23-10 QUEENSBORO SITE

QUEENS, NEW YORK

Remedial Action Work Plan

NYC BCP Site Number: #12CBCP036Q
E-Designation Site Number: #12RHAZ016Q

Prepared for:

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LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
AS/SVE	Air Sparging/Soil Vapor Extraction
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
C/D	Construction/Demolition
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
CSOP	Contractors Site Operation Plan
DCR	Declaration of Covenants and Restrictions
ECs/ICs	Engineering and Institutional Controls
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
BCA	Brownfield Cleanup Agreement
MNA	Monitored Natural Attenuation
NOC	Notice of Completion
NYC BCP	New York City Brownfield Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York State Department of Health and Mental Hygiene
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
ORC	Oxygen-Release Compound
OSHA	United States Occupational Health and Safety Administration
PE	Professional Engineer

PID	Photo Ionization Detector
QEP	Qualified Environmental Professional
QHHEA	Qualitative Human Health Exposure Assessment
RAOs	Remedial Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan or Plan
RCA	Recycled Concrete Aggregate
RD	Remedial Design
RI	Remedial Investigation
RMZ	Residual Management Zone
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SVOC	Semi-Volatile Organic Compound
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

CERTIFICATION

I, Andrew L. Levenbaum, am a Professional Engineer licensed in the State of New York. I have primary direct responsibility for implementation of the remedial action for the 23-10 Queensboro Site (NYC BCP Site No. 12CBCP036Q).

I, Paul P. Stewart am a Qualified Environmental Professional as defined in §43-140. I have primary direct responsibility for implementation of the remedial action for the 23-10 Queensboro Site (NYC BCP Site No. 12CBCP036Q).

I certify that this Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Andrew R. Levenbaum

Name

NYS PE License Number

Signature

Date

PE Stamp

Paul P. Stewart

QEP Name

QEP Signature

Date

EXECUTIVE SUMMARY

Queensboro Development, LLC has enrolled in the New York City Brownfield Cleanup Program (NYC BCP) to investigate and remediate a 0.42 acre site located at 23-10 41st Avenue in Queens, New York. A remedial investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP). The remedial action described in this document provides for the protection of public health and the environment consistent with the intended property use, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Current Usage

The Site is located at 23-10 41st Avenue in the Long Island City section in Queens, New York and is identified as Block 413 and Lots 20, 22 and 27 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 18,536-square feet (0.42 acres) and is bounded by 41st Avenue to the north, two-story office and one-story warehouse buildings to the south, 24th Street to the east, and 23rd Street to the west. A map of the site boundary is shown in Figure 2. Currently, the Site contains only construction equipment and facilities.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site will consist of a 17-story mixed-use residential and commercial building with a footprint of 18,535 square feet which will occupy the entire site. Layout of the proposed site development is presented in Figure 3. The current zoning designation is M1-5/R7-3 with no commercial overlay. The proposed use is consistent with existing zoning for the property.

The 4th through the 17th floors will contain a total of 102,220 square feet of residential space, including 108 middle income affordable rental units, 8 market value residential condominiums and 1 superintendent's unit. The 2nd and 3rd floors will contain 16,347 square feet of parking. The ground floor and cellar will contain 16,481 square feet of commercial space and the sub-cellar will contain storage and mechanical space.

The entire Site will be excavated to various depths depending upon the underlying bedrock surface. The maximum excavation depth beneath the building under construction is expected to be 15 feet and generate approximately 10,000 cubic yards of soil for offsite disposal. All open space areas not covered by the building will be capped with either with concrete or asphalt pavement.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

Summary of the Remedy

The proposed remedial action achieves protection of public health and the environment for the intended use of the property. The proposed remedial action achieves all of the remedial action objectives established for the project and addresses applicable standards, criterion, and guidance; is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants; is cost effective and implementable; and uses standards methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and implementation of a Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Track 2 Restricted-Residential Soil Cleanup Objectives (RRSCOs) for the entire Site.
4. Installation of a watertight, four foot wide secant pile foundation wall around the entire site and into the underlying bedrock surface.
5. Excavation and removal of soil exceeding RRSCOs;
6. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of RRSCOs.

7. Onsite petroleum spill numbers 0412186 and 1103281 will be remediated under the authority of the NYSDEC pursuant to a stipulation agreement executed between the NYSDEC and the enrollee. Remedial action to close the petroleum spills will be managed under the authority of NYSDEC and will be independent of this remedial action. This RAWP does not alter or interfere with the remedial action for the petroleum spills.

8. Import of materials to backfill the excavation pit up to grade level in compliance with this plan and in accordance with applicable laws and regulations;

9. Construction and maintenance of an engineered composite cover consisting of 10-inch thick structural concrete slab on grade beneath both the building to prevent human exposure to residual soil/fill remaining under the Site;

10. Installation of a vapor barrier system beneath the building slab.

11. Installation of an active sub-slab depressurization system beneath the building to the extent not restricted by competent bedrock.

12. Demarcation of residual soil/fill.

13. Transportation and off-Site disposal of all soil at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

14. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

15. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

16. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

17. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

18. Submission of a RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAWP.

19. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency (only applicable if a complete Track 1 cleanup is not achieved for all or some of the Site).

20. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and a requirement that management of these controls must be in compliance with an approved SMP; and Institutional Controls including prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

COMMUNITY PROTECTION STATEMENT

The Office of Environmental Remediation created the New York City Brownfield Cleanup Program (NYC BCP) to provide governmental oversight for the cleanup of contaminated property in NYC. This Remedial Action Work Plan ("cleanup plan") describes the findings of prior environmental studies that show the location of contamination at the site, and describes the plans to clean up the site to protect public health and the environment.

This cleanup plan provides a very high level of protection for neighboring communities. This cleanup plan also includes many other elements that address common community concerns, such as community air monitoring, odor, dust and noise controls, hours of operation, good housekeeping and cleanliness, truck management and routing, and opportunities for community participation. The purpose of this Community Protection Statement is to explain these community protection measures in non-technical language to simplify community review.

Remedial Investigation and Cleanup Plan. Under the NYC BCP, a thorough cleanup study of this property (called a remedial investigation) has been performed to identify past property usage, to sample and test soils, groundwater and soil vapor, and identify contaminant sources present on the property. The cleanup plan has been designed to address all contaminant sources that have been identified during the study of this property.

Identification of Sensitive Land Uses. Prior to selecting a cleanup, the neighborhood was evaluated to identify sensitive land uses nearby, such as schools, day care facilities, hospitals and residential areas. The cleanup program was then tailored to address the special conditions of this community.

Qualitative Human Health Exposure Assessment. An important part of the cleanup planning for the Site is the performance of a study to find all of the ways that people might come in contact with contaminants at the Site now or in the future. This study is called a Qualitative Human Health Exposure Assessment (QHHEA). A QHHEA was performed for this project. This assessment has considered all known contamination at the Site and evaluated the potential for people to come in contact with this contamination. All identified public exposures will be addressed under this cleanup plan.

Health and Safety Plan. This cleanup plan includes a Health and Safety Plan that is designed to protect community residents and on-Site workers. The elements of this plan are in compliance with safety requirements of the United States Occupational Safety and Health Administration. This plan includes many protective elements including those discussed below.

Site Safety Coordinator. This project has a designated Site safety coordinator to implement the Health and Safety Plan. The safety coordinator maintains an emergency contact sheet and protocol for management of emergencies. The Site safety coordinator is Yisong Yang (Tel. No. 718-508-2970). The Alternate Site safety coordinator is Steven Walls (Tel. No. 516-492-6794).

