: 169°C Melting point: -44°C Relative density (water = 1): 0.88 Solubility in water: very poor Relative vapour density (air = 1): 4.1	Relative density of the vapour/air-mixture at 20°C (air = 1): 1.01 Flash point: 44°C c.c. Auto-ignition temperature: 500°C Explosive limits, vol% in air: 0.9-6.4 Octanol/water partition coefficient as log Pow: 3.8
ENVIRONMENTAL DATA	The substance is toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish. 	

N O T E S

Use of alcoholic beverages enhances the harmful effect. Depending on the degree of exposure, periodic medical examination is suggested. See also ICSC 1155 1,3,5-Trimethylbenzene (Mesitylene), ICSC 1362 1,2,3-Trimethylbenzene (Hemimellitene), ICSC 1389 Trimethyl benzene (mixed isomers). 1,3,5-Trimethylbenzene (Mesitylene) is classified as a marine pollutant.

Transport Emergency Card: TEC (R)-30GF1-III
NFPA Code: H0; F2; R0;

ADDITIONAL INFORMATION

International Chemical Safety Cards

TETRACHLOROETHYLENE

ICSC: 0076

1,1,2,2-Tetrachloroethylene
Perchloroethylene
Tetrachloroethene
C_2Cl_4 / $Cl_2C=CCl_2$
Molecular mass: 165.8

ICSC # 0076
CAS # 127-18-4
RTECS # KX3850000
UN # 1897
EC # 602-028-00-4
April 13, 2000 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		STRICT HYGIENE! PREVENT GENERATION OF MISTS!	
•INHALATION	Dizziness. Drowsiness. Headache. Nausea. Weakness. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
•SKIN	Dry skin. Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety goggles , face shield .	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Rest.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. Personal protection: filter respirator for organic gases and vapours.	Separated from metals ,(see Chemical Dangers), food and feedstuffs . Keep in the dark. Ventilation along the floor.	Do not transport with food and feedstuffs. Marine pollutant. Xn symbol N symbol R: 40-51/53 S: (2-)23-36/37-61 UN Hazard Class: 6.1 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0076

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

TETRACHLOROETHYLENE

ICSC: 0076

I M P O R T A N T D A T A

PHYSICAL STATE; APPEARANCE:
COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR.

PHYSICAL DANGERS:
The vapour is heavier than air.

CHEMICAL DANGERS:
On contact with hot surfaces or flames this substance decomposes forming toxic and corrosive fumes (hydrogen chloride, phosgene, chlorine). The substance decomposes slowly on contact with moisture producing trichloroacetic acid and hydrochloric acid. Reacts with metals such as aluminium, lithium, barium, beryllium.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 25 ppm as TWA, 100 ppm as STEL; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued; (ACGIH 2004).
MAK: skin absorption (H);
Carcinogen category: 3B;
(DFG 2004).
OSHA PEL†: TWA 100 ppm C 200 ppm 300 ppm (5-minute maximum peak in any 3-hours)
NIOSH REL: Ca Minimize workplace exposure concentrations. See Appendix A
NIOSH IDLH: Ca 150 ppm See: 127184

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is irritating to the eyes , the skin and the respiratory tract . If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system. Exposure at high levels may result in unconsciousness.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the liver and kidneys. This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 121°C
Melting point: -22°C
Relative density (water = 1): 1.6
Solubility in water, g/100 ml at 20°C: 0.015

Vapour pressure, kPa at 20°C: 1.9
Relative vapour density (air = 1): 5.8
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.09
Octanol/water partition coefficient as log Pow: 2.9

ENVIRONMENTAL DATA

The substance is toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment.

N O T E S

Depending on the degree of exposure, periodic medical examination is suggested. The odour warning when the exposure limit value is exceeded is insufficient. Do NOT use in the vicinity of a fire or a hot surface, or during welding. An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert. Card has been partly updated in April 2005. See section Occupational Exposure Limits.

Transport Emergency Card: TEC (R)-61S1897

NFPA Code: H2; F0; R0;

ADDITIONAL INFORMATION

International Chemical Safety Cards

p-XYLENE

ICSC: 0086

para-Xylene
1,4-Dimethylbenzene
p-Xylol
$C_6H_4(CH_3)_2$ / C_8H_{10}
Molecular mass: 106.2

ICSC # 0086
CAS # 106-42-3
RTECS # ZE2625000
UN # 1307
EC # 601-022-00-9
August 03, 2002 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Flammable.	NO open flames, NO sparks, and NO smoking.	Powder, water spray, foam, carbon dioxide.
EXPLOSION	Above 27°C explosive vapour/air mixtures may be formed.	Above 27°C use a closed system, ventilation, and explosion-proof electrical equipment. Prevent build-up of electrostatic charges (e.g., by grounding).	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		STRICT HYGIENE! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
•INHALATION	Dizziness. Drowsiness. Headache. Nausea.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Burning sensation. Abdominal pain. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. (Extra personal protection: filter respirator for organic gases and vapours.)	Fireproof. Separated from strong oxidants, strong acids	Note: C Xn symbol R: 10-20/21-38 S: 2-25 UN Hazard Class: 3 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0086

International Chemical Safety Cards

p-XYLENE

ICSC: 0086

I M P O R T A N T D A T A	**PHYSICAL STATE; APPEARANCE:** COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR. **PHYSICAL DANGERS:** As a result of flow, agitation, etc., electrostatic charges can be generated. **CHEMICAL DANGERS:** Reacts with strong acids strong oxidants **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 100 ppm as TWA 150 ppm as STEL A4 (ACGIH 2001). BEI (ACGIH 2001). MAK: 100 ppm 440 mg/m³ Peak limitation category: II(2) skin absorption (H); Pregnancy risk group: D (DFG 2005). EU OEL: 50 ppm as TWA 100 ppm as STEL (skin) (EU 2000). OSHA PEL†: TWA 100 ppm (435 mg/m^3) NIOSH REL: TWA 100 ppm (435 mg/m^3) ST 150 ppm (655 mg/m^3) NIOSH IDLH: 900 ppm See: 95476 **ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation, through the skin and by ingestion. **INHALATION RISK:** A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance is irritating to the eyes and the skin The substance may cause effects on the central nervous system If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** The liquid defats the skin. The substance may have effects on the central nervous system. Animal tests show that this substance possibly causes toxicity to human reproduction or development.
PHYSICAL PROPERTIES	Boiling point: 138°C Melting point: 13°C Relative density (water = 1): 0.86 Solubility in water: none Vapour pressure, kPa at 20°C: 0.9 Relative vapour density (air = 1): 3.7 Relative density of the vapour/air-mixture at 20°C (air = 1): 1.02 Flash point: 27°C c.c. Auto-ignition temperature: 528°C Explosive limits, vol% in air: 1.1-7.0 Octanol/water partition coefficient as log Pow: 3.15
ENVIRONMENTAL DATA	The substance is toxic to aquatic organisms. 

N O T E S

Depending on the degree of exposure, periodic medical examination is indicated. The recommendations on this Card also apply to technical xylene. See ICSC 0084 o-Xylene and 0085 m-Xylene.

Transport Emergency Card: TEC (R)-30S1307-III
NFPA Code: H 2; F 3; R 0;

ADDITIONAL INFORMATION

ICSC: 0086 **p-XYLENE**

International Chemical Safety Cards

ANTHRACENE

ICSC: 0825

Anthracin
Paranaphthalene
$C_{14}H_{10}$ / $(C_6H_4CH)_2$
Molecular mass: 178.2

ICSC # 0825
CAS # 120-12-7
RTECS # CA9350000
March 24, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Powder, water spray, foam, carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		PREVENT DISPERSION OF DUST!	
•INHALATION	Cough. Sore throat.	Ventilation (not if powder), local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety spectacles, face shield, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain.	Do not eat, drink, or smoke during work.	Rinse mouth. Rest. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers. Carefully collect remainder, then remove to safe place Do NOT let this chemical enter the environment. (Extra personal protection: P2 filter respirator for harmful particles).	Separated from strong oxidants. Well closed.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0825

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

ANTHRACENE

ICSC: 0825

I **M**	**PHYSICAL STATE; APPEARANCE:** WHITE CRYSTALS OR FLAKES.	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by

P O R T A N T D A T A	**PHYSICAL DANGERS:** Dust explosion possible if in powder or granular form, mixed with air. **CHEMICAL DANGERS:** The substance decomposes on heating, under influence of strong oxidants producing acrid, toxic fume , causing fire and explosion hazard. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established. inhalation. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance slightly irritates the skin and the respiratory tract. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis under the influence of UV light.
PHYSICAL PROPERTIES	Boiling point: 342°C Melting point: 218°C Density: 1.25-1.28 g/cm3 Solubility in water, g/100 ml at 20 °C: 0.00013 Vapour pressure, Pa at 25°C: 0.08 Relative vapour density (air = 1): 6.15 Flash point: 121°C Auto-ignition temperature: 538°C Explosive limits, vol% in air: 0.6-? Octanol/water partition coefficient as log Pow: 4.5 (calculated)
ENVIRONMENTAL DATA	The substance is very toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment. 

N O T E S

Green oil, Tetra-olive N2G are trade names.

NFPA Code: H0; F1; R;

ADDITIONAL INFORMATION

ICSC: 0825 **ANTHRACENE**

International Chemical Safety Cards

BENZ(a)ANTHRACENE

ICSC: 0385

1,2-Benzoanthracene
Benzo(a)anthracene
2,3-Benzphenanthrene
Naphthanthracene
$C_{18}H_{12}$
Molecular mass: 228.3

ICSC # 0385
CAS # 56-55-3
RTECS # CV9275000
EC # 601-033-00-9
October 23, 1995 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.		Water spray, powder. In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Personal protection: complete protective clothing including self-contained breathing apparatus.	Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0385

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

ICSC: 0385

BENZ(a)ANTHRACENE

I M P O R T A N T D A T A

PHYSICAL STATE; APPEARANCE:
COLOURLESS TO YELLOW BROWN FLUORESCENT FLAKES OR POWDER.

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:

OCCUPATIONAL EXPOSURE LIMITS:
TLV: A2 (suspected human carcinogen); (ACGIH 2004).
MAK:
Carcinogen category: 2 (as pyrolysis product of organic materials)
(DFG 2005).

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Sublimation point: 435°C
Melting point: 162°C
Relative density (water = 1): 1.274
Solubility in water:
none

Vapour pressure, Pa at 20°C: 292
Octanol/water partition coefficient as log Pow: 5.61

ENVIRONMENTAL DATA

Bioaccumulation of this chemical may occur in seafood.

N O T E S

This substance is one of many polycyclic aromatic hydrocarbons - standards are usually established for them as mixtures, e.g., coal tar pitch volatiles. However, it may be encountered as a laboratory chemical in its pure form. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Do NOT take working clothes home. Tetraphene is a common name. Card has been partly updated in October 2005 and August 2006: see sections Occupational Exposure Limits, EU classification.

ADDITIONAL INFORMATION

ICSC: 0385 **BENZ(a)ANTHRACENE**

International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

Benz(e)acephenanthrylene
2,3-Benzofluoroanthene
Benzo(e)fluoranthene
3,4-Benzofluoranthene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0720
CAS # 205-99-2
RTECS # CU1400000
EC # 601-034-00-4
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0720

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

I	**PHYSICAL STATE; APPEARANCE:** COLOURLESS CRYSTALS	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation

IMPORTANT DATA	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: A2 (suspected human carcinogen); (ACGIH 2004). MAK: Carcinogen category: 2; (DFG 2004). of its aerosol and through the skin. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans. May cause genetic damage in humans.
PHYSICAL PROPERTIES	Boiling point: 481°C Melting point: 168°C Solubility in water: none Octanol/water partition coefficient as log Pow: 6.12
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality. 

N O T E S

Benzo(b)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(b)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0720 **BENZO(b)FLUORANTHENE**

International Chemical Safety Cards

BENZO(g,h,i)FLUORANTHENE

ICSC: 0527

2,13-Benzofluoranthene
Benzo(mno)fluoranthene
$C_{18}H_{10}$
Molecular mass: 226.3

ICSC # 0527
CAS # 203-12-3
RTECS # DF6140000
March 25, 1998 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray, powder.
EXPLOSION			
EXPOSURE		PREVENT DISPERSION OF DUST!	
•INHALATION		Local exhaust or breathing protection.	
•SKIN	MAY BE ABSORBED!	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention. Wear protective gloves when administering first aid.
•EYES		Safety goggles, face shield, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Well closed.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0527

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BENZO(g,h,i)FLUORANTHENE

ICSC: 0527

I **M** **P**	**PHYSICAL STATE; APPEARANCE:** YELLOW CRYSTALS **PHYSICAL DANGERS:**	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

O R T A N T D A T A	**CHEMICAL DANGERS:** The substance decomposes on heating producing toxic fumes. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established.	**INHALATION RISK:** **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** See Notes.
PHYSICAL PROPERTIES	Melting point: 149°C Solubility in water: none Vapour pressure, Pa at 20°C: <10	Relative vapour density (air = 1): 7.8 Relative density of the vapour/air-mixture at 20°C (air = 1): 1.0 Octanol/water partition coefficient as log Pow: 7.23
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to the total environment. In the food chain important to humans, bioaccumulation takes place, specifically in oils and fats. 	

N O T E S

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Also consult ICSC #0720 and 0721.

ADDITIONAL INFORMATION

ICSC: 0527 **BENZO(g,h,i)FLUORANTHENE**

International Chemical Safety Cards

BENZO(k)FLUORANTHENE

ICSC: 0721

Dibenzo(b,jk)fluorene
8,9-Benzofluoranthene
11,12-Benzofluoranthene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0721
CAS # 207-08-9
RTECS # DF6350000
EC # 601-036-00-5
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0721

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BENZO(k)FLUORANTHENE

ICSC: 0721

I **M**	**PHYSICAL STATE; APPEARANCE:** YELLOW CRYSTALS	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

P O R T A N T D A T A	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established. MAK: Carcinogen category: 2; (DFG 2004). **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 480°C Melting point: 217°C Solubility in water: none Octanol/water partition coefficient as log Pow: 6.84
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality. Bioaccumulation of this chemical may occur in crustacea and in fish. 

N O T E S

Benzo(k)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(k)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0721 **BENZO(k)FLUORANTHENE**

International Chemical Safety Cards

COAL-TAR PITCH

ICSC: 1415

Pitch

ICSC # 1415
CAS # 65996-93-2
RTECS # GF8655000
EC # 648-055-00-5
March 07, 2002 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Foam, dry powder, carbon dioxide.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT! PREVENT DISPERSION OF DUST!	
•INHALATION	Sneezing. Cough. See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	Closed system and ventilation.	Fresh air, rest.
•SKIN	MAY BE ABSORBED! Redness. Burning sensation.	Protective gloves. Protective clothing.	Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety goggles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	Do not eat, drink, or smoke during work. Wash hands before eating.	Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into sealable containers. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment. (Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust.)	Separated from strong oxidants. Separated from food and feedstuffs	Do not transport with food and feedstuffs. Note: H T symbol R: 45 S: 53-45

SEE IMPORTANT INFORMATION ON BACK

ICSC: 1415

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

COAL-TAR PITCH

ICSC: 1415

I

M

P

PHYSICAL STATE; APPEARANCE:
BLACK TO BROWN PASTE

PHYSICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration

O R T A N T D A T A	**CHEMICAL DANGERS:** The substance decomposes on heating above 400°C producing toxic fumes Reacts with strong oxidants **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (as benzene soluble aerosol for coal tar pitch volatiles) 0.2 mg/m³ as TWA A1 (ACGIH 2001). OSHA PEL: TWA 0.2 mg/m^3 (benzene-soluble fraction) 1910.1002 See Appendix C NIOSH REL: Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction) See Appendix A See Appendix C NIOSH IDLH: Ca 80 mg/m^3 See: 65996932 of airborne particles can, however, be reached quickly when dispersed and when heated. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance is irritating to the eyes the skin and the respiratory tract **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis and hyperpigmentation of skin. This substance is carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: >250°C Melting point: 30-180°C Density: >1 g/cm3 Solubility in water: at 20°C none Vapour pressure, kPa at 20°C: <0.01 Flash point: >200°C o.c. Auto-ignition temperature: >500°C Octanol/water partition coefficient as log Pow: 6.04
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to soil contamination and aquatic organisms. The substance may cause long-term effects in the aquatic environment. 

N O T E S

Depending on the degree of exposure, periodic medical examination is suggested.

NFPA Code: H0; F1; R0;

ADDITIONAL INFORMATION

ICSC: 1415 **COAL-TAR PITCH**

International Chemical Safety Cards

INDENO(1,2,3-cd)PYRENE

ICSC: 0730

o-Phenylenepyrene
2,3-Phenylenepyrene
$C_{22}H_{12}$
Molecular mass: 276.3

ICSC # 0730
CAS # 193-39-5
RTECS # NK9300000
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0730

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

INDENO(1,2,3-cd)PYRENE

ICSC: 0730

I **M** **P**	**PHYSICAL STATE; APPEARANCE:** YELLOW CRYSTALS **PHYSICAL DANGERS:**	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and through the skin. **INHALATION RISK:**

IMPORTANT DATA	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: A2 (suspected human carcinogen); (ACGIH 2004). MAK: Carcinogen category: 2; (DFG 2004).	of its aerosol and through the skin. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans. May cause genetic damage in humans.
PHYSICAL PROPERTIES	Boiling point: 481°C Melting point: 168°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.12
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality.	

N O T E S

Benzo(b)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(b)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0720 **BENZO(b)FLUORANTHENE**

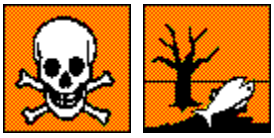
International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

Benz(e)acephenanthrylene
2,3-Benzofluoroanthene
Benzo(e)fluoranthene
3,4-Benzofluoranthene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0720
CAS # 205-99-2
RTECS # CU1400000
EC # 601-034-00-4
March 25, 1999 Peer reviewed



TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0720

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

I	**PHYSICAL STATE; APPEARANCE:** COLOURLESS CRYSTALS	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation

IMPORTANT DATA	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: A2 (suspected human carcinogen); (ACGIH 2004). MAK: Carcinogen category: 2; (DFG 2004).	of its aerosol and through the skin. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans. May cause genetic damage in humans.
PHYSICAL PROPERTIES	Boiling point: 481°C Melting point: 168°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.12
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality.	