Worker Training. Workers participating in cleanup of contaminated material on this project are required to be trained in a 40-hour hazardous waste operators training course and to take annual refresher training. This pertains to workers performing specific tasks including removing contaminated material and installing cleanup systems in contaminated areas.

Community Air Monitoring Plan. Community air monitoring will be performed during this cleanup project to ensure that the community is properly protected from contaminants, dust and odors. Air samples will be tested in accordance with a detailed plan called the Community Air Monitoring Plan or CAMP. Results will be regularly reported to the NYC Office of Environmental Remediation. This cleanup plan also has a plan to address any unforeseen problems that might occur during the cleanup (called a 'Contingency Plan').

Odor, Dust and Noise Control. This cleanup plan includes actions for odor and dust control. These actions are designed to prevent off-Site odor and dust nuisances and includes steps to be taken if nuisances are detected. Generally, dust is managed by application of physical covers and by water sprays. Odors are controlled by limiting the area of open excavations, physical covers, spray foams and by a series of other actions (called operational measures). The project is also required to comply with NYC noise control standards. If you observe problems in these areas, please contact the onsite Project Manager, Thomas Young (Tel. No. 718-482-8750) or the NYC Office of Environmental Remediation Project Manager, Michael Mandac (Tel. No. 212-676-0754).

Quality Assurance. This cleanup plan requires that evidence be provided to illustrate that all cleanup work required under the plan has been completed properly. This evidence will be summarized in the final report, called the Remedial Action Report. This report will be submitted to the NYC Office of Environmental Remediation and will be thoroughly reviewed.

Storm-Water Management. To limit the potential for soil erosion and discharge, this cleanup plan has provisions for storm-water management. The main elements of the storm water management include physical barriers such as tarp covers and erosion fencing, and a program for frequent inspection.

Hours of Operation. The hours for operation of cleanup will comply with the NYC Department of Buildings construction code requirements or according to specific variances issued by that agency. For this cleanup project, the hours of operation are 7:00 a.m. to 3:00 p.m. weekdays.

Signage. While the cleanup is in progress, a placard will be prominently posted at the main entrance of the property with a laminated project Fact Sheet that states that the project is in the NYC Brownfield Cleanup Program, provides project contact names and numbers, and locations of project documents can be viewed.

Complaint Management. The contractor performing this cleanup is required to address all complaints. If you have any complaints, you can call the facility Project Manager, Alex Afxentiou (Tel. No. 718-932-6342), the NYC Office of Environmental Remediation Project Manager, Michael Mandac (212-676-0754). or call 311 and mention the Site is in the NYC Brownfield Cleanup Program.

Utility Mark-outs. To promote safety during excavation in this cleanup, the contractor is required to first identify all utilities and must perform all excavation and construction work in compliance with NYC Department of Buildings regulations.

Soil and Liquid Disposal. All soil and liquid material removed from the Site as part of the cleanup will be transported and disposed of in accordance with all applicable City, State and Federal regulations and required permits will be obtained.

Soil Chemical Testing and Screening. All excavations will be supervised by a trained and properly qualified environmental professional. In addition to extensive sampling and chemical testing of soils on the Site, excavated soil will be screened continuously using hand-held instruments, by sight, and by smell to ensure proper material handling and management, and community protection.

Stockpile Management. Soil stockpiles will be kept covered with tarps to prevent dust, odors and erosion. Stockpiles will be frequently inspected. Damaged tarp covers will be promptly replaced. Stockpiles will be protected with silt fences. Hay bales will be used, as needed to protect storm water catch basins and other discharge points.

Trucks and Covers. Loaded trucks leaving the Site will be covered in compliance with applicable laws and regulations to prevent dust and odor. Trucks will be properly recorded in logs and records and placarded in compliance with applicable City, State and Federal laws, including those of the New York State Department of Transportation. If loads contain wet material that can leak, truck liners will be used. All transport of materials will be performed by licensed truckers and in compliance with all laws and regulations.

Imported Material. All fill materials proposed to be brought onto the Site will comply with rules outlined in this cleanup plan and will be inspected and approved by a qualified worker located on-Site. Waste materials will not be brought onto the Site. Trucks entering the Site with imported clean materials will be covered in compliance with applicable laws and regulations.

Equipment Decontamination. All equipment used for cleanup work will be inspected and washed, if needed, before it leaves the Site. Trucks will be cleaned at a truck inspection station on the property before leaving the Site.

Housekeeping. Locations where trucks enter or leave the Site will be inspected every day and cleaned regularly to ensure that they are free of dirt and other materials from the Site.

Truck Routing. Truck routes have been selected to: (a) limit transport through residential areas and past sensitive nearby properties; (b) maximize use of city-mapped truck routes; (c) limit total distance to major highways; (d) promote safety in entry to highways; (e) promote overall safety in trucking; and (f) minimize off-Site line-ups (queuing) of trucks entering the

property. Operators of loaded trucks leaving the Site will be instructed not to stop or idle in the local neighborhood.

Final Report. The results of all cleanup work will be fully documented in a final report (called a Remedial Action Report) that will be available for you to review in the public document repository located at Long Island City Community Library.

REMEDIAL ACTION WORK PLAN

1.0 SITE BACKGROUND

Queensboro Development, LLC has enrolled in the New York City Brownfield Cleanup Program (NYC BCP) to investigate and remediate a property located at 23-10 41st Avenue in the Long Island City section of Queens, New York (the Site). A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in a manner that will render the Site protective of public health and the environment consistent with the contemplated end use. This RAWP establishes remedial action objectives, provides an analysis of the proposed remedy that includes consideration of a permanent cleanup, and provides a description of the selected remedial action. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 SITE LOCATION AND CURRENT USAGE

The Site is located at 23-10 41st Avenue in the Long Island City section in Queens, New York and is identified as Block 413 and Lots 20, 22 and 27 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 18,536-square feet (0.42 acres) in area and is bounded by 41st Avenue to the north, two-story office and one-story warehouse buildings to the south, 24th Street to the east, and 23rd Street to the west. A map of the site boundaries is shown in Figure 2. Currently, the Site is undergoing development and contains only construction equipment and facilities.

1.2 PROPOSED REDEVELOPMENT PLAN

The proposed future use of the Site will consist of a 17-story mixed-use residential and commercial building with a footprint of 18,535 square feet which will occupy the entire site. Layout of the proposed site development is presented in Figure 3. The current zoning designation is M1-5/R7-3 with no commercial overlay. The proposed use is consistent with existing zoning for the property.

The 4th through the 17th floors will contain a total of 102,220 square feet of residential space, including 108 middle income affordable rental units, 8 market value residential condominiums and 1 superintendent's unit. The 2nd and 3rd floors will contain 16,347 square feet of parking. The ground floor and cellar will contain 16,481 square feet of commercial space and the sub-cellar will contain storage and mechanical space.

The entire Site will be excavated to various depths depending upon the underlying bedrock surface. The maximum excavation depth beneath the building under construction is expected to be 15 feet and generate approximately 10,000 cubic yards of soil for offsite disposal. All open space areas not covered by the building will be capped with either with concrete or asphalt pavement.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The site is located in a commercial and industrial area in the northern portion of Queens. A gasoline and automotive service station is located directly to the north across 41st Avenue. One and two story commercial office and warehouse buildings are located to the south and a parking lot is located to the east. A commercial storage yard is located to the west of the site. An MTA subway passes beneath 41st Avenue to the north.