N O T E S

Benzo(b)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(b)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0720 **BENZO(b)FLUORANTHENE**

International Chemical Safety Cards

CHRYSENE

ICSC: 1672

Benzoaphenanthrene
1,2-Benzophenanthrene
1,2,5,6-Dibenzonaphthalene
$C_{18}H_{12}$
Molecular mass: 228.3

ICSC # 1672
CAS # 218-01-9
RTECS # GC0700000
UN # 3077
EC # 601-048-00-0
October 12, 2006 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray. Dry powder. Foam. Carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Personal protection: P3 filter respirator for toxic particles. Do NOT let this chemical enter the environment. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.	Separated from strong oxidants, Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.	T symbol N symbol R: 45-68-50/53 S: 53-45-60-61 UN Hazard Class: 9 UN Packing Group: III Signal: Warning Aqua-Cancer Suspected of causing cancer Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

SEE IMPORTANT INFORMATION ON BACK

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European

International Chemical Safety Cards

CHRYSENE

ICSC: 1672

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS TO BEIGE CRYSTALS OR POWDER

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
The substance decomposes on burning producing toxic fumes Reacts violently with strong oxidants

OCCUPATIONAL EXPOSURE LIMITS:
TLV: A3 (confirmed animal carcinogen with unknown relevance to humans); (ACGIH 2006).
MAK not established.

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
This substance is possibly carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 448°C
Melting point: 254 - 256°C
Density: 1.3 g/cm³

Solubility in water:
very poor
Octanol/water partition coefficient as log Pow: 5.9

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in seafood. It is strongly advised that this substance does not enter the environment.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home. This substance does not usually occur as a pure substance but as a component of polyaromatic hydrocarbon (PAH) mixtures. Human population studies have associated PAH's exposure with cancer and cardiovascular diseases.

Transport Emergency Card: TEC (R)-90GM7-III

ADDITIONAL INFORMATION

International Chemical Safety Cards

COAL-TAR PITCH

ICSC: 1415

Pitch

ICSC # 1415
CAS # 65996-93-2
RTECS # GF8655000
EC # 648-055-00-5
March 07, 2002 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Foam, dry powder, carbon dioxide.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT! PREVENT DISPERSION OF DUST!	
•INHALATION	Sneezing. Cough. See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	Closed system and ventilation.	Fresh air, rest.
•SKIN	MAY BE ABSORBED! Redness. Burning sensation.	Protective gloves. Protective clothing.	Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety goggles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	Do not eat, drink, or smoke during work. Wash hands before eating.	Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into sealable containers. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment. (Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust.)	Separated from strong oxidants. Separated from food and feedstuffs	Do not transport with food and feedstuffs. Note: H T symbol R: 45 S: 53-45

SEE IMPORTANT INFORMATION ON BACK

ICSC: 1415

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

COAL-TAR PITCH

ICSC: 1415

I

M

P

PHYSICAL STATE; APPEARANCE:
BLACK TO BROWN PASTE

PHYSICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration

O R T A N T D A T A	**CHEMICAL DANGERS:** The substance decomposes on heating above 400°C producing toxic fumes Reacts with strong oxidants **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (as benzene soluble aerosol for coal tar pitch volatiles) 0.2 mg/m³ as TWA A1 (ACGIH 2001). OSHA PEL: TWA 0.2 mg/m^3 (benzene-soluble fraction) 1910.1002 See Appendix C NIOSH REL: Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction) See Appendix A See Appendix C NIOSH IDLH: Ca 80 mg/m^3 See: 65996932 of airborne particles can, however, be reached quickly when dispersed and when heated. **EFFECTS OF SHORT-TERM EXPOSURE:** The substance is irritating to the eyes the skin and the respiratory tract **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis and hyperpigmentation of skin. This substance is carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: >250°C Melting point: 30-180°C Density: >1 g/cm3 Solubility in water: at 20°C none Vapour pressure, kPa at 20°C: <0.01 Flash point: >200°C o.c. Auto-ignition temperature: >500°C Octanol/water partition coefficient as log Pow: 6.04
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to soil contamination and aquatic organisms. The substance may cause long-term effects in the aquatic environment. 

N O T E S

Depending on the degree of exposure, periodic medical examination is suggested.

NFPA Code: H0; F1; R0;

ADDITIONAL INFORMATION

ICSC: 1415 **COAL-TAR PITCH**

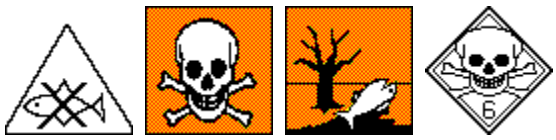
International Chemical Safety Cards

ARSENIC

ICSC: 0013

Grey arsenic
As
Atomic mass: 74.9

ICSC # 0013
CAS # 7440-38-2
RTECS # CG0525000
UN # 1558
EC # 033-001-00-X
October 18, 1999 Peer reviewed



TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames. NO contact with strong oxidizers. NO contact with hot surfaces.	Powder, water spray, foam, carbon dioxide.
EXPLOSION	Risk of fire and explosion is slight when exposed to hot surfaces or flames in the form of fine powder or dust.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		PREVENT DISPERSION OF DUST! AVOID ALL CONTACT! AVOID EXPOSURE OF (PREGNANT) WOMEN!	IN ALL CASES CONSULT A DOCTOR!
•INHALATION	Cough. Sore throat. Shortness of breath. Weakness. See Ingestion.	Closed system and ventilation.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
•SKIN	Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
•EYES	Redness.	Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Diarrhoea. Nausea. Vomiting. Burning sensation in the throat and chest. Shock or collapse. Unconsciousness.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Evacuate danger area! Sweep spilled substance into sealable containers. Carefully collect remainder, then remove to safe place. Chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment.	Separated from strong oxidants, acids, halogens, food and feedstuffs. Well closed.	Do not transport with food and feedstuffs. Marine pollutant. T symbol N symbol R: 23/25-50/53 S: 1/2-20/21-28-45-60-61 UN Hazard Class: 6.1 UN Packing Group: II

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0013

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

ARSENIC

ICSC: 0013

I M P O R T A N T D A T A

PHYSICAL STATE; APPEARANCE:
ODOURLESS, BRITTLE, GREY, METALLIC-LOOKING CRYSTALS.

PHYSICAL DANGERS:

CHEMICAL DANGERS:
Upon heating, toxic fumes are formed. Reacts violently with strong oxidants and halogens, causing fire and explosion hazard. Reacts with acids to produce

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 0.01 mg/m³ as TWA A1 (confirmed human carcinogen); BEI issued (ACGIH 2004).
MAK:
Carcinogen category: 1; Germ cell mutagen group: 3A; (DFG 2004).
OSHA PEL: 1910.1018 TWA 0.010 mg/m^3
NIOSH REL: Ca C 0.002 mg/m^3 15-minute See Appendix A
NIOSH IDLH: Ca 5 mg/m^3 (as As) See: 7440382

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly, when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is irritating to the eyes the skin and the respiratory tract. The substance may cause effects on the gastrointestinal tract cardiovascular system central nervous system kidneys , resulting in severe gastroenteritis, loss of fluid, and electrolytes, cardiac disorders shock convulsions and kidney impairment Exposure above the OEL may result in death. The effects may be delayed. Medical observation is indicated.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the mucous membranes, skin, peripheral nervous system liver bone marrow , resulting in pigmentation disorders, hyperkeratosis, perforation of nasal septum, neuropathy, liver impairment anaemia This substance is carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Sublimation point: 613°C
Density: 5.7 g/cm³

Solubility in water:
none

ENVIRONMENTAL DATA

The substance is toxic to aquatic organisms. It is strongly advised that this substance does not enter the environment.

N O T E S

The substance is combustible but no flash point is available in literature. Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home. Refer also to cards for specific arsenic compounds, e.g., Arsenic pentoxide (ICSC 0377), Arsenic trichloride (ICSC 0221), Arsenic trioxide (ICSC 0378), Arsine (ICSC 0222).

Transport Emergency Card: TEC (R)-61GT5-II

ADDITIONAL INFORMATION

IMPORTANT LEGAL NOTICE:

International Chemical Safety Cards

BARIUM SULFATE

ICSC: 0827

Barium sulphate
Blanc fixe
Artificial barite
$BaSO_4$
Molecular mass: 233.43

ICSC # 0827
CAS # 7727-43-7
RTECS # CR0600000
October 20, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		PREVENT DISPERSION OF DUST!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
•EYES		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Personal protection: P1 filter respirator for inert particles.		R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0827

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BARIUM SULFATE

ICSC: 0827

IMPORTANT DATA	**PHYSICAL STATE; APPEARANCE:** ODOURLESS TASTELESS, WHITE OR YELLOWISH CRYSTALS OR POWDER. **PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Reacts violently with aluminium powder. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 10 mg/m³ as TWA; (ACGIH 2004). MAK: (Inhalable fraction) 4 mg/m³; (Respirable fraction) 1.5 mg/m³; (DFG 2004). OSHA PEL†: TWA 15 mg/m^3 (total) TWA 5 mg/m^3 (resp) NIOSH REL: TWA 10 mg/m^3 (total) TWA 5 mg/m^3 (resp) NIOSH IDLH: N.D. See: IDLH INDEX **ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol. **INHALATION RISK:** Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Lungs may be affected by repeated or prolonged exposure to dust particles , resulting in baritosis (a form of benign pneumoconiosis).
PHYSICAL PROPERTIES	Melting point (decomposes): 1600°C Density: 4.5 g/cm³ Solubility in water: none
ENVIRONMENTAL DATA	

NOTES

Occurs in nature as the mineral barite; also as barytes, heavy spar. Card has been partly updated in October 2005. See section Occupational Exposure Limits.

ADDITIONAL INFORMATION

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

COPPER

ICSC: 0240

Cu
(powder)

ICSC # 0240
CAS # 7440-50-8
RTECS # GL5325000
September 24, 1993 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Special powder, dry sand, NO other agents.
EXPLOSION			
EXPOSURE		PREVENT DISPERSION OF DUST!	
•INHALATION	Cough. Headache. Shortness of breath. Sore throat.	Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Nausea. Vomiting.	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers. Carefully collect remainder. Then remove to safe place. (Extra personal protection: P2 filter respirator for harmful particles).	Separated from - See Chemical Dangers.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0240

International Chemical Safety Cards

COPPER

ICSC: 0240

I

M

P

PHYSICAL STATE; APPEARANCE:
RED POWDER, TURNS GREEN ON EXPOSURE TO MOIST AIR.

PHYSICAL DANGERS:

CHEMICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

O **R** **T** **A** **N** **T** **D** **A** **T** **A**	Shock-sensitive compounds are formed with acetylenic compounds, ethylene oxides and azides. Reacts with strong oxidants like chlorates, bromates and iodates, causing explosion hazard. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 0.2 mg/m³ fume (ACGIH 1992-1993). TLV (as Cu, dusts & mists): 1 mg/m³ (ACGIH 1992-1993). Intended change 0.1 mg/m³ Inhal., A4 (not classifiable as a human carcinogen); MAK: 0.1 mg/m³ (Inhalable fraction) Peak limitation category: II(2) Pregnancy risk group: D (DFG 2005). OSHA PEL*: TWA 1 mg/m^3 *Note: The PEL also applies to other copper compounds (as Cu) except copper fume. NIOSH REL*: TWA 1 mg/m^3 *Note: The REL also applies to other copper compounds (as Cu) except Copper fume. NIOSH IDLH: 100 mg/m^3 (as Cu) See: 7440508	**EFFECTS OF SHORT-TERM EXPOSURE:** Inhalation of fumes may cause metal fume fever. See Notes. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact may cause skin sensitization.

PHYSICAL PROPERTIES	Boiling point: 2595°C Melting point: 1083°C Relative density (water = 1): 8.9	Solubility in water: none
ENVIRONMENTAL DATA		

N O T E S

The symptoms of metal fume fever do not become manifest until several hours.

ADDITIONAL INFORMATION

ICSC: 0240 **COPPER**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

CHROMIUM

ICSC: 0029

Chrome
Cr
Atomic mass: 52.0
(powder)

ICSC # 0029
CAS # 7440-47-3
RTECS # GB4200000
October 27, 2004 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible under specific conditions.	No open flames if in powder form.	In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION		Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		PREVENT DISPERSION OF DUST!	
•**INHALATION**	Cough.	Local exhaust or breathing protection.	Fresh air, rest.
•**SKIN**		Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
•**EYES**	Redness.	Safety goggles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•**INGESTION**		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Personal protection: P2 filter respirator for harmful particles.		R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0029

International Chemical Safety Cards

CHROMIUM

ICSC: 0029

I

M

P

PHYSICAL STATE; APPEARANCE:
GREY POWDER

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

ROUTES OF EXPOSURE:

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed.

O R T A N T D A T A	**CHEMICAL DANGERS:** Chromium is a catalytic substance and may cause reaction in contact with many organic and inorganic substances , causing fire and explosion hazard. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (as Cr metal, Cr(III) compounds) 0.5 mg/m³ as TWA A4 (ACGIH 2004). MAK not established. OSHA PEL*: TWA 1 mg/m^3 See Appendix C *Note: The PEL also applies to insoluble chromium salts. NIOSH REL: TWA 0.5 mg/m^3 See Appendix C NIOSH IDLH: 250 mg/m^3 (as Cr) See: 7440473 **EFFECTS OF SHORT-TERM EXPOSURE:** May cause mechanical irritation tothe eyesandthe respiratory tract. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:**
PHYSICAL PROPERTIES	Boiling point: 2642°C Melting point: 1900°C Density: 7.15 g/cm³ Solubility in water: none
ENVIRONMENTAL DATA	

N O T E S

The surface of the chromium particles is oxidized to chromium(III)oxide in air. See ICSC 1531 Chromium(III) oxide.

ADDITIONAL INFORMATION

ICSC: 0029 **CHROMIUM**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

LEAD

ICSC: 0052

Lead metal
Plumbum
Pb
Atomic mass: 207.2
(powder)

ICSC # 0052
CAS # 7439-92-1
RTECS # OF7525000
October 08, 2002 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	PREVENT DISPERSION OF DUST! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Nausea. Vomiting.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment. Personal protection: P3 filter respirator for toxic particles.	Separated from food and feedstuffs incompatible materials See Chemical Dangers.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0052

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

LEAD

ICSC: 0052

I M P O R T A N T D A T A

PHYSICAL STATE; APPEARANCE:
BLUISH-WHITE OR SILVERY-GREY SOLID IN VARIOUS FORMS. TURNS TARNISHED ON EXPOSURE TO AIR.

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
On heating, toxic fumes are formed. Reacts with oxidants. Reacts with hot concentrated nitric acid, boiling concentrated hydrochloric acid and sulfuric acid. Attacked by pure water and by weak organic acids in the presence of oxygen.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 0.05 mg/m³ A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued (ACGIH 2004).
MAK:
Carcinogen category: 3B; Germ cell mutagen group: 3A; (DFG 2004).
EU OEL: as TWA 0.15 mg/m³ (EU 2002).
OSHA PEL*: 1910.1025 TWA 0.050 mg/m^3 See Appendix C *Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.
NIOSH REL*: TWA 0.050 mg/m^3 See Appendix C *Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.
NIOSH IDLH: 100 mg/m^3 (as Pb) See: 7439921

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
The substance may have effects on the blood bone marrow central nervous system peripheral nervous system kidneys , resulting in anaemia, encephalopathy (e.g., convulsions), peripheral nerve disease, abdominal cramps and kidney impairment. Causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES		
	Boiling point: 1740°C	Density: 11.34 g/cm3
	Melting point: 327.5°C	Solubility in water: none

ENVIRONMENTAL DATA	
	Bioaccumulation of this chemical may occur in plants and in mammals. It is strongly advised that this substance does not enter the environment. 

N O T E S

Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home.

Transport Emergency Card: TEC (R)-51S1872

ADDITIONAL INFORMATION

ICSC: 0052 **LEAD**

International Chemical Safety Cards

MERCURY

ICSC: 0056

Quicksilver
Liquid silver
Hg
Atomic mass: 200.6

ICSC # 0056
CAS # 7439-97-6
RTECS # OV4550000
UN # 2809
EC # 080-001-00-0
April 22, 2004 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Risk of fire and explosion.		In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		STRICT HYGIENE! AVOID EXPOSURE OF (PREGNANT) WOMEN! AVOID EXPOSURE OF ADOLESCENTS AND CHILDREN!	IN ALL CASES CONSULT A DOCTOR!
•INHALATION	Abdominal pain. Cough. Diarrhoea. Shortness of breath. Vomiting. Fever or elevated body temperature.	Local exhaust or breathing protection.	Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.
•SKIN	MAY BE ABSORBED! Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
•EYES		Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work. Wash hands before eating.	Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Evacuate danger area in case of a large spill! Consult an expert! Ventilation. Collect leaking and spilled liquid in sealable non-metallic containers as far as possible. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Chemical protection suit including self-contained breathing apparatus.	Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs Well closed.	Special material. Do not transport with food and feedstuffs. T symbol N symbol R: 23-33-50/53 S: 1/2-7-45-60-61 UN Hazard Class: 8 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European Communities (C) IPCS CEC 1994. No modifications to the International version have been made except to add the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

MERCURY

ICSC: 0056

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
ODOURLESS, HEAVY AND MOBILE SILVERY LIQUID METAL.