The East River is located less than ½ mile to the northwest. The Academy of American Studies, a public high school at 28-04 41st Avenue, is located approximately 1000 feet to the southeast. The Pal Western Queens Nursery School, a day care facility at 10-26 41st Avenue, is located approximately 1,500 feet to the northwest. The Mount Sinai Hospital of Queens is located approximately 1.36 miles to the northeast. Figure 1 shows the surrounding land usage.

1.4 REMEDIAL INVESTIGATION

A remedial investigation was performed and the results are documented in a companion document called "*Remedial Investigation Report, 23-10 Queensboro Site*", dated December, 2011 (RIR). Previous environmental investigations included within the RIR are contained in Appendix 5. Copies of previous regulatory correspondence are provided in Appendix 6.

Summary of Past Uses of Site and Areas of Concern

Lot 20 is currently owned by Angela Moura since 1982 when it was purchased from Matthew Lupoli. Queensboro Development LLC has a long-term ground lease on the property and will be transferred ownership of the property when construction is completed. Lot 20 previously contained a two-story office building.

Lot 22 is currently owned by Queensboro Development LLC since 2009 when it was purchased from Am Holding of NY Corp. which purchased it in 2005 from Husnain Hussain. It previously contained a single-story 2,000 square foot auto repair building, a one-story metal shed, four 550 gallon underground gasoline storage tanks, two 2,500 gallon underground gasoline storage tanks and one 550 gallon underground waste oil storage tank. All known petroleum storage facilities on Lot 22 were removed from the Site in June 2006 except the waste oil storage tank, which was removed from the Site on June 23, 2011. Lot 22 is currently undergoing remediation in accordance with a Stipulation Agreement executed between the NYSDEC and Queensboro Development LLC. relating to NYSDEC Spill Numbers 0412186 and 1103281. The remedial action being performed under the Stipulation Agreement is independent from this remedial program.

Lot 27 is currently owned by Queensboro Development LLC since 2009 when it was purchased from 24 Development which purchased it in 2008 from Joseph E. Hwang. Lot 27 formerly contained three buildings including a two-story mixed use residential and commercial building in the northeast portion of the lot, a one-story commercial building and parking garage in the southeast portion of the lot and a two-story commercial building in the southwest portion of the lot.

The AOCs identified for this site include:

1. Gas station and associated tanks and appurtenances on the western and central portions of the property,
2. Historical fill throughout the site.
3. Soil vapor impacts beneath the central and eastern portions of the Site.

Summary of the Work Performed under the Remedial Investigation

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Performed a geophysical survey of the site utilizing ground penetrating radar (GPR);
3. Installed 12 deep soil borings and 24 shallow soil borings across the Site and collected 36 soil samples from shallow and deep soil horizons for chemical analysis to evaluate soil quality;
4. Installed 12 temporary monitoring wells and 11 conventional monitoring wells throughout the Site and its vicinity to establish groundwater flow, and collected and analyzed 23 ground water samples to evaluate groundwater quality;
5. Installed, sampled and analyzed soil vapor from 6 soil vapor probes around the Site to evaluate soil vapor quality.

Summary of Environmental Findings

1. Elevation of the property ranges from 15 feet to 25 feet msl.
2. Depth to groundwater ranges from 10 to 20 feet at the Site.
3. Groundwater flow is generally from east to west beneath the Site.
4. Depth to bedrock from east to west ranges from 20 to 40 feet at the Site.
5. The stratigraphy of the site consists of fine, silty sand with some clay from the ground surface to the water table followed by fine to medium silty sand to the bedrock surface.
6. Soil samples collected during the RI showed VOCs, SVOCs, Metals, PCBs and Pesticides all below Track 2 Restricted Residential Soil Cleanup Objectives in western portion of the Site and below Track 1 Unrestricted Use Soil Cleanup Objectives in the central and eastern portions of the Site.
7. Groundwater samples collected during the RI showed VOCs and SVOCs above Class GA groundwater standards in the western portion of the Site and SVOCs slightly above Class GA groundwater standards in the southeast portion of the Site.

8. Soil vapor samples collected during the RI showed petroleum-based VOCs beneath the western portion of the Site and chlorinated VOCs above NYSDOH Matrix 1 and Matrix 2 guidance values beneath the central and eastern portions of the Site.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this site.

2.0 REMEDIAL ACTION OBJECTIVES

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site:

Groundwater

No ground water impacts have been identified requiring remediation or monitoring, except those associated with NYSDEC Spill Numbers 0412186 and 1103281which are being remediated pursuant to a Stipulation Agreement executed with the NYSDEC and under a higher governmental environmental authority independent of this remedial action.

Soil

- Prevent direct contact with contaminated soil.
- Prevent exposure to contaminants volatilizing from contaminated soil.
- Prevent migration of contaminants that would result in groundwater water contamination.

Groundwater

- Prevent direct exposure to contaminated groundwater.
- Prevent exposure to contaminants volatilizing from contaminated groundwater.

Soil Vapor

- Prevent exposure to contaminants in soil vapor.
- Prevent migration of soil vapor into the proposed development and other occupied structures.

3.0 REMEDIAL ALTERNATIVES ANALYSIS

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing remedial action objectives (RAOs) for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values (SCGs). A remedy is then developed based on the following nine criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance; and
- Land use.

The western portion of the Site (AOC 1) is impacted by petroleum spills that have caused contamination of soil, groundwater and soil vapor by VOC and SVOC compounds primarily found in petroleum. The central and eastern portions of the site are impacted by historic fill with low concentrations of SVOCs and metals in soil (AOC 2). The central and eastern portions of the Site (AOC 3) are impacted by low concentrations of VOC compounds in ground water and VOC compounds, primarily chlorinated VOCs and BTEX compounds, in soil vapor originating from former auto repair operations in the western portion of the Site.

The petroleum impacts beneath the western portion of the Site are being addressed under a stipulation agreement with the NYSDEC at a higher level of governmental environmental authority and are not addressed by this RAWP. However, the remedial activities performed to

address the petroleum spills under NYSDEC authority will be coordinated with activities performed under this RAWP.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

- Alternative 1 is a Track 1 remedial action and would result in removal of all soils above bedrock to achieve Track 1 Unrestricted Use Soil Cleanup Objectives (UUSCOs). Excavation throughout the Site would be required until UUSCOs were met or the bedrock surface was encountered. This alternative does not allow the use of long-term institutional /engineering controls to address impacted media or prevent exposures.
- Alternative 2 is a Track 2 remedial action and would:
    - Utilize a secant pile foundation wall installed around the Site from street level to below the bedrock surface to form an impermeable barrier beneath the Site;
    - Achieve Track 2 Restricted Residential Soil Cleanup Objectives (RRSCOs) and remove and/or treat soils in excess of RRSCOs;
    - Utilize in-situ soil treatment such as oxygen release compounds to reduce or eliminate exceedances of RRSCO's, under DEC's independent remedial action;
    - Place a vapor barrier beneath the building to eliminate potential exposures to soil vapor;
    - Place a sub-slab depressurization system within a layer of crushed stone beneath the building slab to the extent not restricted by competent bedrock;
    - Place an engineered composite cover over the entire property consisting of the building slab and other paved surfaces;
    - Establish use restrictions to ensure that future exposures are eliminated, such as prohibition on use of groundwater for potable purposes;

3.1 Threshold Criteria

Protection of Public Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of Engineering Controls or Institutional Controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would result in removal of all soil/fill with contaminant concentration above Track 1 UUSCOs. This alternative would be consistent with the RAOs and provide overall protection of public health and the environment in consideration of current and potential future land use by:

- Eliminating the potential for direct contact with contaminated on-site soils, and
- Eliminating potential on-site sources for production of soil vapors.

Alternative 2 would:

- Establish Track 2 RRSCOs and remove soil in excess of the RRSCOs;
- Utilize an impermeable secant pile foundation wall installed around the Site and into the bedrock surface to prevent migration of offsite groundwater and soil vapor onto the site, and a Site cover consisting of the building slab and other paved surfaces to prevent exposure to residual contamination;
- Install a vapor barrier and a sub-slab depressurization system beneath the building to eliminate potential exposures to soil vapor;
- Establish use restrictions to ensure that future exposures are eliminated, such as prohibition on the use of groundwater for potable purposes;

During remedial and construction activity, workers and area residents may be exposed to impacted soil, ground water and vapors. Worker exposure to soil and vapors will be minimized through implementation of a site-specific Construction Health and Safety Plan (CHASP). Exposures to area residents from dust and/or vapors will be minimized through the use of engineering controls and through implementation of a Community Air Monitoring Plan (CAMP).

3.2. Balancing Criteria

Compliance with Standards, Criteria and Guidance (SCGs)

Alternative 1 would achieve compliance with the remedial goals, SCGs and RAOs for soil through source removal to Track 1 unrestricted cleanup levels. Given the depths of petroleum impacted soil that represents a source to groundwater contamination, excavation to the bedrock surface would probably be required over portions of the site, well into the water table. Groundwater impacts are related to the petroleum spills that are being addressed under a stipulation agreement with the NYSDEC under a higher level of government environmental authority.

It is unlikely that the remedial activities covered by the NYSDEC stipulation agreement will achieve its goal prior to the completion of remedial construction and thus continued monitoring will be required. SCGs for groundwater may not be achieved; however, bulk reduction in groundwater contamination will be realized under the stipulation agreement and would be consistent with the RAOs established for the Site. Volatilization of petroleum contaminants to soil vapor will also be managed by the NYSDEC under the stipulation agreement. Compliance with SCGs for soil vapor is expected following completion of the remedial action but like groundwater remediation may take time to achieve.

Alternative 2 would achieve compliance with the remedial goals, SCGs and RAOs for soil through removal of soil exceeding RRSCOs and placement of a permanent engineered composite cover over the entire Site. Groundwater impacts are related to the petroleum spills and would be managed separately by NYSDEC under the stipulation agreement. SCGs for groundwater may not be achieved; however, bulk reduction in groundwater contamination will be realized and would be consistent with the RAOs established for the Site. Soil vapor sources are also related to

the petroleum spills and would also managed by NYSDEC the stipulation agreement. Residual soil vapor will be addressed through the installation of vapor barriers and active SSD system.

Short-term effectiveness and impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their effects on public health and the environment during implementation of the remedial action, including protection of the community, environmental impacts, time until remedial response objectives are achieved, and protection of workers during remedial actions.

Alternative 1 would create the potential for short -term impacts through the removal of large amounts of contaminated soils to depths in excess of 20 feet in some locations. Implementation of this RAWP including provision for health and safety protection and community air monitoring would prevent unacceptable exposure during remediation and construction activities. Short-term exposure to on-site workers during excavation and loading activities will be addressed with a CHASP and mitigated through the use of personal protective equipment, monitoring and engineering controls. Potential short-term exposure to the surrounding community will be addressed through the use of odor and dust-suppression techniques and through the implementation of a CAMP which will require air monitoring activities during all excavation and soil disturbance activities.

Alternative 2 would result in fewer short-term impacts associated with excavation, handling, load out of materials, and truck traffic than a Track 1 remediation. However, removal of soils that exceed RRSCOs to the maximum extent feasible will still result in the potential for short-term impacts. Similar to Alternative 1, implementation of this RAWP including provision for health and safety protection and community air monitoring would prevent unacceptable exposure during remediation and construction activities.

Other potential impacts to the community under Alternatives 1 or 2, such as construction-related noise, vibrations and traffic, will be controlled and regulated under the terms of the NYC

Department of Buildings-issued building permit, for which a Stop Work Order can be placed on the property for unsafe conditions, community impacts or violation of the terms and conditions of the permit. Decontamination procedures for equipment transporting soil to off-site disposal facilities, including an onsite truck washing station, will minimize the potential for impacted soil to be dispersed beyond the Site boundary. A truck traffic plan would also be prepared to minimize disturbance to the local roads and community under these alternatives.

Long-term effectiveness and permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual contamination remaining at the Site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of ECs/ICs that may be used to manage contaminant residuals that remain at the Site and assessment of containment systems and ICs that are designed to eliminate exposures to contaminants, and long-term reliability of Engineering Controls.

Alternative 1 would achieve long-term effectiveness and permanence by permanently removing and/or remediating all soils affected by Site contaminants or historic fill materials, including petroleum impacted soil. Groundwater impacts related to the petroleum spills would be managed separately by NYSDEC under the stipulation agreement. Similarly, soil vapor impacts related to the petroleum spill would also be managed separately by NYSDEC under the stipulation agreement. Groundwater and soil vapor impacts would be expected to dissipate after the removal of onsite sources in soil.

Alternative 2 would achieve long-term effectiveness and permanence by removing all soils exhibiting contaminants above RRSCOs to the maximum extent feasible, treating soils remaining in place to RRSCO's and permanently covering all remaining soils with an engineered composite cover. Groundwater impacts related to the petroleum spills would be managed separately by NYSDEC under the stipulation agreement. Soil vapor impacts would be expected to dissipate after the removal of onsite sources in soil. However, residual soil vapor caused by remaining soil

or groundwater contamination will be addressed through the installation of a vapor barrier and an active SSD system.

Reduction of toxicity, mobility, or volume of contaminated material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a Site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use treatment or removal to eliminate contaminants at a Site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by meeting Track 1 UUSCOs. The removal/remediation of on-site soil will also reduce the toxicity, mobility, and volume of contaminants within on-site groundwater and soil vapor.

Alternative 2 would lower toxicity and volume of contaminated material by removing and/or treating soil in excess of RRSCOs. The mobility of soil vapor into the onsite building will be addressed by the construction of a vapor barrier and an active SSD system.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials.

Removal of impacted soil and historic fill potentially to the bedrock surface over the entire Site would be difficult to implement because much contamination from the petroleum spill is present below the water table and removal would require extensive dewatering and additional shoring. However, standard excavation technology would be utilized. Removal of all petroleum contamination above UUSCOs would ultimately achieve GQS and eliminate emissions of soil vapor.

Alternative 2 is feasible and implementable. It uses standard materials and services and well established technology. The removal and/or treatment of impacted soil is feasible and can be accomplished using standard excavation technology. The reliability of the remedy is also high. There are no special difficulties associated with any of the activities proposed, which utilize standard industry methods. Covering of soils with a composite cover including a foundation slab uses standard technology common in the industry and is a reliable method which has a long and proven track record in preventing direct contact with affected soils. The use of a vapor barrier is a common and highly effective method of preventing vapor intrusion especially when combined with a sub-slab depressurization system. The installation of a vapor barrier and an active SSDS beneath the building is implemented using standard technology and common materials.

Cost effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (such as construction costs, equipment costs, and disposal costs, engineering expenses) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action.