PHYSICAL DANGERS:

CHEMICAL DANGERS:
Upon heating, toxic fumes are formed. Reacts violently with ammonia and halogens causing fire and explosion hazard. Attacks aluminium and many other metals forming amalgams.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 0.025 mg/m³ as TWA (skin) A4 BEI issued (ACGIH 2004).
MAK: 0.1 mg/m³ Sh
Peak limitation category: II(8) Carcinogen category: 3B (DFG 2003).
OSHA PEL†: C 0.1 mg/m^3
NIOSH REL: Hg Vapor: TWA 0.05 mg/m^3 skin
Other: C 0.1 mg/m^3 skin
NIOSH IDLH: 10 mg/m^3 (as Hg) See: 7439976

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its vapour and through the skin , also as a vapour!

INHALATION RISK:
A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is irritating to the skin. Inhalation of the vapours may cause pneumonitis. The substance may cause effects on the central nervous systemandkidneys. The effects may be delayed. Medical observation is indicated.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
The substance may have effects on the central nervous system kidneys , resulting in irritability, emotional instability, tremor, mental and memory disturbances, speech disorders. Danger of cumulative effects. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

PHYSICAL PROPERTIES

Boiling point: 357°C
Melting point: -39°C
Relative density (water = 1): 13.5
Solubility in water:
none

Vapour pressure, Pa at 20°C: 0.26
Relative vapour density (air = 1): 6.93
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.009

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. In the food chain important to humans, bioaccumulation takes place, specifically in fish.

N O T E S

Depending on the degree of exposure, periodic medical examination is indicated. No odour warning if toxic concentrations are present. Do NOT take working clothes home.

Transport Emergency Card: TEC (R)-80GC9-II+III

ADDITIONAL INFORMATION

ICSC: 0056 **MERCURY**

International Chemical Safety Cards

NICKEL

ICSC: 0062

Ni
Atomic mass: 58.7
(powder)

ICSC # 0062
CAS # 7440-02-0
RTECS # QR5950000
EC # 028-002-00-7
October 17, 2001 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Flammable as dust. Toxic fumes may be released in a fire.		Dry sand. NO carbon dioxide. NO water.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		PREVENT DISPERSION OF DUST! AVOID ALL CONTACT!	
•INHALATION	Cough. Shortness of breath.	Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Vacuum spilled material. Carefully collect remainder, then remove to safe place. Personal protection: P2 filter respirator for harmful particles.	Separated from strong acids.	Xn symbol R: 40-43 S: 2-22-36

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0062

International Chemical Safety Cards

NICKEL

ICSC: 0062

I

PHYSICAL STATE; APPEARANCE:
SILVERY METALLIC SOLID IN VARIOUS FORMS.

PHYSICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of the dust.

IMPORTANT DATA	Dust explosion possible if in powder or granular form, mixed with air. **CHEMICAL DANGERS:** Reacts violently, in powder form, with titanium powder and potassium perchlorate, and oxidants such as ammonium nitrate, causing fire and explosion hazard. Reacts slowly with non-oxidizing acids and more rapidly with oxidizing acids. Toxic gases and vapours (such as nickel carbonyl) may be released in a fire involving nickel. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (Inhalable fraction) 1.5 mg/m³ as TWA A5 (not suspected as a human carcinogen); (ACGIH 2004). MAK: (Inhalable fraction) sensitization of respiratory tract and skin (Sah); Carcinogen category: 1; (DFG 2004). OSHA PEL*†: TWA 1 mg/m^3 *Note: The PEL does not apply to Nickel carbonyl. NIOSH REL*: Ca TWA 0.015 mg/m^3 See Appendix A *Note: The REL does not apply to Nickel carbonyl. NIOSH IDLH: Ca 10 mg/m^3 (as Ni) See: 7440020	**INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed. **EFFECTS OF SHORT-TERM EXPOSURE:** May cause mechanical irritation. Inhalation of fumes may cause pneumonitis. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma. Lungs may be affected by repeated or prolonged exposure. This substance is possibly carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 2730°C Melting point: 1455°C Density: 8.9 g/cm3	Solubility in water: none
ENVIRONMENTAL DATA		

N O T E S

At high temperatures, nickel oxide fumes will be formed. Depending on the degree of exposure, periodic medical examination is suggested. The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this substance.

ADDITIONAL INFORMATION

ICSC: 0062 **NICKEL**

International Chemical Safety Cards

ZINC POWDER

ICSC: 1205

Blue powder
Merrillite
Zn
Atomic mass: 65.4
(powder)

ICSC # 1205
CAS # 7440-66-6
RTECS # ZG8600000
UN # 1436 (zinc powder or dust)
EC # 030-001-00-1
October 24, 1994 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Highly flammable. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking. NO contact with acid(s), base (s) and incompatible substances (see Chemical Dangers).	Special powder, dry sand, NO other agents. NO water.
EXPLOSION	Risk of fire and explosion on contact with acid(s), base(s), water and incompatible substances.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Prevent deposition of dust.	In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.
EXPOSURE		PREVENT DISPERSION OF DUST! STRICT HYGIENE!	
•**INHALATION**	Metallic taste and metal fume fever. Symptoms may be delayed (see Notes).	Local exhaust.	Fresh air, rest. Refer for medical attention.
•**SKIN**	Dry skin.	Protective gloves.	Rinse and then wash skin with water and soap.
•**EYES**		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•**INGESTION**	Abdominal pain. Nausea. Vomiting.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Extinguish or remove all ignition sources. Do NOT wash away into sewer. Sweep spilled substance into containers. then remove to safe place. Personal protection: self-contained breathing apparatus.	Fireproof. Separated from acids, bases oxidants Dry.	Airtight. F symbol N symbol R: 15-17-50/53 S: 2-7/8-43-46-60-61 UN Hazard Class: 4.3 UN Subsidiary Risks: 4.2

SEE IMPORTANT INFORMATION ON BACK

International Chemical Safety Cards

ZINC POWDER

ICSC: 1205

I M P O R T A N T D A T A

PHYSICAL STATE; APPEARANCE:
ODOURLESS GREY TO BLUE POWDER.

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc.

CHEMICAL DANGERS:
Upon heating, toxic fumes are formed. The substance is a strong reducing agent and reacts violently with oxidants. Reacts with water and reacts violently with acids and bases forming flammable/explosive gas (hydrogen - see ICSC0001) Reacts violently with sulfur, halogenated hydrocarbons and many other substances causing fire and explosion hazard.

OCCUPATIONAL EXPOSURE LIMITS:
TLV not established.

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE:
Inhalation of fumes may cause metal fume fever. The effects may be delayed.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
Repeated or prolonged contact with skin may cause dermatitis.

PHYSICAL PROPERTIES

Boiling point: 907°C
Melting point: 419°C
Relative density (water = 1): 7.14
Solubility in water: reaction
Vapour pressure, kPa at 487°C: 0.1
Auto-ignition temperature: 460°C

ENVIRONMENTAL DATA

N O T E S

Zinc may contain trace amounts of arsenic, when forming hydrogen, may also form toxic gas arsine (see ICSC 0001 and ICSC 0222). Reacts violently with fire extinguishing agents such as water, halons, foam and carbon dioxide. The symptoms of metal fume fever do not become manifest until several hours later. Rinse contaminated clothes (fire hazard) with plenty of water.

Transport Emergency Card: TEC (R)-43GWS-II+III
NFPA Code: H0; F1; R1;

ADDITIONAL INFORMATION

ICSC: 1205 **ZINC POWDER**

APPENDIX D

HOSPITAL INFORMATION AND MAP

FIELD ACCIDENT REPORT

FIELD ACCIDENT REPORT

This report is to be filled out by the designated Site Safety Officer after EVERY accident.

PROJECT NAME _____ PROJECT. NO._____

Date of Accident _____ Time _____ Report By _____

Type of Accident (Check One):

( ) Vehicular ( ) Personal ( ) Property

Name of Injured _____ DOB or Age _____

How Long Employed _____

Names of Witnesses _____

_____

Description of Accident _____

_____

_____

Action Taken _____

_____

_____

Did the Injured Lose Any Time? _____ How Much (Days/Hrs.)? _____

Was Safety Equipment in Use at the Time of the Accident (Hard Hat, Safety Glasses, Gloves, Safety Shoes, etc.)? _____

_____

(If not, it is the EMPLOYEE'S sole responsibility to process his/her claim through his/her Health and Welfare Fund.)

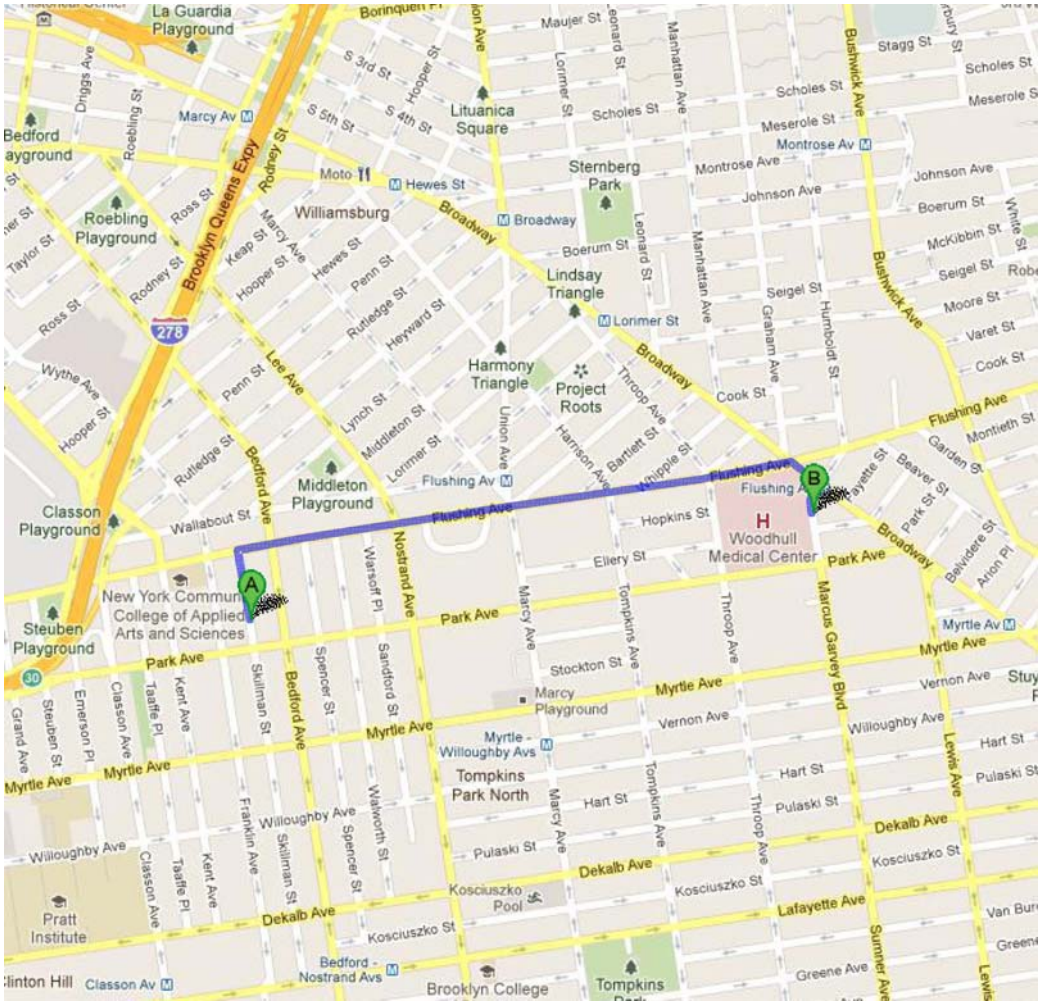
INDICATE STREET NAMES, DESCRIPTION OF VEHICLES, AND NORTH ARROW

HOSPITAL INFORMATION AND MAP

The hospital nearest the site is:

Woodhull Hospital

760 Broadway Brooklyn, New York 11206
0.9 Miles – About 3 Minutes



A 39 Skillman St, Brooklyn, NY 11205

1.	Head **north** on **Skillman St** toward **Flushing Ave**	go 0.1 mi total 0.1 mi
2.	Turn right onto **Flushing Ave** About 3 mins	go 0.8 mi total 1.0 mi
3.	Turn right onto **Broadway**	go 292 ft total 1.0 mi
4.	Take the 1st right onto **Marcus Garvey Blvd/Sumner Ave**	go 253 ft total 1.1 mi

B **Woodhull Medical Center**
760 Broadway Brooklyn, New York 11206 - (718) 963-8000

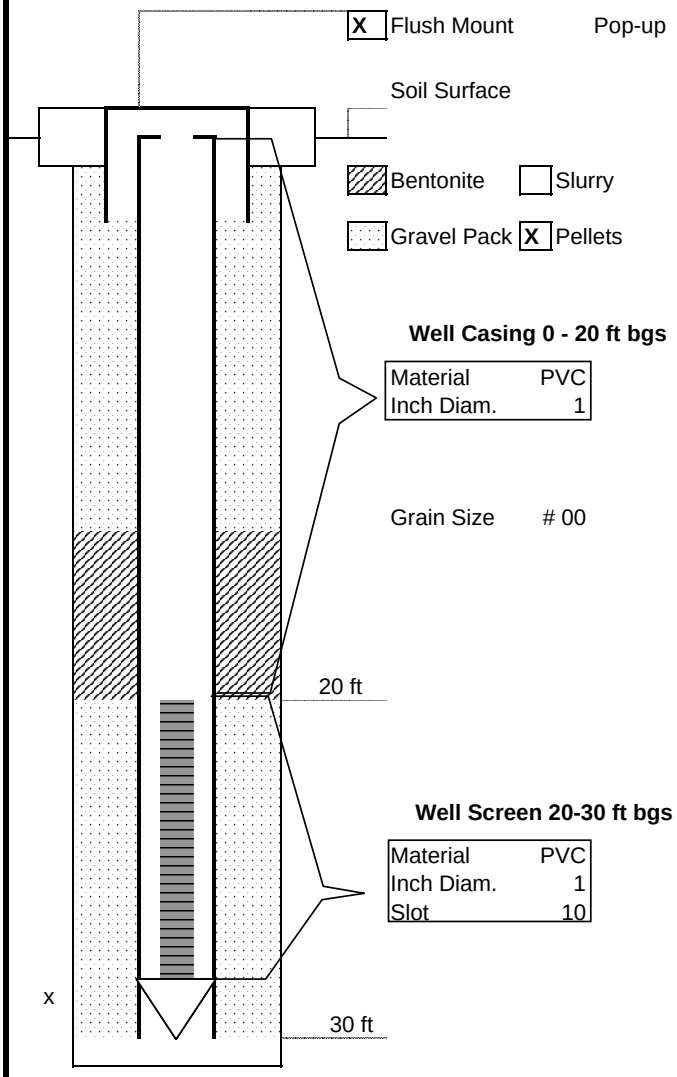
ATTACHMENT E
Well Construction Logs

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-1



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-1

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date: Not installed

Installation Depth: 30 ft bgs

Survey Point Elevation: NA

Installation Date: Not installed

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: Dominick Mosca

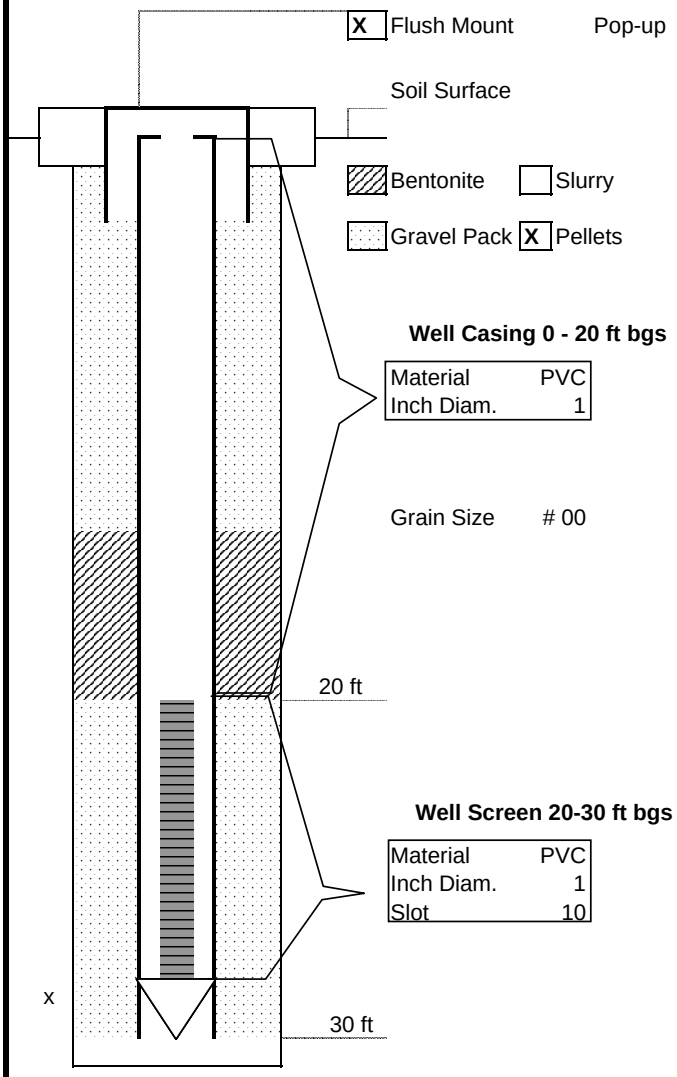
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-2