Costs associated with Alternative 1 are expected to be extremely high due to the large amount of material that would have to be removed from the site, the depth of excavation and the need for extensive additional shoring, and the need to dewater in order to remove saturated soils.

Costs associated with Alternative 2 would be considerably lower because significantly less material will be removed. Excavation will take place over most of the Site above the water table and will not require dewatering or extensive shoring. Additional costs will come from the

installation of a vapor barrier and an active SSDS beneath the building slab. However, these costs will have the added value of protecting the structure from residual soil vapor impacts.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action. Observations here will be supplemented by public comment received on the RAWP.

Both of the alternatives for the Site would provide a remedial action that is protective of public health and the environment and would be safe to achieve and should be acceptable to the community. This RAWP will be subject to and undergo public review under the NYC BCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedial action. This public comment will be considered by OER prior to approval of this plan.

Land use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the Site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; and current Institutional Controls applicable to the site.

The proposed redevelopment of the Site is compatible with its current M1-5/R7-3 zoning designation. Following remediation, the Site will meet either Track 1 UUSCOs, or Track 2 RRSCOs that are appropriate for the Site's planned use as a 17-story mixed use commercial and residential building.

Sustainability of the Remedial Action

This criterion evaluates the overall sustainability of the remedial action alternatives and the degree to which sustainable means are employed to implement the remedial action including those that take into consideration NYC's sustainability goals defined in *PlaNYC: A Greener, Greater New York*. Sustainability goals may include: maximizing the recycling and reuse of non-virgin materials; reducing the consumption of virgin and non-renewable resources; minimizing energy consumption and greenhouse gas emissions; improving energy efficiency; and promotion of the use of native vegetation and enhancing biodiversity during landscaping associated with Site development.

Both remedial alternatives are comparable with respect to the opportunity to achieve sustainable remedial action.

4.0 REMEDIAL ACTION

4.1 SUMMARY OF PREFERRED REMEDIAL ACTION

The preferred remedial action alternative is Alternative 2. The preferred remedial action alternative achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative will achieve all of the RAOs established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective and implementable and uses standard methods that are well established in the industry.

The proposed remedial action will consist of:

1. Preparation of a Community Protection Statement and implementation of a Citizen Participation Plan.

2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.

3. Installation of a watertight, four foot wide secant pile foundation wall around the entire site and into the underlying bedrock surface.

4. Establishment of Track 2 Restricted Residential Soil Cleanup Objectives (RRSCOs) for the entire Site.

5. Excavation and removal of soil exceeding RRSCOs;

6. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of RRSCOs.

7. Onsite petroleum spill numbers 0412186 and 1103281 will be remediated under the authority of the NYSDEC pursuant to a stipulation agreement executed between the NYSDEC and the enrollee. Remedial action to close the petroleum spills will be managed under the authority of NYSDEC and independent of this remedial action. This RAWP does not alter or interfere with the remedial action for the petroleum spills.

8. Import of materials to backfill the excavation pit up to grade level in compliance with this plan and in accordance with applicable laws and regulations;

9. Construction and maintenance of an engineered composite cover consisting of 10-inch thick structural concrete slab on grade beneath both the building to prevent human exposure to residual soil/fill remaining under the Site;

10. Installation of a vapor barrier system beneath the building slab.

11. Installation of an active sub-slab depressurization system beneath the building to the extent not restricted by competent bedrock.

12. Demarcation of residual soil/fill.

13. Transportation and off-Site disposal of all soil at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media onsite.

14. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

15. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

16. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

17. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

18. Submission of a RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAWP.

19. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency (only applicable if a complete Track 1 cleanup is not achieved for all or some of the Site).

20. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and a requirement that management of these controls must be in compliance with an approved SMP; and Institutional Controls including prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

Remedial activities will be performed at the Site in accordance with this RAWP upon receipt of OER approval. All deviations from the RAWP will be promptly reported to OER and NYSDEC. Changes will be documented in the RAR.

4.2 SOIL CLEANUP OBJECTIVES AND SOIL/FILL MANAGEMENT

Track 2 RRSCOs are proposed for the Site. Soil and materials management on-Site and off-Site, including excavation, handling and disposal, will be conducted in accordance with the Soil/Materials Management Plan provided in Appendix 3.

Discrete contaminant sources (such as hotspots) identified during the remedial action will be surveyed and provided in the Remedial Action Report.

Soil Excavation and Disposal

The total quantity of soil expected to be excavated and disposed off-Site is 10,000 tons. The proposed disposal locations for Site-derived materials are listed below. Additional disposal

locations established at a later date will be reported promptly to the OER Project Manager. The disposal facilities and quantities of material expected to be removed from the Site is provided in Table 4, below. A copy of a sample non-hazardous waste manifest is provided in Appendix 7.

Table 4

Estimated Quantities and Disposal Facilities for Material To Be Removed from the Site

23-10 41st Avenue

Long Island City, NY

Disposal Facility	**Waste Type**	**Estimated Quantities**
Clean Earth of Carteret Carteret, NJ	Petroleum-impacted soil	4,000 tons
Recycled EarthProducts Kings Park, NY	Clean soil	6,000 tons
Clear Flo Technologies Lindenhurst, NY	Petroleum-impact water	50,000 gallons

In-Situ Soil Treatment

Under the remedial action managed under the authority of NYS DEC and independent of this program, based upon the endpoint soil sampling results, in-situ soil mixing may be utilized to reduce the concentrations of gasoline constituents in saturated soil beneath the site. In-situ soil mixing involves the use of a chemical oxidizer to reduce the mass of gasoline constituents remaining in saturated or unsaturated soil following soil excavation. It can also involve the use

of bioremedial solutions to enhance the growth of indigenous bacteria capable of decreasing remaining concentrations of dissolved gasoline constituents over time.

Due to the relatively high initial concentrations of gasoline constituents in both saturated and unsaturated soil, a combination of chemical oxidizer and bioremedial solution may be applied to soil remaining in the base of the excavation. Proportionately diluted solutions of RegenOx chemical oxidizer and ORC Advanced will be added to the excavation pit and mixed into the remaining soil to maximize surface contact with the contaminated media. Care will be taken to avoid splashing the product or generating fugitive dust emissions. Copies of the Material Safety Data Sheets for these products are contained in Appendix 8.

Clean backfill will be added to the excavation to enhance the even distribution of the oxidizer and bioremedial solution over the impacted area. Once the treated area has been fully mixed, it will be further backfilled with clean fill material. Soil borings will be installed through the treated area to monitor the reduction in gasoline constituents over time. If necessary, additional chemical oxidizer and/or bioremedial solution will be injected through overlying fill material and into impacted soil to accomplish further reductions in soil contamination.

End-Point Sampling

Removal actions under this plan will be performed in conjunction with remedial end-point sampling. End point samples will be collected to confirm the attainment of the Track 2 SCOs. Hot spot areas may be identified during the remedial action. In these cases, removal actions under this plan will be performed in conjunction with remedial end-point sampling at a frequency that will consist of the following:

1. For excavations less than 20 feet in total perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.

2. For excavations 20 to 300 feet in perimeter:

    - For surface removals, one sample from the top of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

- For subsurface removals, one sample from each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

3. For sampling of volatile organics, bottom samples should be taken within 24 hours of excavation, and should be taken from the zero to six-inch interval at the excavation floor. Samples taken after 24 hours should be taken at six to twelve inches.

4. For contaminated soil removal, post remediation soil samples for laboratory analysis should be taken immediately after contaminated soil removal. If the excavation is enlarged horizontally, additional soil samples will be taken pursuant to bullets 1-3 above.

Figure 4 depicts the approximate locations of post-remediation endpoints samples. Sample locations and depth will be biased towards the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated. In all cases, post-remediation samples should be biased toward locations and depths of the highest expected contamination.

New York State ELAP certified labs will be used for all end-point sample analyses. Labs for end-point sample analyses will be reported in the RAR. The RAR will provide a tabular and map summary of all end-point sample results and will include all data including non-detects and applicable standards and/or guidance values. End-point samples will be analyzed for trigger analytes (those for which exceedence of RRSCO's is identified) utilizing the following methodology:

Soil analytical methods will include:

- Volatile organic compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Target Analyte List metals; and
- Pesticides/PCBs by EPA Method 8081/8082.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "finger print analysis" and required regulatory reporting (i.e. spills hotline) will be performed.

Quality Assurance/Quality Control

At least one duplicate sample will be collected and analyzed for each of 20 samples collected. In addition, one field blank sample and one trip blank sample will be collected each day of endpoint sample collection.

Import and Reuse of Soils

No soil is expected to be imported into the Site for backfill and cover soil. No onsite soil/fill is expected to be reused/relocated on Site. In the event of the import of soils onto the property and/or reuse of soils already onsite, such import and/or reuse will be performed in conformance with the Soil/Materials Management Plan in Appendix 3.

4.3 ENGINEERING CONTROLS

Engineering Controls will be employed in the remedial action to address residual contamination remaining at the site. The Site has 3 primary Engineering Control Systems. These are:

- Impermeable secant pile foundation wall, consisting of 268 interlocking four foot thick concrete columns containing steel i-beams, installed around the entire site and into the bedrock surface,
- Composite cover system consisting of asphalt-paved roadways, Concrete-covered sidewalks and a concrete building slab,
- Vapor barrier system, and
- An active sub-slab depressurization system.

Impermeable Secant Pile Foundation Wall

A four-foot thick poured concrete foundation wall has been installed into the bedrock surface at the Site. Groundwater within the wall has been pumped and transported offsite for proper disposal. Substantially all groundwater is now diverted around the Sit by the secant pile foundation wall. The completion report for the secant pile foundation wall is provided in Appendix 9.

Composite Cover System

Exposure to residual soil will be prevented by an engineered, composite cover system to be built on the Site. This composite cover system is comprised of:

- asphalt covered roads;
- concrete covered sidewalks;
- 10-inch concrete building foundation slab;
- 2-feet of clean cover soil in open spaces.

The composite cover system is a permanent engineering control for the Site. The system will be inspected and reported at specified intervals as required by this RAWP and the SMP. A Soil Management Plan will be included in the Site Management Plan and will outline the procedures to be followed in the event that the composite cover system and underlying residual soil/fill is disturbed after the remedial action is complete. Maintenance of this composite cover system will be described in the Site Management Plan in the RAR.

Vapor Barrier

Migration of soil vapor will be mitigated with a combination of secant pile foundation wall, building slab and vapor barrier. The vapor barrier will be installed beneath the slab of the building foundation. The vapor barrier will consist of a Moistop Ultra 15 Underslab Vapor Retarder, a 15 mil vapor barrier provided by Fortifiber Building Systems Group. The vapor barrier will be laid down in 14 by 140 foot sections that will be overlapped and joined by single-

sided tape provided by the vapor barrier manufacturer. The specifications of the vapor barrier are provided in Figure 5 and Appendix 9.

The Remedial Closure Report will include photographs (maximum of two photos per page) of the installation process, PE/RA certified letter (on company letterhead) from primary contractor responsible for installation oversight and field inspections, and a copy of the manufacturers certificate of warranty.

Active Sub-Slab Depressurization System

Contaminated sub-slab vapor is likely to be present mainly beneath the Site as a result of off gassing from residual contaminated subsurface soil and ground water. The eastern portion of the Site will be in contact with competent bedrock following excavation of substantially all of the overburden and weathered bedrock.

An active sub-slab depressurization system will be installed beneath the portion of the Site not restricted by competent bedrock. The SSDS will be designed in conjunction with the vapor barrier to create a negative pressure beneath the entire Site and prevent the migration of fugitive soil vapors into the proposed building. In the areas of competent bedrock, any rock fractures will be grouted prior to construction of the building slab. The SSDS will consist of a network of horizontal perforated pipes installed within a minimum of 18 inch layers of crushed stone beneath the building's 10-inch foundation floor. The perforated piping will consist of 4-inch diameter scheduled 40 PVC perforated pipe. A minimum of 4 inches of crushed stone will be placed above and below the pipes.

The horizontal depressurization piping will be connected to one or more vertical header pipes that will discharge above the second floor parking garage. A wind-driven turbine fan will be installed on the exhaust pipe to maintain negative pressure beneath the building foundation. Following installation of the active SSDS, indoor air samples will be collected and analyzed to provide a basis for the operation of the SSDS to be operated as a passive wind-driven system. Design plans and specifications for the SSDS are provided in Figure 6 and Appendix 9.

4.4 Institutional Controls

Institutional Controls (IC) have been incorporated in this remedial action to manage residual soil/fill and other media and render the Site protective of public health and the environment. Institutional Controls are listed below. Long-term employment of EC/ICs will be established in a Declaration of Covenant and Restrictions (DCR) assigned to the property by the title holder and will be implemented under a site-specific Site Management Plan (SMP) that will be included in the RAR.

Institutional Controls for this remedial action are:

- Recording of an OER-approved Declaration of Covenant and Restrictions (DCR) with the City Register or county clerk, as appropriate. The DCR will include a description of all ECs and ICs, will summarize the requirements of the Site Management Plan, and will note that the property owner and property owner's successors and assigns must comply with the DCR and the approved SMP. The recorded DCR will be submitted in the Remedial Action Report. The DCR will be recorded prior to OER issuance of the Notice of Completion,

- Submittal of a Site Management Plan in the RAR for approval by OER that provides procedures for appropriate operation, maintenance, monitoring, inspection, reporting and certification of ECs. SMP will require that the property owner and property owner's successors and assigns will submit to OER a periodic written statement that certifies that: (1) controls employed at the Site are unchanged from the previous certification or that any changes to the controls were approved by OER; 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. OER retains the right to enter the Site in order to evaluate the continued maintenance of any controls. This certification shall be submitted annually and will comply with RCNY §43-1407(l)(3).

- Vegetable gardens and farming on the Site are prohibited,

- Use of groundwater underlying the Site is prohibited without treatment rendering it safe for its intended use, and

- All future activities on the Site that will disturb residual material must be conducted pursuant to the soil management provisions in an approved SMP.

4.5 SITE MANAGEMENT PLAN

- Site Management is the last phase of remediation and begins with the approval of the Remedial Action Report and issuance of the Notice of Completion (NOC) for the Remedial Action. The Site Management Plan (SMP) describes appropriate methods and procedures to ensure implementation of all ECs and ICs that are required by the DCR and this RAWP. The Site Management Plan is submitted as part of the RAR but will be written in a manner that allows its use as an independent document. Site Management continues until terminated in writing by OER. The property owner is responsible to ensure that all Site Management responsibilities defined in the DCR and the Site Management Plan are implemented.

- The SMP will provide a detailed description of the procedures required to manage residual soil/fill left in place following completion of the remedial action in accordance with the Brownfield Cleanup Agreement with OER. This includes a plan for: (1) implementation of EC's and ICs; (2) implementation of monitoring programs; (3) operation and maintenance of EC's; (4) inspection and certification of EC's; and (5) reporting.