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-2

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date: Not installed

Installation Depth: 30 ft bgs

Survey Point Elevation: NA

Installation Date: Not installed

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: Dominick Mosca

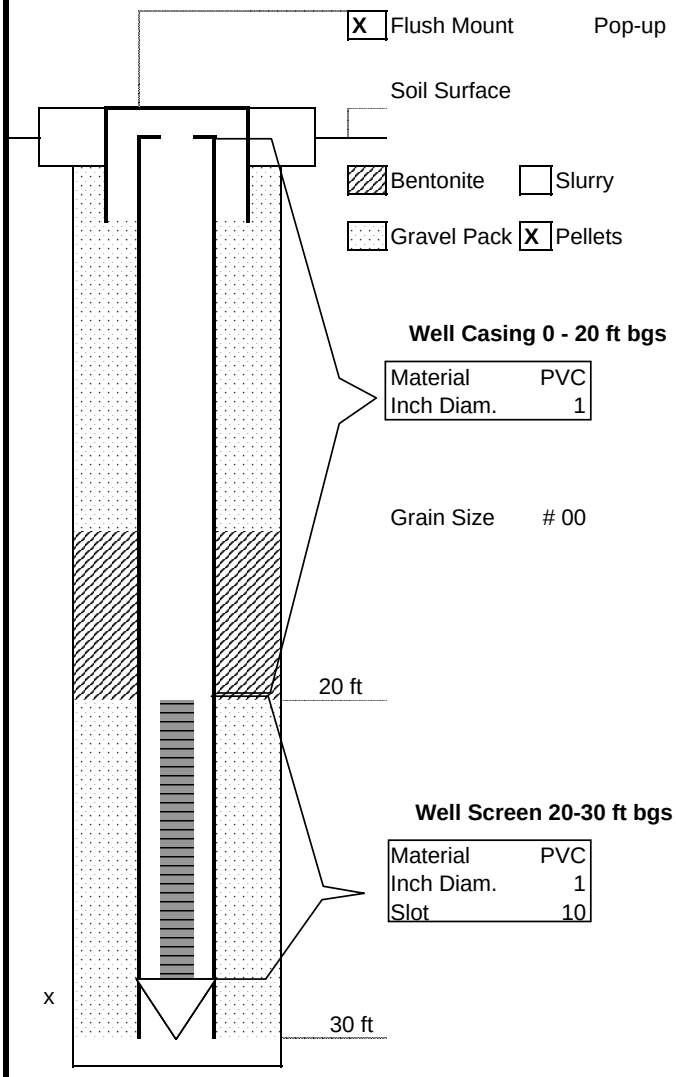
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-3



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-3

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date: Not installed

Installation Depth: 30 ft bgs

Survey Point Elevation: NA

Installation Date: Not installed

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: Dominick Mosca

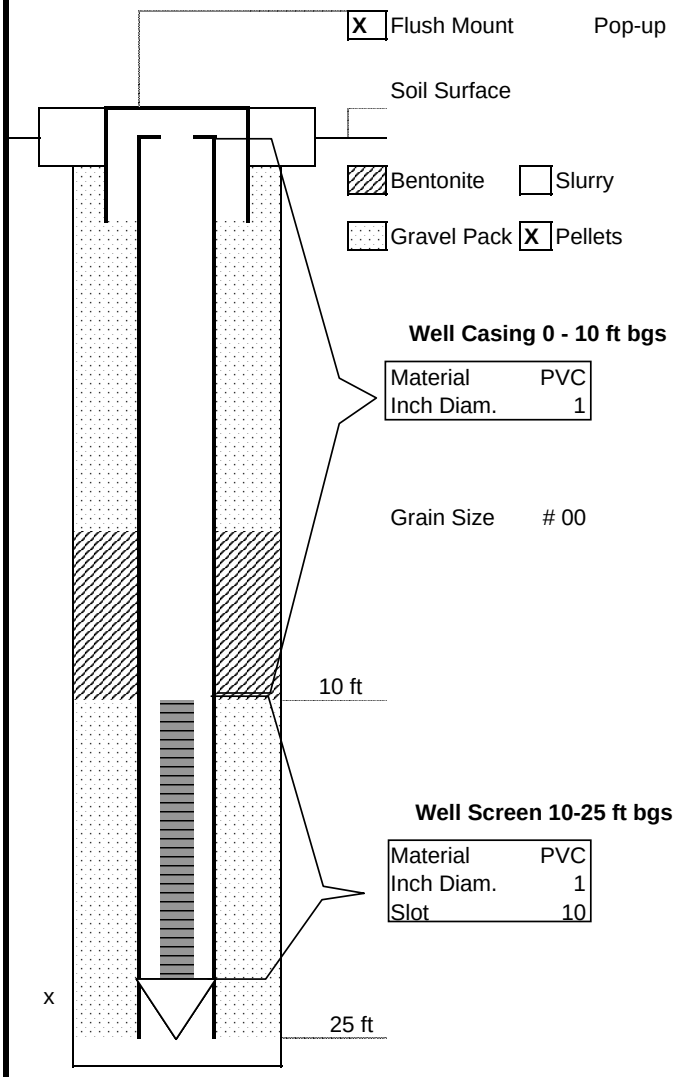
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-4



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-4

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/15//13

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

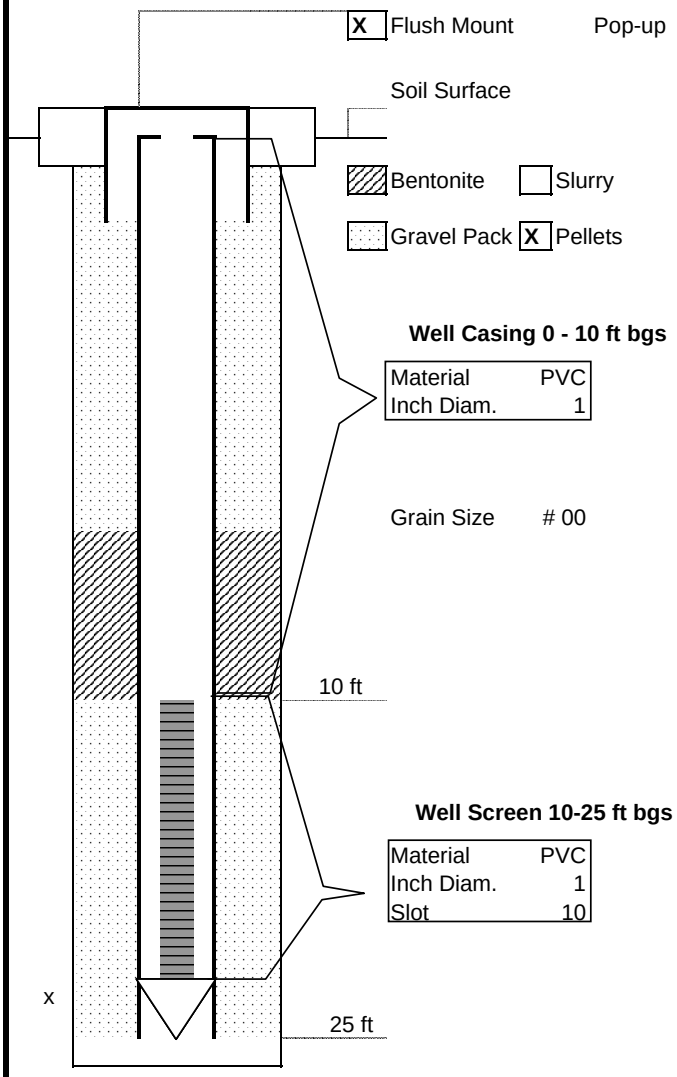
Company Name: EBC

GROUNDWATER MONITORING WELL

CONSTRUCTION LOG

MW-5

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-5

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/15/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

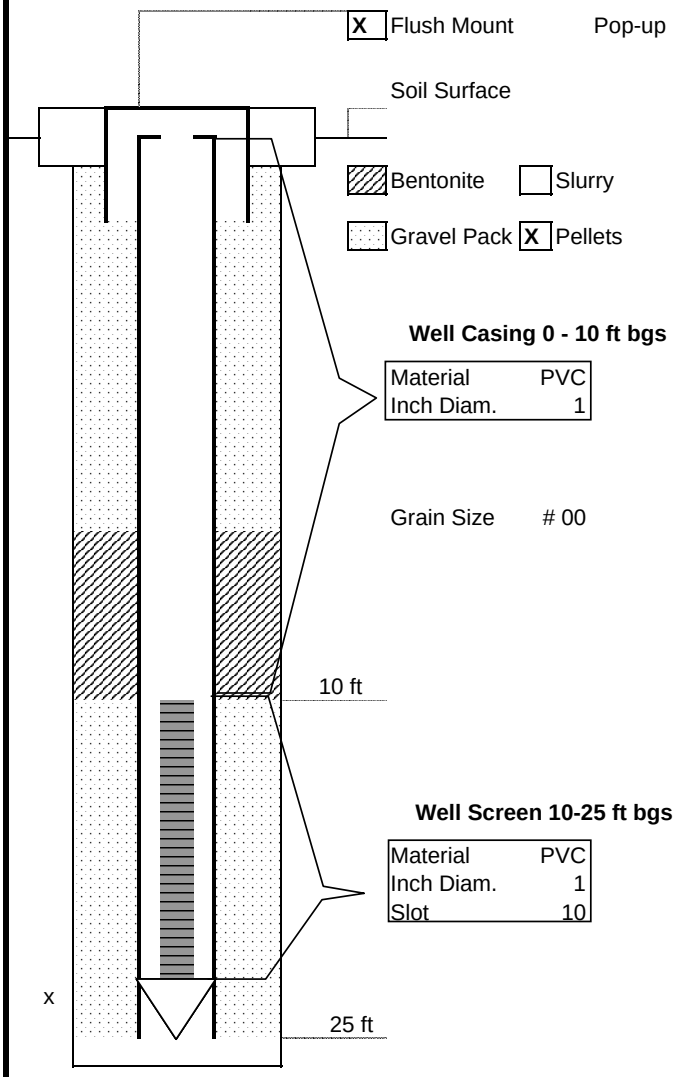
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-6



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-6

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/15/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters X

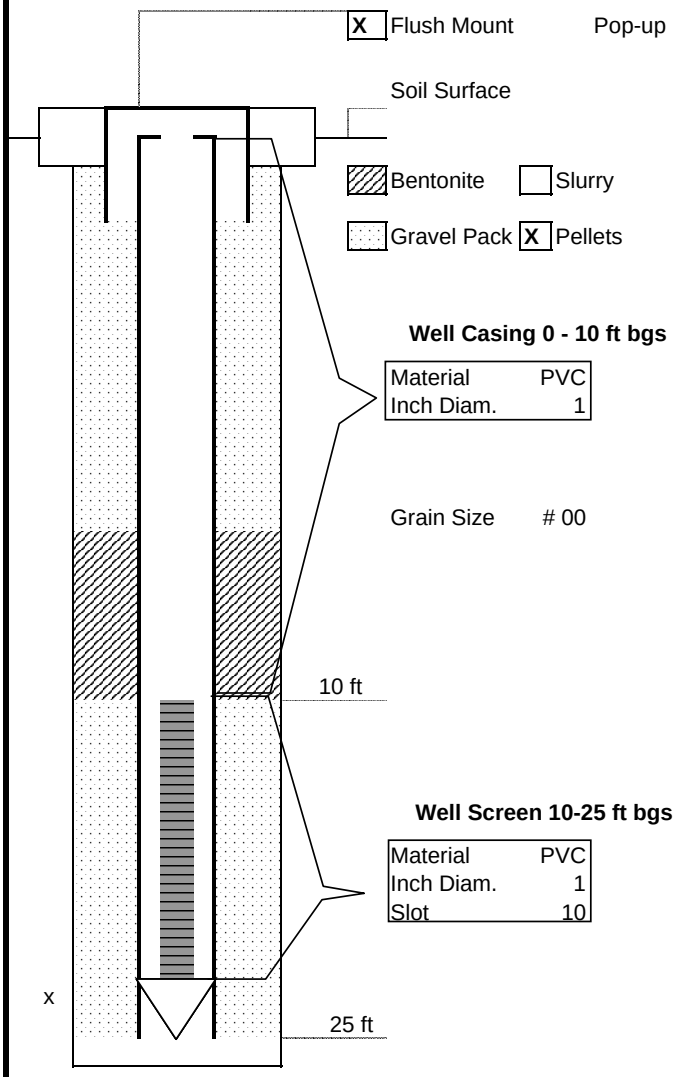
Company Name: EBC

GROUNDWATER MONITORING WELL

CONSTRUCTION LOG

MW-7

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-7

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/20/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

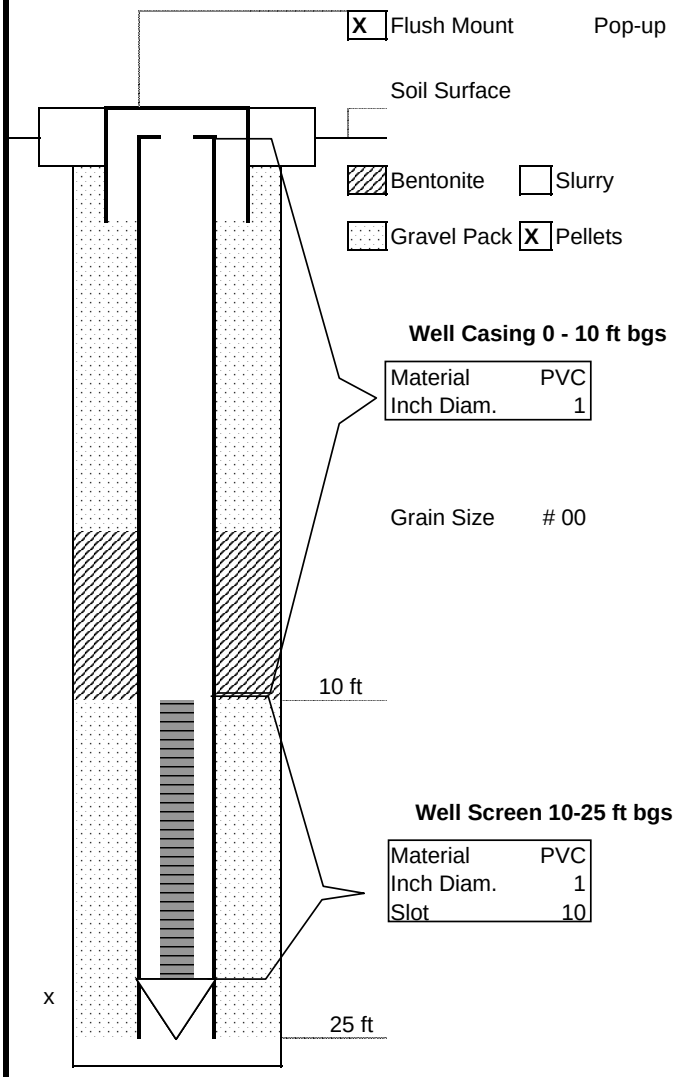
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-8



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-8

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/20/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

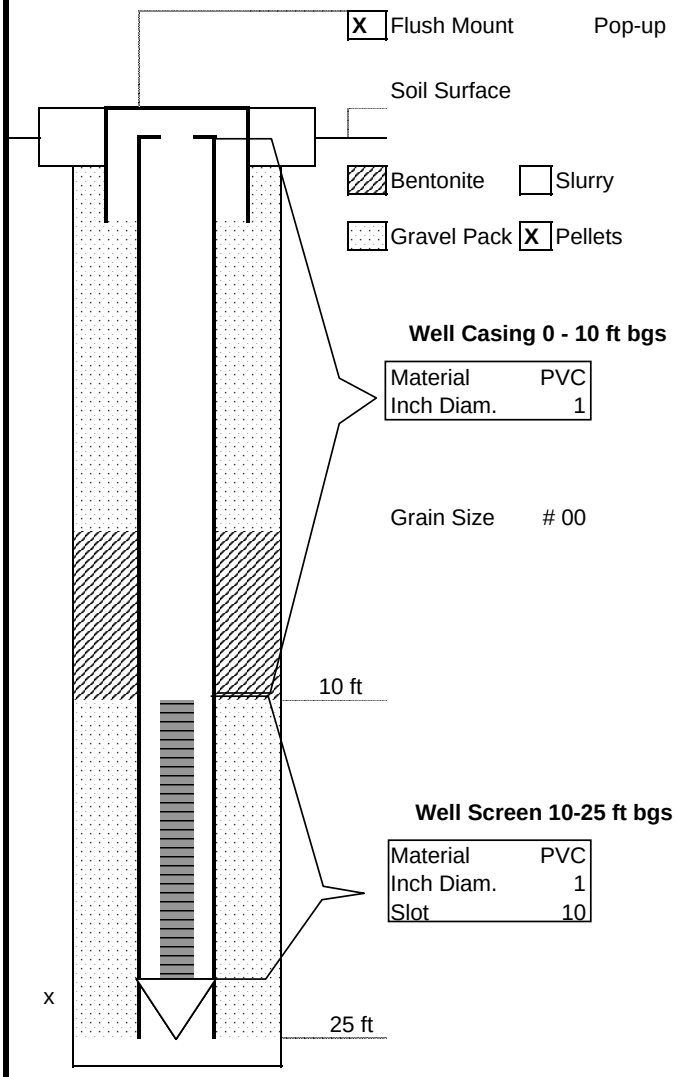
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-9



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-9

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/20/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

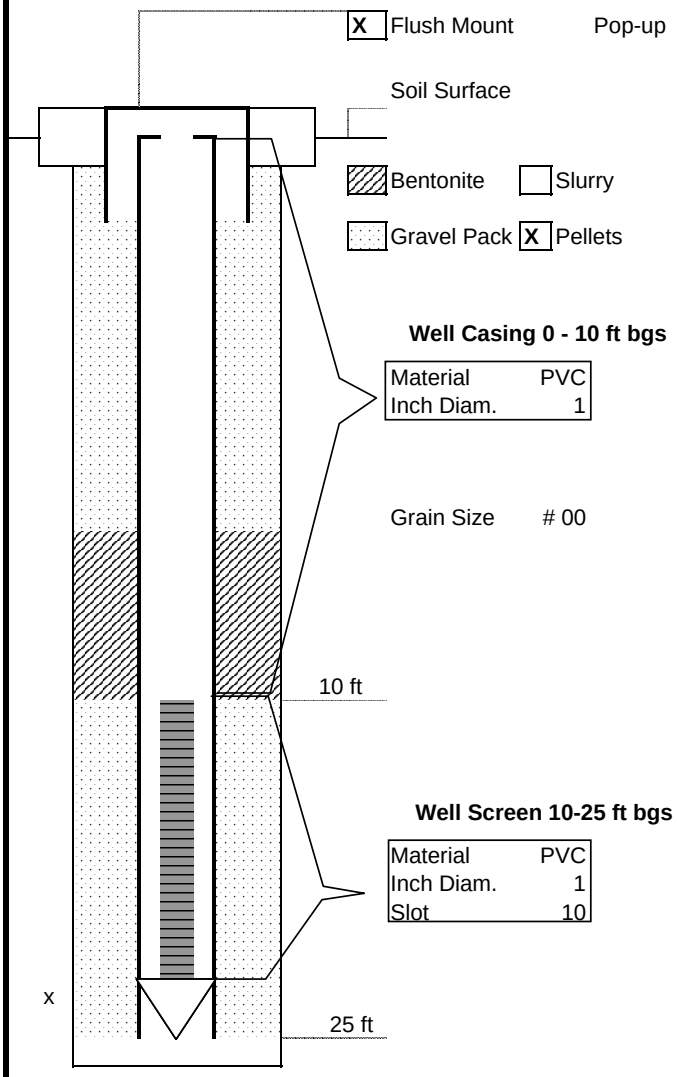
Company Name: EBC

GROUNDWATER MONITORING WELL

ENVIRONMENTAL BUSINESS CONSULTANTS

CONSTRUCTION LOG

MW-10



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: MW-10

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/20/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

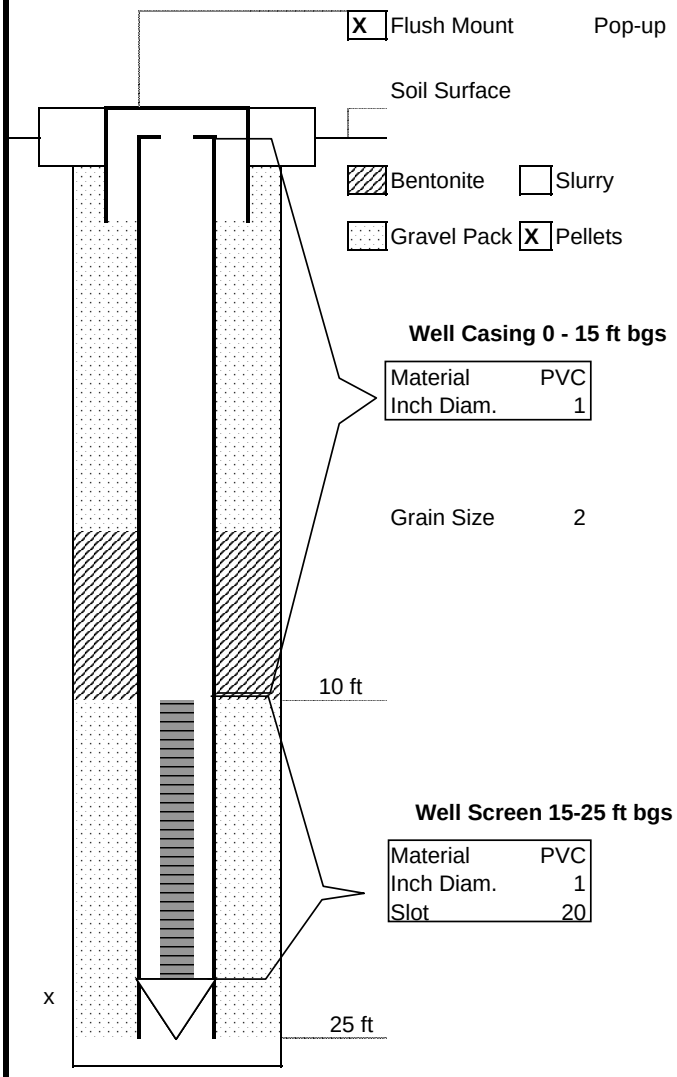
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-1

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-1

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/15/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

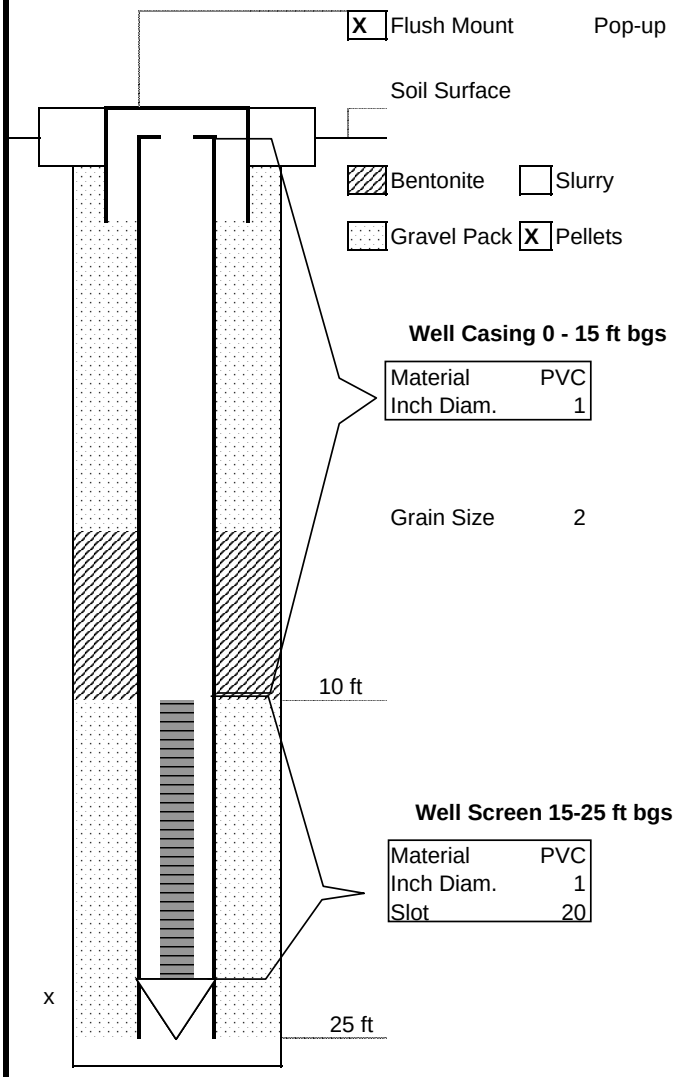
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-2

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-2

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: ####

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

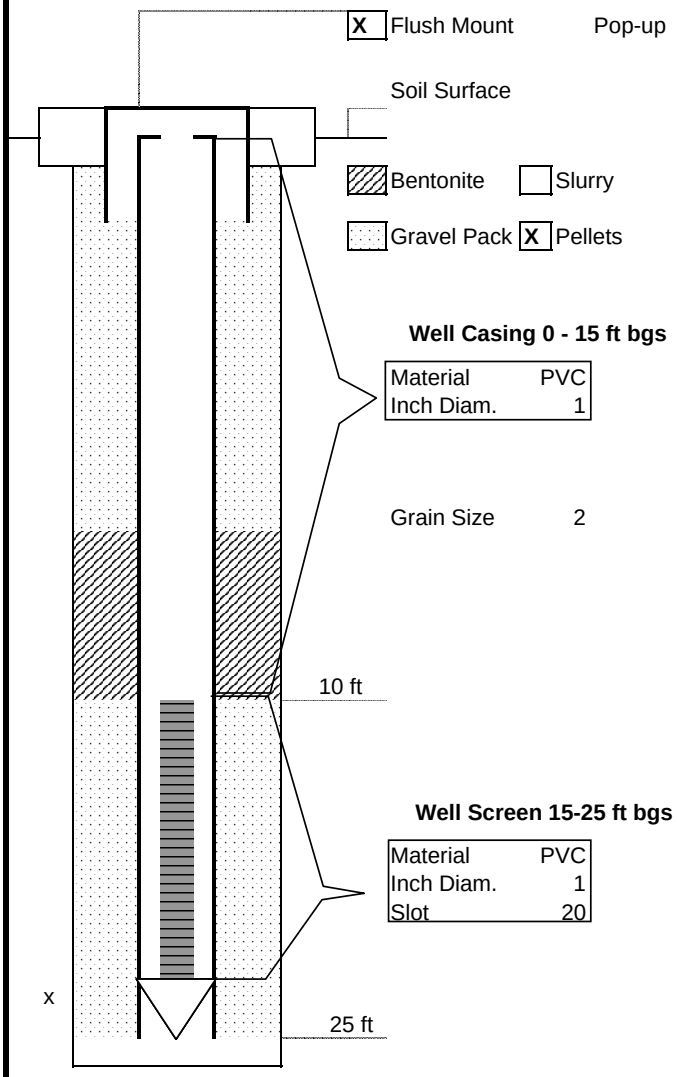
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-3

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-3

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/15/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

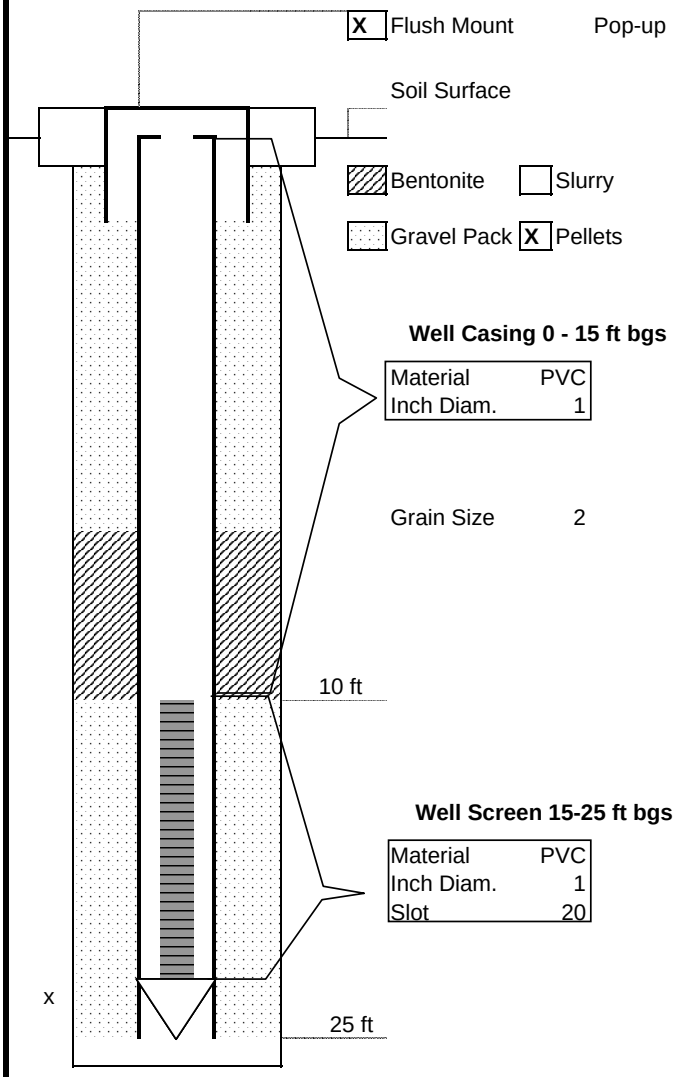
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-4



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-4

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/18/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

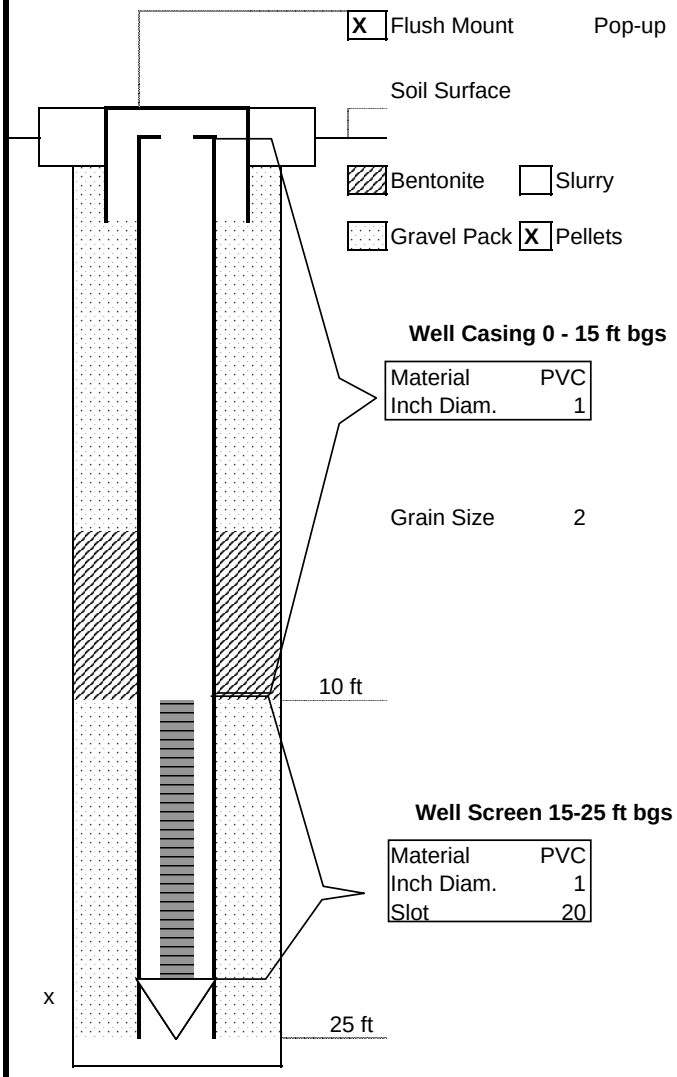
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-5



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-5

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/18/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

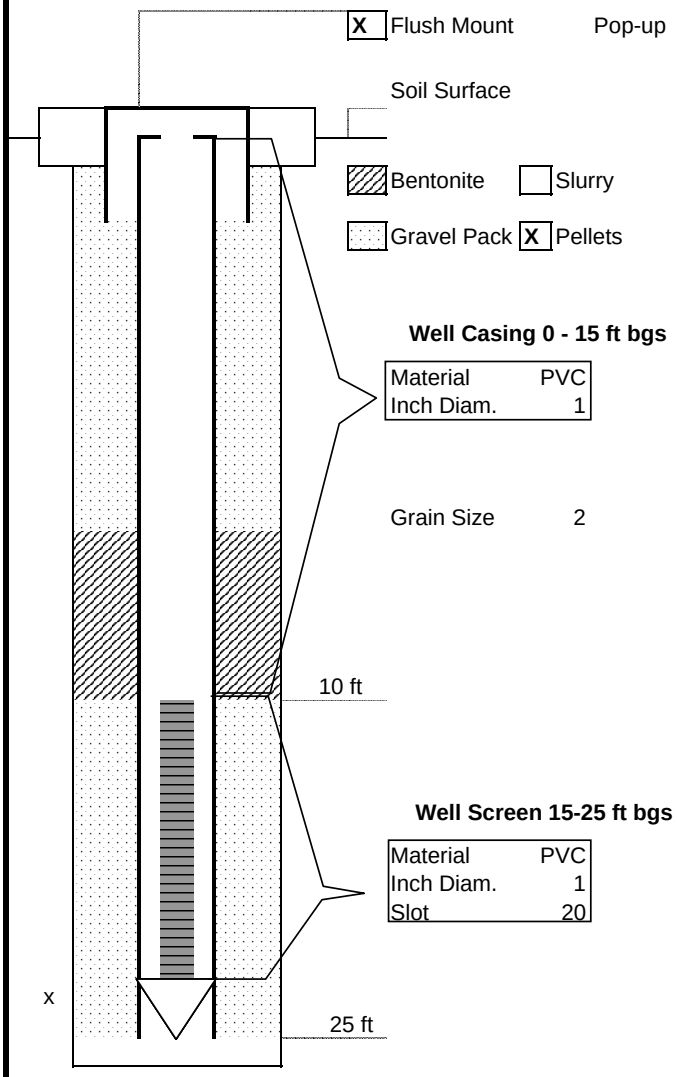
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-6

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-6

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/18/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

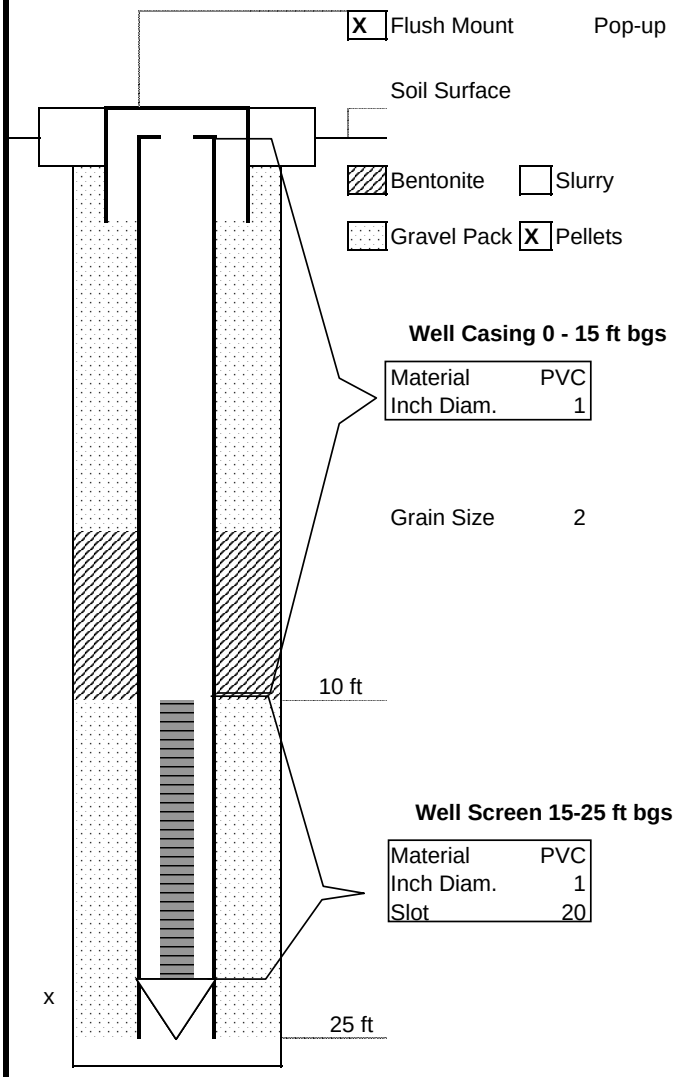
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-7