- Site management activities, reporting, and EC/IC certification will be scheduled on an periodic basis to be established in the SMP and will be subject to review and modification by OER. The Site Management Plan will be based on a calendar year and certification reports will be due for submission to OER by March 31 of the year following the reporting period.

4.6 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

Conceptual Site Model

A conceptual site model (CSM) has been developed based on the findings from the subsurface investigations performed at the Site. The purpose of the CSM is to develop a simplified framework for understanding the distribution of impacted materials, potential migration pathways, and potentially complete exposure pathways.

Known and Potential Sources

The RI determined that former gas station usage had impacted soil, ground water and soil vapor in the western portion of the Site. The compounds of concern uniformly found in soil, groundwater and soil vapor beneath western portion of the Site include non-chlorinated VOCs and SVOCs commonly found in gasoline and diesel motor fuel. The RI also identified low level concentrations of metals and SVOCs across the site, indicative of historic fill.

In addition, soil vapor impacts (chlorinated VOCs) were identified beneath the central and eastern portions of the Site in the vicinity of a former waste oil tank release. The compounds of concern in soil vapor beneath the central and eastern portions of the Site include 1,1,1-trichloroethane, trichloroethene (TCE), and tetrachloroethene (PCE). These releases are being remediated under the authority of NYS DEC under an independent remedial action plan.

The contaminants of concern identified for this Site include:

1. The presence of VOCs and SVOCs above regulatory standards in saturated soil and groundwater beneath the western portion of the Site. These VOCs and SVOCs are associated with active NYSDEC Spill Numbers 0412186 and 1103281 and the historical use of the Site as a gasoline service station.
2. The presence of VOCs in soil vapor beneath the central and eastern portion of the Site in the vicinity of a former waste oil tank release.

Nature, Extent, Fate and Transport of Contaminants

The environmental media that currently may serve as pathways for contaminant migration are soil, groundwater, and soil vapor.

Soil Contamination

The remedial excavation of soil contamination consisting of gasoline constituents beneath the western portion of the Site under the authority of NYSDEC is complete. The ground surface is covered with approximately 18 inches of crushed stone.

The remainder of the site is covered with historic fill, impacted with SVOCs and metals. The depth of excavation will remove the remainder of the historic fill over the eastern and central portion of the site and proceed well into the competent bedrock. An engineering composite cover slab, consisting of the building foundation and a vapor barrier underneath the building foundation, will act as a barrier to prevent any human contact with residual soil in the future.

Groundwater Contamination

An impermeable secant pile foundation wall has been installed around the site and into the bedrock surface, thus preventing the migration of ground water onto or off the property. Dewatering and treatment of the effluent is anticipated at the Site after the installation of the secant pile wall for excavation purposes. Dissolved gasoline constituents detected in ground water beneath the western portion of the Site are being remediated under the stipulation agreement with the NYSDEC. Rapid improvement in groundwater quality is expected since substantially all gasoline-impacted soil has been removed beneath the western portion of the Site. Groundwater impacts beneath the central and eastern portions of the Site included up to 6 SVOCs detected slightly above ground water standards and do not require remediation. No offsite groundwater impacts have been identified.

Soil Vapor Contamination

Soil vapor impacts beneath the Site are most likely associated with residual onsite soil and groundwater contamination. Progressively decreasing soil vapor contamination is expected following the removal of the gasoline-impacted soil beneath the western portion of the Site and substantially all soil above the bedrock surface in the central and eastern portions of the Site. Residual vapors may potentially migrate into the structure that exhibit negative pressure when compared to the pressure conditions in the subsurface.

Potential Routes of Exposure

Exposure can only occur if there is a complete pathway from a specific chemical of concern contained in one of the on-site media to a receptor. The mere presence of a chemical at a site is not in itself evidence that a complete exposure pathway will exist. Currently, there are several potential migration pathways for absorptions, ingestion, and inhalation for soil, absorption and ingestion for groundwater, and inhalahtion for soil vapor. The soil at the site is primarily contaminated with VOCs, SVOCs, and metals. The groundwater at the site is primarily contaminated with VOCs and SVOCs. There are VOC-contaminated soil vapors at the site.

The work performed at the site will include excavation of soil/fill material, dewatering and general construction activities and will affect the on-site construction/remediation workers and the off-site local population. The construction and remediation work at the site will expose the contaminants to the on-site workers in a variety of ways, including direct contact with the soil and groundwater (during dewatering) and inhalation/ingestion of soil (by means of fugitive dust), groundwater, and soil vapors. These exposures will be limited to short durations through the intrusive work. The construction and remediation work at the site may expose the contaminants to off-site local residents in a variety of ways, including inhalation of soil (by meants of fugitive dust) and soil vapors.

A Construction Health and Safety Plan will be implemented during construction and remediation work for the safety of the on-site workers and off-site local workers. Some measures include conducting a community air monitoring programs (CAMP) for dust and VOC emissions to track the on-site and off-site conditions, requiring personal protective equipment, provisions for upgrading the level of personal protective equipment when needed, and applying dust and vapor suppression measures where applicable and needed, for on-site workers and the of-site local population.

Upon the completion of remediation and construction activities, the Site will be covered by engineering composite cover (i.e. building foundation and vapor barrier). The composite cover system will prevent direct human exposure to the impacted soil, groundwater, and soil vapors at the Site.

Existence of Human Health Exposure

An exposure pathway begins with a source of mechanism of contaminant release, resulting in the contamination of a receiving matrix (environmental medium). A complete exposure pathway also requires a point of potential contact with the contaminated matrix (i.e. exposure point), an exposure route (i.e. inhalation or ingestion), and a receptor population. If an exposure pathway is not complete because it does not include a contaminated matrix, a point of potential contact, an exposure route or a receptor, then no risk exists.

On-site soil contaminated with VOCs, SVOCs, and metals will be removed across the site to a depth of 15 feet below grade. Any residual contaminated soil not excavated at the site or left in place will be capped with an engineered composite cover (building foundation and vapor barrier), eliminating the exposure pathway.

An active SSDS will intercept any residual soil vapors from the soil or from the groundwater before reaching the engineered composite cover, eliminating the exposure pathway for soil vapor. Additionally, the engineering composite cover will also eliminate the exposure path way for soil vapors.

The groundwater at the site is contaminated with VOCs and SVOCs. The source of the VOCs and SVOCs is the gasoline spill and the historic fill at the site. The remedial action (excavation and ORC treatment) performed under NYSDEC authority will address the VOC contamination from the spill. The impermeable secant pile wall will prevent off-site groundwater contamination. Dewatering after the installation of the impermeable secant pile wall will remove the majority of the on-site groundwater. The effluent from the dewatering apparatus will be treated prior to discharging to the NYC sewer system. Any residual groundwater contamination will be addressed through the engineered composite cover, eliminating the exposure pathway. Additionally, the building will receive potable water from a municipal source and not the groundwater from the site.

Receptor Populations

The Site is currently under construction. The immediate area surrounding the Site is commercial and residential and is anticipated to remain as such. The new building at the site will be utilized for commercial offices and residential condominiums. The receptor populations are as follows:

On-Site Receptors - The on-site potential sensitive receptors include commercial workers, adult and child occupants, visitors, and trespassers. The proposed redevelopment of the Site includes the construction of an 17-story mixed use commercial and residential building with two floors of indoor parking, a cellar and sub-cellar. During redevelopment of the Site, the onsite potential sensitive receptors will include construction workers. Once the Site is redeveloped, the onsite potential sensitive receptors will include building occupants including commercial workers and visitors, resident adults, children and maintenance staff.