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-7

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3718/13

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

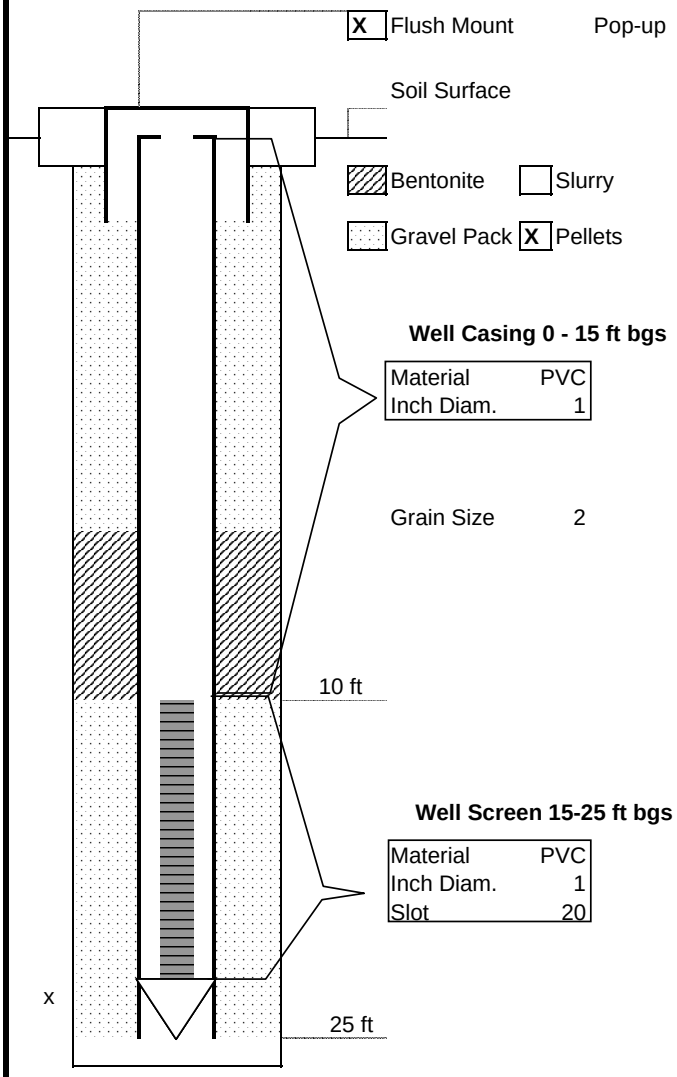
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-8

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-8

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

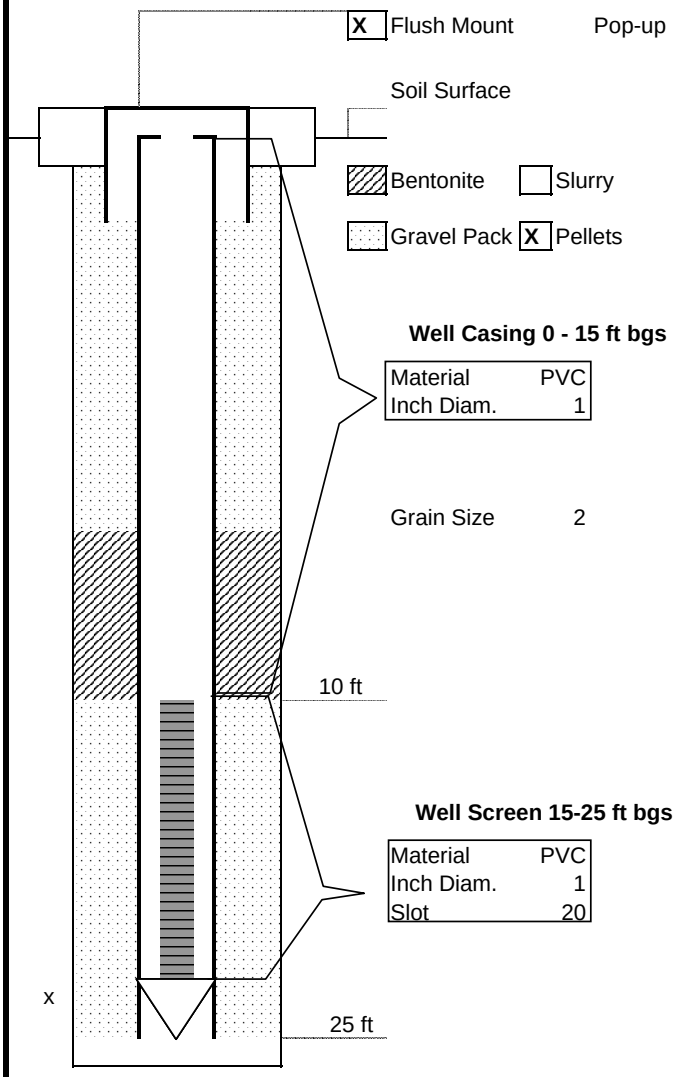
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-9



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-9

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

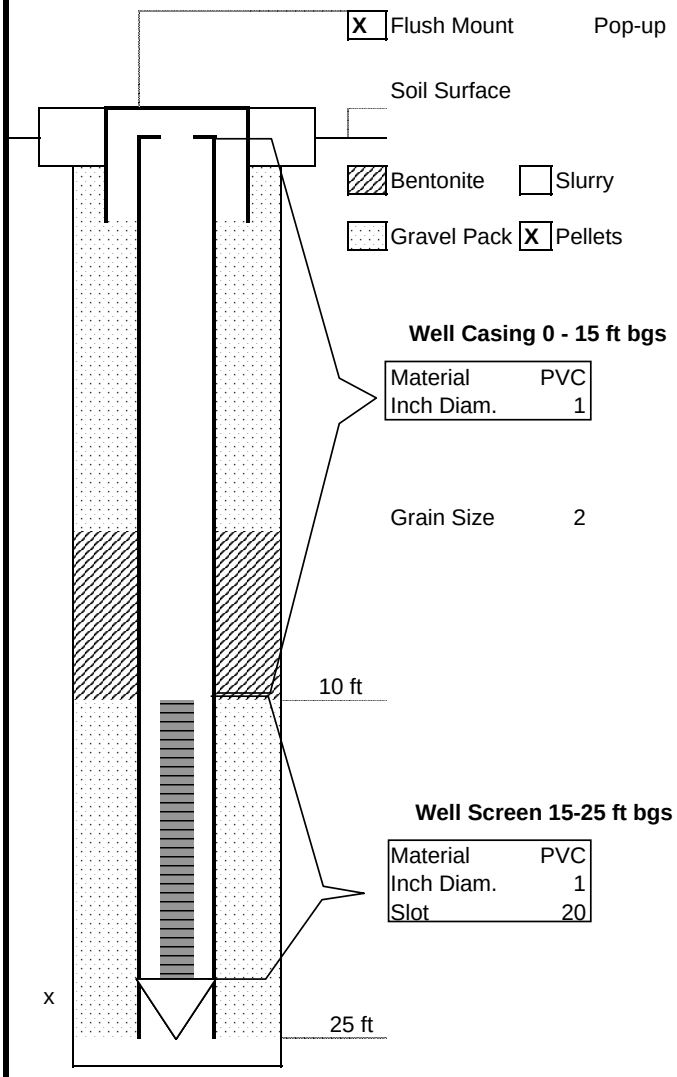
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-10



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-10

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

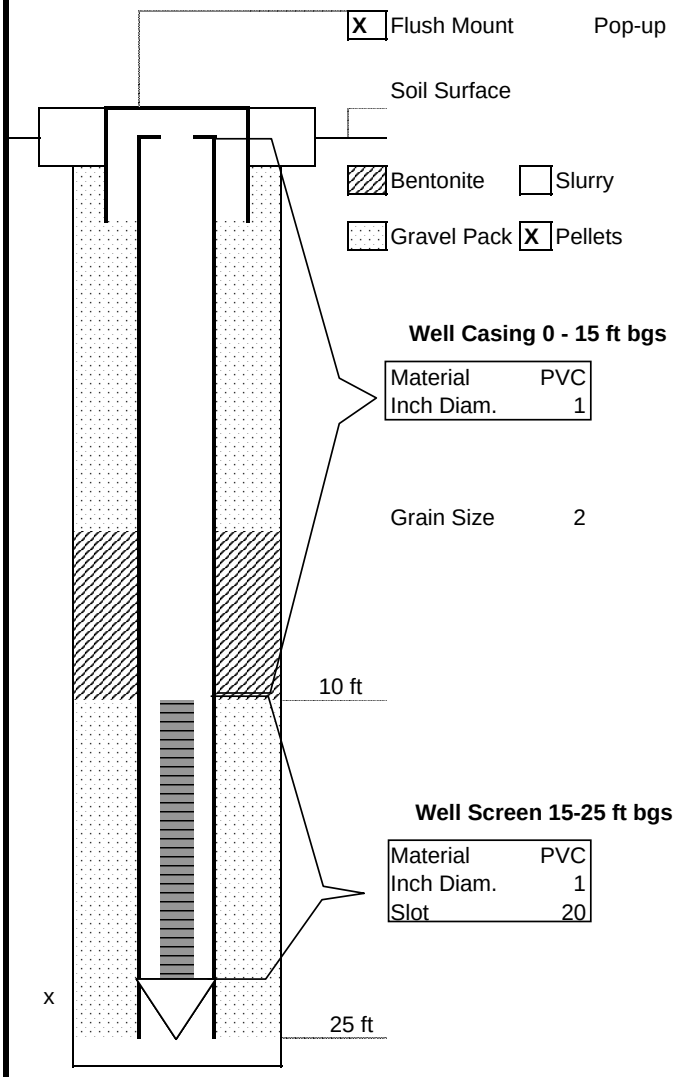
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-11



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-11

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

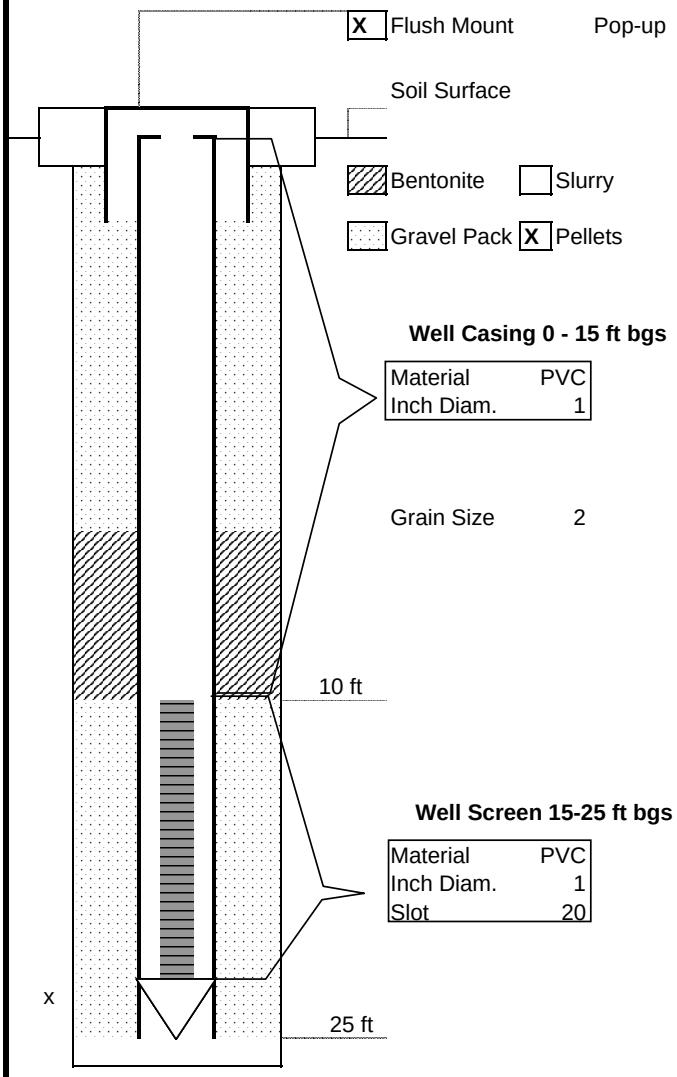
Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-12

ENVIRONMENTAL BUSINESS CONSULTANTS



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-12

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

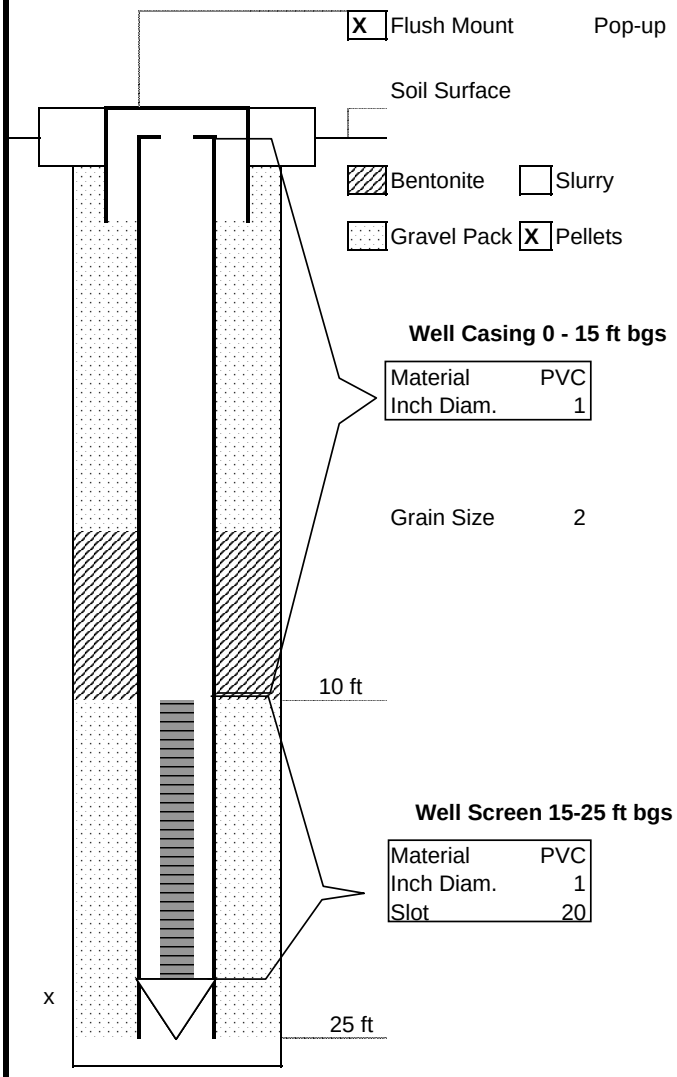
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-13



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-13

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/19/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

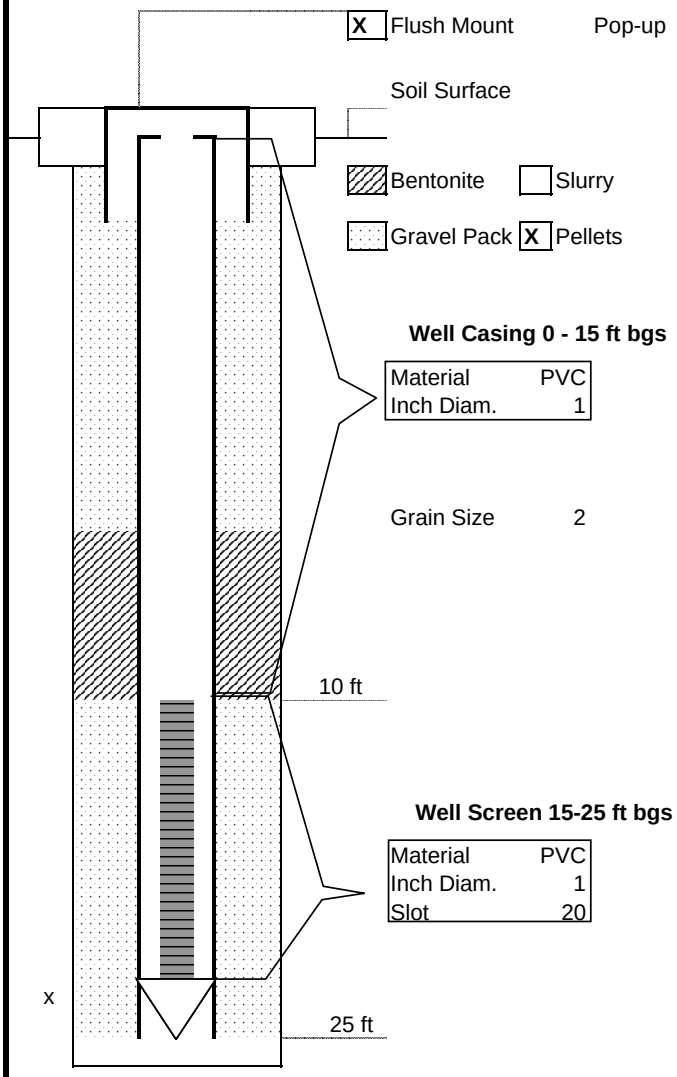
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-14



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-14

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/13/2019

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

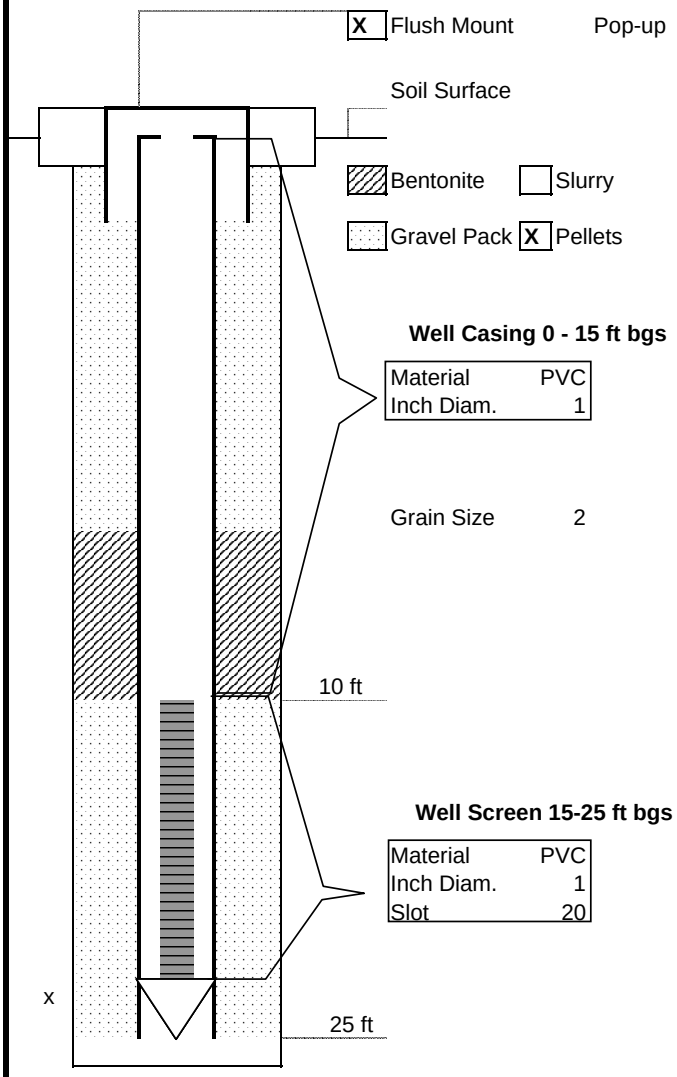
Hydrogeologist: K. Waters

Company Name: EBC

CHEMICAL INJECTION WELL

CONSTRUCTION LOG

IW-15



Note: Drawing is not to scale.
Depths are given in feet below land surface.

Monitoring Well No.: IW-15

Project: 39 Skillman Street, Brooklyn, NY

Depth to Groundwater Date:

Installation Depth: 25 ft bgs

Survey Point Elevation: NA

Installation Date: 3/20/2013

Drilling Contractor: Eastern Environmental Solutions, Inc.

Installation Method: Hollow Geoprobe Rods

Water Removed During Development:

Hydrogeologist: K. Waters

Company Name: EBC

ATTACHMENT F
Groundwater Sampling Logs

GROUNDWATER PURGE / SAMPLE LOGS

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

Well I.D.: _____ Date: _____

Well Depth (from TOC): _____ Equipment: _____

Static Water Level (from TOC): _____ _____

Height of Water in Well: 0 _____

Gallons of Water per Well Volume: 0 _____

Flow Rate: 400ml/min.

Time	Pump Rate	Gal. Removed	pH	Cond. (mS/cm)	Temp. (deg. C)	DO (mg/L)	Comments

Note 400 ml = 0.11 gallons

ATTACHMENT G
Site Inspection Checklist and Inspection Forms

SITE INSPECTION CHECKLIST

Site Inspection Checklist - Subslab Depressurization System
39 Skillman Street
Brooklyn, NY

Date: _____ Time: _____

Inspector Name/Organization: _____

Physical Inspection of Fans

Fan 1 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Fan 2 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Fan 3 :	**yes**	**no**	Fan Model No. Manufacturer:
Operational?			
Observed Leaks at Seals?			
Air Flow at Exhaust Stack?			Other Comments / Observations
Alarm Sound W/power off?			
Alarm Flash W/power off?			
Vacuum Reading:			

Repairs Needed and / or Maintenance at this time?

Signature: _____ Date: _____

SITE INSPECTION CHECKLIST

Site Inspection Checklist - Cover System
39 Skillman Street
Brooklyn, NY

Date: _____ Time: _____

Inspector Name/Organization: _____

Visual Inspection of Concrete Slabs

Building 1 Inspect concrete slab for cracks, perforations and patching

Describe General Condition of Slab _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Building 2 Inspect for cracks, perforations and patching

Describe General Condition of Slab _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Exterior Impervious Cap Areas (Driveway, Parking areas and Walkways) Inspect for cracks, perforations and patching

Describe General Condition of Impervious Cap _____

_____

Describe any Cracks or New Penetrations _____

_____

Describe any Patching _____

_____

Exterior Green Areas Inspect for signs of disturbance

Describe General Condition of Soil Cover _____

_____

Describe any Indications of Recent Disturbance _____

_____

Repairs Needed and / or Maintenance at this time?

_____

_____

_____

_____

Signature: _____ Date: _____

ATTACHMENT H
Quality Assurance Project Plan

QUALITY ASSURANCE PROJECT PLAN
Former East Coast Industrial Uniforms Site
39 Skillman Street, Brooklyn, NY
BCP No. 224156

Prepared on behalf of:

39 Skillman Street LLC
331 Rutledge Street, Suite 209
Brooklyn, NY 11211

Prepared by:

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961

TABLE OF CONTENTS

QUALITY ASSURANCE PROJECT PLAN

Former East Coast Industrial Uniforms Site
39 Skillman Street, Brooklyn, NY

TABLES

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) has been prepared in accordance with DER-10 to detail procedures to be followed during the course of the sampling and analytical portion of the project, as required by the approved work plan.

To ensure the successful completion of the project each individual responsible for a given component of the project must be aware of the quality assurance objectives of his / her particular work and of the overall project. The EBC Project Director, Charles Sosik will be directly responsible to the client for the overall project conduct and quality assurance/quality control (QA/QC) for the project. The Project Director will be responsible for overseeing all technical and administrative aspects of the project and for directing QA/QC activities. As Project Director Mr. Sosik will also serve as the Quality Assurance Officer (QAO) and in this role may conduct:

- conduct periodic field and sampling audits;
- interface with the analytical laboratory to resolve problems; and
- interface with the data validator and/or the preparer of the DUSR to resolve problems.

Kevin Brussee will serve as the Project Manager and will be responsible for implementation of the Remedial Action and coordination with field sampling crews and subcontractors. Reporting directly to the Project Manager will be the Field Operations Officer, Kevin Waters; who will serve as the on-Site qualified environmental professional who will record observations, direct the sampling team and be responsible for the collection and handling of all samples.

1.1 Organization

Project QA will be maintained under the direction of the Project Manager, in accordance with this QAPP. QC for specific tasks will be the responsibility of the individuals and organizations listed below, under the direction and coordination of the Project Manager

.

GENERAL RESPONSIBILITY	SCOPE OF WORK	RESPONSIBILITY OF QUALITY CONTROL
Field Operations	Supervision of Field Crew, sample collection and handling	K. Waters, EBC
Project Manager	Implementation of the IRM according to the IRMWP.	Kevin Brussee, EBC
Laboratory Analysis	Analysis of soil samples by NYSDEC ASP methods Laboratory	NYSDOH-Certified Laboratory
Data review	Review for completeness and compliance	3rd party validation

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2.0 QUALITY ASSURANCE PROJECT PLAN OBJECTIVES

2.1 Overview

Overall project goals are defined through the development of Data Quality Objectives (DQOs), which are qualitative and quantitative Statements that specify the quality of the data required to support decisions; DQOs, as described in this section, are based on the end uses of the data as described in the work plan.

In this plan, Quality Assurance and Quality Control are defined as follows:

- Quality Assurance - The overall integrated program for assuring reliability of monitoring and measurement data.

- Quality Control - The routine application of procedures for obtaining prescribed standards of performance in the monitoring and measurement process.

2.2 QA / QC Requirements for Analytical Laboratory

Samples will be analyzed by a New York State Department of Health (NYSDOH) ELAP certified laboratory. Data generated from the laboratory will be used primarily to evaluate the success of the remedial program VOC components in soil, groundwater and air at the Site. The QA requirements for all subcontracted analytical laboratory work performed on this project are described below. QA elements to be evaluated include accuracy, precision, sensitivity, representativeness, and completeness. The data generated by the analytical laboratory for this project are required to be sensitive enough to achieve detection levels low enough to meet required quantification limits as specified in NYSDEC Analytical Services Protocol (NYSDEC ASP, 07/2005. The analytical results meeting the required quantification limits will provide data sensitive enough to meet the data quality objectives of this remedial program as described in the work plan. Reporting of the data must be clear, concise, and comprehensive. The QC elements that are important to this project are completeness of field data, sample custody, sample holding times, sample preservation, sample storage, instrument calibration and blank contamination.

2.2.1 Instrument Calibration

Calibration curves will be developed for each of the compounds to be analyzed. Standard concentrations and a blank will be used to produce the initial curves. The development of calibration curves and initial calibration response factors must be consistent with method requirements presented in the most recent version of NYSDEC ASP 07/2005).

2.2.2 Continuing Instrument Calibration

The initial calibration curve will be verified every 12 hrs by analyzing one calibration standard. The standard concentration will be the midpoint concentration of the initial calibration curve. The calibration check compound must come within 25% relative percent difference (RPD) of the average response factor obtained during initial calibration. If the RPD is greater than 25%, then corrective action must be taken as provided in the specific methodology.

2.2.3 Method Blanks

Method blank or preparation blank is prepared from an analyte·free matrix which includes the same reagents, internal standards and surrogate standards as me related samples. II is carried through the

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entire sample preparation and analytical procedure. A method blank analysis will be performed once for each 12 hr period during the analysis of samples for volatiles. An acceptable method blank will contain less than two (2) times the CRQL of methylene chloride, acetone and 2-butanone. For all other target compounds, the method blank must contain less than or equal to the CRQL of any single target compound. For non-target peaks in the method blank, the peak area must be less than 10 percent of the nearest internal standard. The method blank will be used to demonstrate the level of laboratory background and reagent contamination that might result from the analytical process itself.

2.2.4 Trip Blanks.
Trip blanks consist of a single set of sample containers filled at the laboratory with deionized. laboratory-grade water. The water used will be from the same source as that used for the laboratory method blank. The containers will be carried into the field and handled and transported in the same way as the samples collected that day. Analysis of the trip blank for VOCs is used to identify contamination from the air, shipping containers, or from other items coming in contact with the sample bottles. (The bottles holding the trip blanks will be not opened during this procedure.) A complete set of trip blanks will be provided with each shipment of samples to the certified laboratory.

2.2.5 Surrogate Spike Analysis
For organic analyses, all samples and blanks will be spiked with surrogate compounds before purging or extraction in order to monitor preparation and analyses of samples. Surrogate spike recoveries shall fall within the advisory limits in accordance with the NY5DEC ASP protocols for samples falling within the quantification limits without dilution.

2.2.6 Matrix Spike / Matrix Spike Duplicate / Matrix Spike Blank (MS/MSDIMSB) Analysis
MS, MSD and MSB analyses will be performed to evaluate the matrix effect of the sample upon the analytical methodology along with the precision of the instrument by measuring recoveries. The MS / MSD / MSB samples will be analyzed for each group of samples of a similar matrix at a rate of one for every 20 field samples. The RPD will be calculated from the difference between the MS and MSD. Matrix spike blank analysis will be performed to indicate the appropriateness of the spiking solution(s) used for the MS/MSD.

2.3 Accuracy
Accuracy is defined as the nearness of a real or the mean (x) of a set of results to the true value. Accuracy is assessed by means of reference samples and percent recoveries. Accuracy includes both precision and recovery and is expressed as percent recovery (% REC). The MS sample is used to determine the percent recovery. The matrix spike percent recovery (% REC) is calculated by the following equation:

$$\%REC = \frac{SSR - SR}{SA} \times 100$$

Where:
SSR = spike sample results
SR = sample results
SA = spike added from spiking mix

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2.4 Precision

Precision is defined as the measurement of agreement of a set of replicate results among themselves without a Precision is defined as the measurement of agreement of a set of replicate results among themselves without assumption of any prior information as to the true result. Precision is assessed by means of duplicate/replicate sample analyses.

Analytical precision is expressed in terms of RPD. The RPD is calculated using the following formula:

$$RPD = \frac{D^1 - D^2}{(D^1 - D^2)/2} \times 100$$

Where:
RPD = relative percent difference
D^1 = first sample value
D^2 = second sample value (duplicate)

2.5 Sensitivity

The sensitivity objectives for this plan require that data generated by the analytical laboratory achieve quantification levels low enough to meet the required detection limits specified by NYSDEC ASP and to meet all site-specific standards, criteria and guidance values (SGCs) established for this project.

2.6 Representativeness

Representativeness is a measure of the relationship of an individual sample taken from a particular site to the remainder of that site and the relationship of a small aliquot of the sample (i.e., the one used in the actual analysis) to the sample remaining on site. The representativeness of samples is assured by adherence to sampling procedures described in the IRM Work Plan.

2.7 Completeness

Completeness is a measure of the quantity of data obtained from a measurement system as compared to the amount of data expected from the measurement system. Completeness is defined as the percentage of all results that are not affected by failing QC qualifiers, and should be between 70 and 100% of all analyses performed. The objective of completeness in laboratory reporting is to provide a thorough data support package. The laboratory data package provides documentation of sample analysis and results in the form of summaries, QC data, and raw analytical data. The laboratory will be required to submit data packages that follow NYSDEC ASP reporting format which, at a minimum, will include the following components:

1. All sample chain-of-custody forms.
2. The case narrative(s) presenting a discussion of any problems and/or procedural changes required during analyses. Also presented in the case narrative are sample summary forms.
3. Documentation demonstrating the laboratory's ability to attain the contract specified detection limits for all target analytes in all required matrices.
4. Tabulated target compound results and tentatively identified compounds.
5. Surrogate spike analysis results (organics).
6. Matrix spike/matrix spike duplicate/matrix spike blank results.
7. QC check sample and standard recovery results
8. Blank results (field, trip, and method).
9. Internal standard area and RT summary.

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2.8 Laboratory Custody Procedures

The following elements are important for maintaining the field custody of samples:

- Sample identification
- Sample labels
- Custody records
- Shipping records
- Packaging procedures

Sample labels will be attached to all sampling bottles before field activities begin; each label will contain an identifying number. Each number will have a suffix that identifies the site and where the sample was taken. Approximate sampling locations will be marked on a map with a description of the sample location. The number, type of sample, and sample identification will be entered into the field logbook. A chain-of-custody form, initiated at the analytical laboratory will accompany the sample bottles from the laboratory into the field. Upon receipt of the bottles and cooler, the sampler will sign and date the first received blank space. After each sample is collected and appropriately identified, entries will be made on the chain-of-custody form that will include:

- Site name and address
- Samplers' names and signatures

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3.0 ANALYTICAL PROCEDURES

3.1 Laboratory Analysis

Samples will be analyzed by the NYSDEC ELAP laboratory for one or more of the following parameters: VOCs in soil and groundwater by USEPA Method 8260, and VOCs in air by USEPA Method TO15. If any modifications or additions to the standard procedures are anticipated, and if any nonstandard sample preparation or analytical protocol is to be used, the modifications and the nonstandard protocol will be explicitly defined and documented. Prior approval by EBC's PM will be necessary for any nonstandard analytical or sample preparation protocol used by the laboratory, i.e., dilution of samples or extracts by greater than a factor of five (5).

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4.0 DATA REDUCTION, REVIEW, AND REPORTING

4.1 Overview

The process of data reduction, review, and reporting ensures the assessments or a conclusion based on the final data accurately reflects actual site conditions. This plan presents the specific procedures, methods, and format that will be employed for data reduction, review and reporting of each measurement parameter determined in the laboratory and field. Also described in this section is the process by which all data, reports, and work plans are proofed and checked for technical and numerical errors prior to final submission.

4.2 Data Reduction

Standard methods and references will be used as guidelines for data handling, reduction, validation, and reporting. All data for the project will be compiled and summarized with an independent verification at each step in the process to prevent transcription/typographical errors. Any computerized entry of data will also undergo verification review.

Sample analysis will be provided by a New York State ELAP certified laboratory. Laboratory reports will include ASP category B deliverables for use in the preparation of a data usability summary report (DUSR). All results will be provided in accordance with the NYSDEC Environmental Information Management System (EIMS) electronic data deliverable (EDD) format. Analytical results shall be presented on standard NYSDEC ASP-B forms or equivalents, and include the dates the samples were received and analyzed, and the actual methodology used. Note that waste characterization samples will be in results only format and will not be evaluated in the DUSR.

Laboratory QA/QC information required by the method protocols will be compiled, including the application of data QA/QC qualifiers as appropriate. In addition, laboratory worksheets, laboratory notebooks, chains-of-custody, instrument logs, standards records, calibration records, and maintenance records, as applicable, will be provided in the laboratory data packages to determine the validity of data. Specifics on internal laboratory data reduction protocols are identified in the laboratory's SOPs.

Following receipt of the laboratory analytical results by EBC, the data results will be compiled and presented in an appropriate tabular form. Where appropriate, the impacts of QA/QC qualifiers resulting from laboratory or external validation reviews will be assessed in terms of data usability.

4.3 Laboratory Data Reporting

All sample data packages submitted by the analytical laboratory will be required to be reported in conformance to the NYSDEC ASP (7/2005), Category B data deliverable requirements as applicable to the method utilized. All results will be provided in accordance with the NYSDEC Environmental Information Management System (EIMS) electronic data deliverable (EDD) format. Note that waste characterization samples will be in results only format and will not be evaluated in the DUSR.

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5.0 CORRECTIVE ACTION

Review and implementation of systems and procedures may result in recommendations for corrective action. Any deviations from the specified procedures within approved project plans due to unexpected site-specific conditions shall warrant corrective action. All errors, deficiencies, or other problems shall be brought to the immediate attention of the EBC PM, who in turn shall contact the Quality Assurance/Data Quality Manager or his designee (if applicable).

Procedures have been established to ensure that conditions adverse to data quality are promptly investigated, evaluated and corrected. These procedures for review and implementation of a change are as follows:

- Define the problem.
- Investigate the cause of the problem.
- Develop a corrective action to eliminate the problem, in consultation with the personnel who defined the problem and who will implement the change.
- Complete the required form describing the change and its rationale (see below for form requirements).
- Obtain all required written approvals.
- Implement the corrective action.
- Verify that the change has eliminated the problem.

During the field investigation, all changes to the sampling program will be documented in field logs/sheets and the EBC PM advised.

If any problems occur with the laboratory or analyses, the laboratory must immediately notify the PM, who will consult with other project staff. All approved corrective actions shall be controlled and documented.

All corrective action documentation shall include an explanation of the problem and a proposed solution which will be maintained in the project file or associated logs. Each report must be approved by the necessary personnel (e.g., the PM) before implementation of the change occurs. The PM shall be responsible for controlling, tracking, implementing and distributing identified changes.

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TABLE 1
SUMMARY OF
SAMPLING PROGRAM RATIONALE AND ANALYSIS

Matrix	Location	Approximate Number of Samples	Frequency	Rationale for Sampling	Laboratory Analysis	Matrix Spikes	Spike Duplicates	Trip Blanks
Groundwater	10 Monitoring Wells	10	Quarterly	Performance monitoring	VOCs by 8260C	1 per 20 samples	1 per 20 samples	1 per trip
Air	Subslab and Exterior Ambient	10	1 time or as needed to confirm conditions	Performance monitoring	VOCs by TO15	0	0	0

TABLE 2
SAMPLE COLLECTION AND ANALYSIS PROTOCOLS

Sample Type	Matrix	Sampling Device	Parameter	Sample Container	Sample Preservation	Analytical Method#	CRQL / MDLH	Holding Time
Grab	Groundwater	Dedicated tubing	VOCs	(3) 40 ml Vial	Cool to 4^{o} C HCL	EPA Method 8260C	Compound specific (1-5 ug/L)	14 days
2 hr Average	Air	Vacuum Canister	VOCs	6 Liter Summa Can	Ambient	EPA Method TO15	Compound specific (1- ug/m3)	30 day

Notes:
All holding times listed are from Verified Time of Sample Receipt (VTSR) unless noted otherwise. *Holding time listed is from time of sample collection.
The number in parentheses in the "Sample Container" column denotes the number of containers needed.
Triple volume required when collecting MS/MSD samples
The number of trip blanks are estimated.
CRQL / MDL = Contract Required Quantification Limit / Method Detection Limit.
MCAWW = Methods for Chemical Analysis of Water and Wastes.
NA = Not available or not applicable.

ATTACHMENT I
Metes and Bounds Description

SCHEDULE "A" PROPERTY DESCRIPTION

LEGAL DESCRIPTION FOR SECTION 7 BLOCK 1886 LOT 10

35 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 239.99 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly approximately parallel with Park Avenue 68.83 feet;

THENCE northwesterly 38.09 feet;

THENCE northerly approximately parallel with Skillman Street 73.54 feet;

THENCE westerly approximately parallel with Park Avenue, 100 feet;

THENCE southerly along the easterly side of Skillman Street, 85.5 feet, to the point or place of BEGINNING.

LEGAL DESCRIPTION FOR SECTION 7 BLOCK 1886 LOT 11

43 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 163.32 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly approximately parallel with Park Avenue 63.83 feet;

THENCE southeasterly 43.83 feet;

THENCE northerly approximately parallel with Skillman Street 113.5 feet;

THENCE southwesterly 3 8.0 9 feet;

THENCE westerly approximately parallel with Park Avenue, 63.83 feet;

THENCE southerly along the easterly side of Skillman Street, 76.67 feet, to the point or place of BEGINNING.

LEGAL DESCRIPTION FOR SECTION 7 BLOCK 1886 LOT 12

49 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 75.49 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly approximately parallel with Park Avenue 100 feet;

THENCE northerly approximately parallel with Skillman Street 62.96 feet;

THENCE northwesterly 43.89 feet;

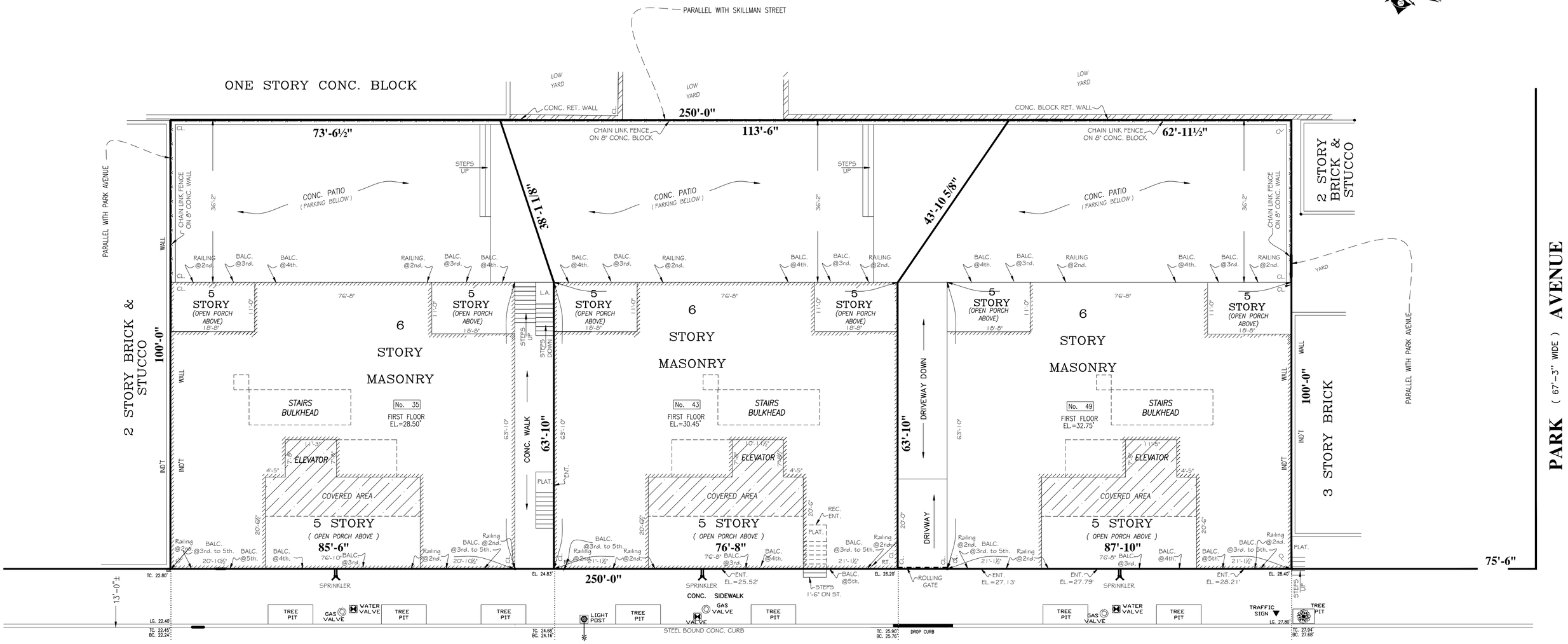
THENCE westerly approximately parallel with Park Avenue, 63.83 feet;

THENCE southerly along the easterly side of Skillman Street, 87.83 feet, to the point or place of BEGINNING.

LEGEND
(NOT FOR TITLE PURPOSES)
JOB # K-1886-10-13

GAS VALVE | PARKING METER | TRAFFIC SIGN | HYDRANT HYD. | TREE PIT | LIGHT POST | CATCH BASIN

UTILITY POLE | D.W.S WATER | WATER VALVE | D.W.S WATER | TEL. MANHOLE | SEWER MANHOLE | ELECTRIC MANHOLE



SKILLMAN (50' WIDE) STREET

SURVEYED :	JUNE 11, 2013
UPDATED:	
UPDATED:	
SCALE:	1"=15'
BLOCK:	1886
LOT(s):	10,11 & 12
SECTION:	7
COUNTY:	KINGS
DWG BY:	AAA-J

STATE OF NEW YORK * VINCENT M. TEUTONICO * 050307 LICENSED LAND SURVEYER

AAA GROUP
LAND SURVEYORS SERVICES
100-A BROADWAY
BROOKLYN, N.Y. 11249
TEL (718) 387-9800 , FAX 384-5050

FINAL SURVEY

1) ALL ELEVATIONS REFER TO BROOKLYN TOPOGRAPHICAL DATUM WHICH IS 2.560 FEET ABOVE NATIONAL GEODETIC SURVEY DATUM AT SANDY HOOK NEW JERSEY.

0' 5' 10' GRAPHIC SCALE 25'

ATTACHMENT J
Environmental Easement

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

THIS INDENTURE made this 26th day of November, 2013 between Owner(s) 39 SKILLMAN STREET LLC, having an office at 266 Broadway, Suite 301, County of Kings, 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 39 Skillman Street (a/k/a 35, 43 and 49 Skillman Street in the City of Brooklyn, County of Kings and State of New York, known and designated on the tax map of the City Register of the City of New York as tax map parcel numbers: Section 7 Block 1886 Lot (s) 10,11 and 12, being the same as that property conveyed to Grantor by Bargain and Sale deed dated December 27, 2011 and Confirmatory Deeds dated October 11, 2013 and recorded in the City Register of the City of New York as CRFN No (s): 2012000061792, 2013000430464, 2013000430465 and 2013000430578. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.5739 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 20, 2013, recently updated on November 13, 2013 prepared by AAA Group Land Surveyor Services, which will be attached to the Site Management Plan. The Controlled Property description 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 public 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 Brownfield Cleanup Agreement Index Number: C224156-03-12, 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), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(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) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Kings County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

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

(6) 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;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

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

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

(10) 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 Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), 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:

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, at such time as NYSDEC may require, 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: C224156
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.

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

Grantor: 39 SKILLMAN STREET LLC

By: _____

Print Name: ZELIG WEISS

Title: MEMBER Date: 11/21/13

Grantor's Acknowledgment

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

On the 21 day of November, in the year 20 13, before me, the undersigned, personally appeared Zelig Weiss, 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.

SHIA W. GREENFELD
NOTARY PUBLIC, State of New York
No. 01-GR6273115
Qualified in Kings County
Commission Expires 12/03/2016

Notary Public - State of New York

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: _____
Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

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

On the 26th day of November, in the year 2013, before me, the undersigned, personally appeared Robert W. Schick, 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

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2014

SCHEDULE "A"
ENVIRONMENTAL EASEMENT
PROPERTY DESCRIPTION

AAA GROUP

100-A Broadway

Brooklyn NY 11249

Tel: (718) 387-9800 Fax: (718) 384-5050

E-mail= Info@aaagrouponline.com

SCHEDULE 'A'

DESCRIPTION OF ENVIRONMENTAL EASEMENT AREA

BLOCK 1886 LOT 10

35 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 240.00 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly parallel with Park Avenue 63.83 feet;

THENCE northwesterly 38.09 feet;

THENCE northerly parallel with Skillman Street 73.54 feet;

THENCE westerly parallel with Park Avenue, 100 feet;

THENCE southerly along the easterly side of Skillman Street, 85.5 feet, to the point or place of BEGINNING.

"Being the same piece and parcel of land as described in confirmation deed dated December 27, 2011 recorded February 15, 2012 as CRFN : 2012000061792 in the office of the City Register of the City of New York"

AAA GROUP

100-A Broadway

Brooklyn NY 11249

Tel: (718) 387-9800 Fax: (718) 384-5050

E-mail= Info@aaagrouponline.com

SCHEDULE 'A'

DESCRIPTION OF ENVIRONMENTAL EASEMENT AREA

BLOCK 1886 LOT 11

43 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 163.33 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly parallel with Park Avenue 63.83 feet;

THENCE southeasterly 43.89 feet;

THENCE northerly parallel with Skillman Street 113.5 feet;

THENCE southwesterly 38.09 feet;

THENCE westerly parallel with Park Avenue, 63.83 feet;

THENCE southerly along the easterly side of Skillman Street, 76.67 feet, to the point or place of BEGINNING.

"Being the same piece and parcel of land as described in confirmation deed dated December 27, 2011 recorded February 15, 2012 as CRFN : 2012000061792 in the office of the City Register of the City of New York

AAA GROUP

100-A Broadway

Brooklyn NY 11249

Tel: (718) 387-9800 Fax: (718) 384-5050

E-mail= Info@aaagrouponline.com

SCHEDULE 'A'

DESCRIPTION OF ENVIRONMENTAL EASEMENT AREA

BLOCK 1886 LOT 12

49 SKILLMAN STREET

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 75.50 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly parallel with Park Avenue 100 feet;

THENCE northerly parallel with Skillman Street 62.96 feet;

THENCE northwesterly 43.89 feet;

THENCE westerly parallel with Park Avenue, 63.83 feet;

THENCE southerly along the easterly side of Skillman Street, 87.83 feet, to the point or place of BEGINNING.

"Being the same piece and parcel of land as described in confirmation deed dated December 27, 2011 recorded February 15, 2012 as CRFN : 2012000061792 in the office of the City Register of the City of New York"

AAA GROUP

100-A Broadway

Brooklyn NY 11249

Tel: (718) 387-9800 Fax: (718) 384-5050

E-mail= Info@aaagrouponline.com

SCHEDULE 'A'

DESCRIPTION OF ENVIRONMENTAL EASEMENT AREA

BLOCK 1886 LOT 10, 11, 12

OVERALL DESCRIPTION

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point which is distant 75.50 feet northerly formed the corner formed by the intersection of the northerly side of Park Avenue with the easterly side of Skillman Street;

THENCE easterly parallel with Park Avenue 100 feet;

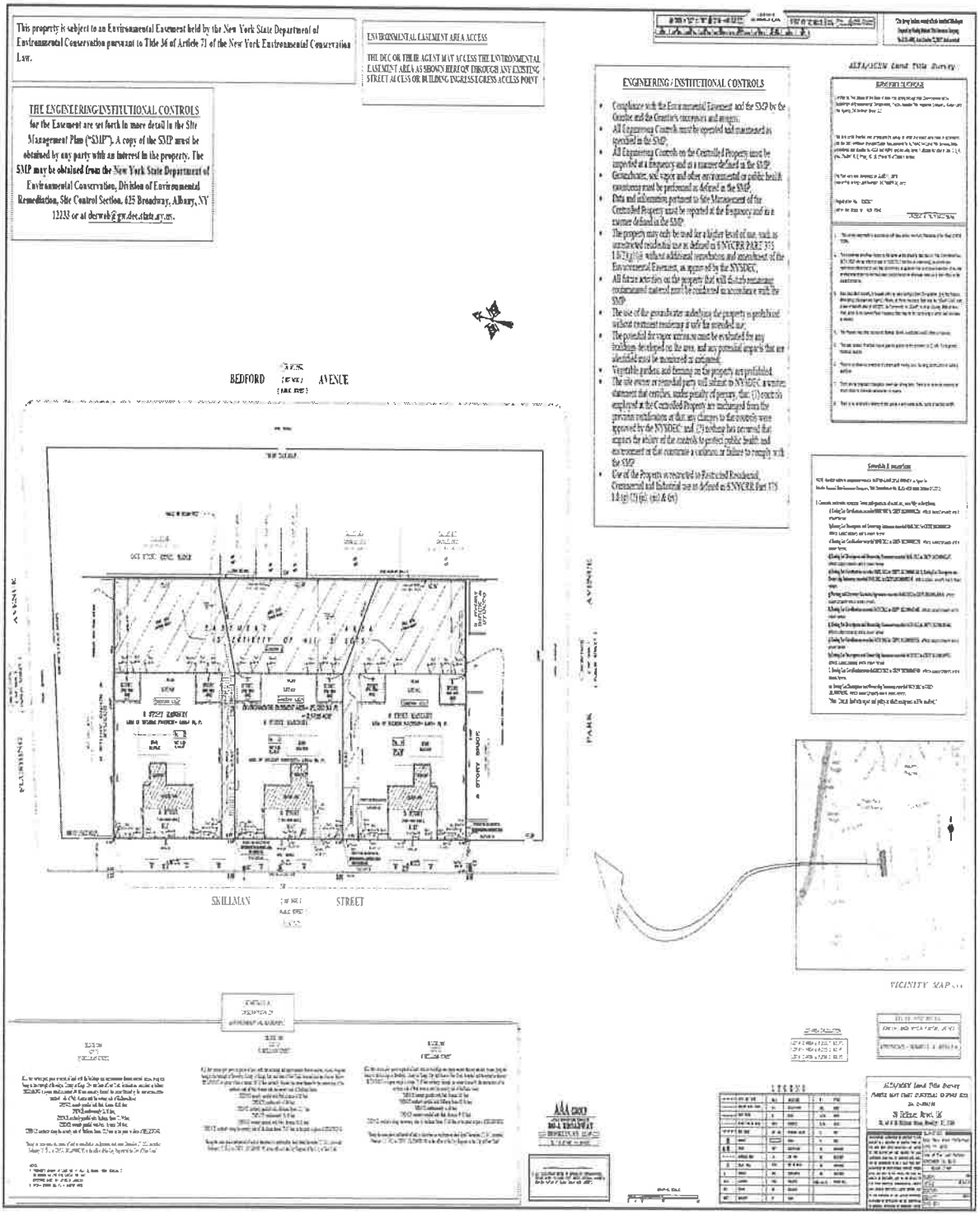
THENCE northerly parallel with Skillman Street 250 feet;

THENCE westerly parallel with Park Avenue 100 feet;

THENCE southerly along the easterly side of Skillman Street, 250 feet, to the point or place of BEGINNING.

"Being the same piece and parcel of land as described in confirmation deed dated December 27, 2011 recorded February 15, 2012 as CRFN : 2012000061792 in the office of the City Register of the City of New York"

SURVEY


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 New York Environmental Conservation Law.
THE ENGINEERING/INSTITUTIONAL CONTROLS for the Easement are set forth in more detail 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 may be obtained from the New York State 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 OR BUILDING INGRESS/EGRESS ACCESS POINT
ENGINEERING / INSTITUTIONAL CONTROLS
Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns;
All Engineering Controls must be operated and maintained as specified in the SMP;
All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
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;
The property may only be used for a higher level of use, such as unrestricted residential use as defined in 6 NYCRR PART 375 1.8(g)(2)(i) without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
The potential for vapor intrusion must be evaluated for any buildings developed on the site, and any potential impacts that are identified must be monitored or mitigated;
Vegetable gardens and farming on the property are prohibited;
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 constitutes a violation or failure to comply with the SMP;
Use of the Property is restricted to Restricted Residential, Commercial and Industrial use as defined in 6 NYCRR Part 375 1.8 (g) (2) (i), (ii) & (iii)
BEDFORD AVENUE
SKILLMAN STREET
VICINITY MAP
LEGEND