Off-Site Receptors - Potential offsite receptors within a 0.25-mile radius of the Site include: adult and child residents, commercial and construction workers, pedestrians, trespassers, and cyclists, based on the following:

1. Commercial Businesses (up to 0.25 mile) – existing and future
2. Residential Buildings (up to 0.25 mile) – existing and future
3. Building Construction/Renovation (up to 0.25 mile) – existing and future
4. Pedestrians, Trespassers, Cyclists (up to .25 mile) – existing and future
5. Schools (up to .25 mile) – existing and future

Overall Human Health Exposure Assessment

Based upon this analysis, currently, there are two potential exposure pathways: 1) from soil vapor entering structures via vapor intrusion or as a result of migration through foundation slab/wall openings or cracks; and, 2) direct exposure to onsite soils and dust from onsite soils. The onsite potential sensitive receptors include construction workers. The potential offsite receptors are construction and commercial workers, and adult and child residents. The primary route of exposure would be inhalation and dermal contact onsite and inhalation offsite. During remedial construction, onsite and offsite exposures to contaminated dust from contaminated soils will be addressed through dust controls, and through the implementation of the community air monitoring program and a construction health and safety plan.

After the remedial action is complete, there will be no remaining exposure pathways. The vapor barrier, an active SSDS, the composite cover and long-term site management will interrupt any remaining exposure pathways.

5.0 REMEDIAL ACTION MANAGEMENT

5.1 PROJECT ORGANIZATION AND OVERSIGHT

The Professional Engineer (PE) for this project is Andrew R. Levenbaum, P.E.. The Qualified Environmental Professionals (QEP) for this project is Paul P. Stewart.

5.2 SITE SECURITY

Site access will be controlled by a steel construction fence and gated entrances on 23rd Street and 24th Street.

5.3 WORK HOURS

The hours for operation of remedial construction will be from 7:00 a.m. to 3:00 p.m. These hours conform to the New York City Department of Buildings construction code requirements.

5.4 CONSTRUCTION HEALTH AND SAFETY PLAN

The Health and Safety Plan is included in Appendix 10. The Site Safety Coordinator will be Yisong Yang of ACT. The Alternate Site Safety Coordinator will be Steven Walls. Remedial work performed under this RAWP will be in full compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the HASP and applicable laws and regulations. The HASP pertains to remedial and invasive work performed at the Site until the issuance of the Notice of Completion.

All field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the HASP and be required to sign an HASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before any remedial work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a log book or specific form.

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use in case of emergency.

5.5 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

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

or adjacent to a school or residence. Exceedences of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

VOC Monitoring, Response Levels, and Actions

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

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

5.6 AGENCY APPROVALS

All permits or government approvals required for remedial construction have been or will be obtained prior to the start of remedial construction. Approval of this RAWP by OER does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

5.7 SITE PREPARATION

Pre-Construction Meeting

OER will be invited to attend the pre-construction meeting at the Site with all parties involved in the remedial process prior to the start of remedial construction activities.

Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities will be performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with all laws and regulations will be employed during invasive and other work contemplated under this RAWP. The integrity and safety of on-Site and off-Site structures will be maintained during all invasive, excavation or other remedial activity performed under the RAWP.

Dewatering

A dewatering system will be installed to lower the water table in order to facilitate the removal of impacted soil beneath the water table. The dewatering system will consist of well points installed in the western portion of the Site that will discharge water into an 8,500 gallon holding tank. An ejector pump will discharge ground water from the holding tank into either pump trucks for offsite transport and disposal or the New York City sewer system. A dewatering permit has been obtained and will be renewed prior to the discharge of any ground water into the municipal sewer system.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations. Due to the method of construction, locations of proposed equipment and material staging areas, stockpile areas, and other pertinent remedial management features will vary during different stages of construction. The truck inspection station will be located inside the eastern gate along 24th Street.

Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site will not track soil, fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

Truck Inspection Station

Before exiting the NYC BCP Site, trucks will be required to stop at the truck inspection station inside the eastern gate along 24th Street and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary.

5.8 TRAFFIC CONTROL

Drivers of trucks leaving the NYC BCP Site with soil/fill will be instructed to proceed without stopping in the vicinity of the site to prevent neighborhood impacts. The planned route on local roads for trucks leaving the site is to the south along 24th Street to Queens Plaza North and then west across the Queensboro Bridge or east to the Long Island Expressway.

5.9 DEMOBILIZATION

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (*e.g.*, soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

5.10 REPORTING AND RECORD KEEPING

Daily Reports

Daily reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;

- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

Record Keeping and Photo-Documentation

Job-site record keeping for all remedial work will be performed. These records will be maintained on-Site during the project and will be available for inspection by OER staff. Representative photographs will be taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the RAR in digital format (i.e. jpeg files).

5.11 COMPLAINT MANAGEMENT

All complaints from citizens will be promptly reported to OER. Complaints will be addressed and outcomes will also be reported to OER in daily reports. Notices to OER will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems.

5.12 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

All changes to the RAWP will be reported to the OER Project Manager and will be documented in daily reports and reported in the Remedial Action Report. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from OER noting the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

5.13 DATA USABILITY SUMMARY REPORT

The primary objective of a Data Usability Summary Report (DUSR) is to determine whether or not data meets the site specific criteria for data quality and data use. The DUSR provides an evaluation of analytical data without third party data validation. The DUSR for post-remedial samples collected during implementation of this RAWP will be included in the Remedial Action Report (RAR).

6.0 REMEDIAL ACTION REPORT

A Remedial Action Report (RAR) will be submitted to OER following implementation of the remedial action defined in this RAWP. The RAR will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The RAR will include:

- Information required by this RAWP;
- As-built drawings for all constructed remedial elements, required certifications, manifests and other written and photographic documentation of remedial work performed under this remedy;
- Site Management Plan;
- Description of any changes in the remedial action from the elements provided in this RAWP and associated design documents;
- Tabular summary of all end point sampling results and all material characterization results, QA/QC results for end-point sampling, and other sampling and chemical analysis performed as part of the remedial action and DUSR;
- Test results or other evidence demonstrating that remedial systems are functioning properly;
- Account of the source area locations and characteristics of all contaminated material removed from the Site including a map showing source areas;
- Account of the disposal destination of all contaminated material removed from the Site. Documentation associated with disposal of all material will include transportation and disposal records, and letters approving receipt of the material.
- Account of the origin and required chemical quality testing for material imported onto the Site.
- Recorded Declaration of Covenants and Restrictions.
- Reports and supporting material will be submitted in digital form.

Remedial Action Report Certification

The following certification will appear in front of the Executive Summary of the Remedial Action Report. The certification will include the following statements:

I, Andrew R. Levenbaum, am currently a professional engineer licensed by the State of New York. I had primary direct responsibility for implementation of the remedial program for the 23-10 Queensboro Site (NYC BCP Site No. 12CBCP036Q).

I, Paul P. Stewart, am a qualified Environmental Professional. I had primary direct responsibility for implementation remedial program for the 23-10 Queensboro Site (NYC BCP Site No. 12CBCP036Q).

I certify that the OER-approved Remedial Action Work Plan dated January 2012 and Stipulations in a letter dated month day, year; if any were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

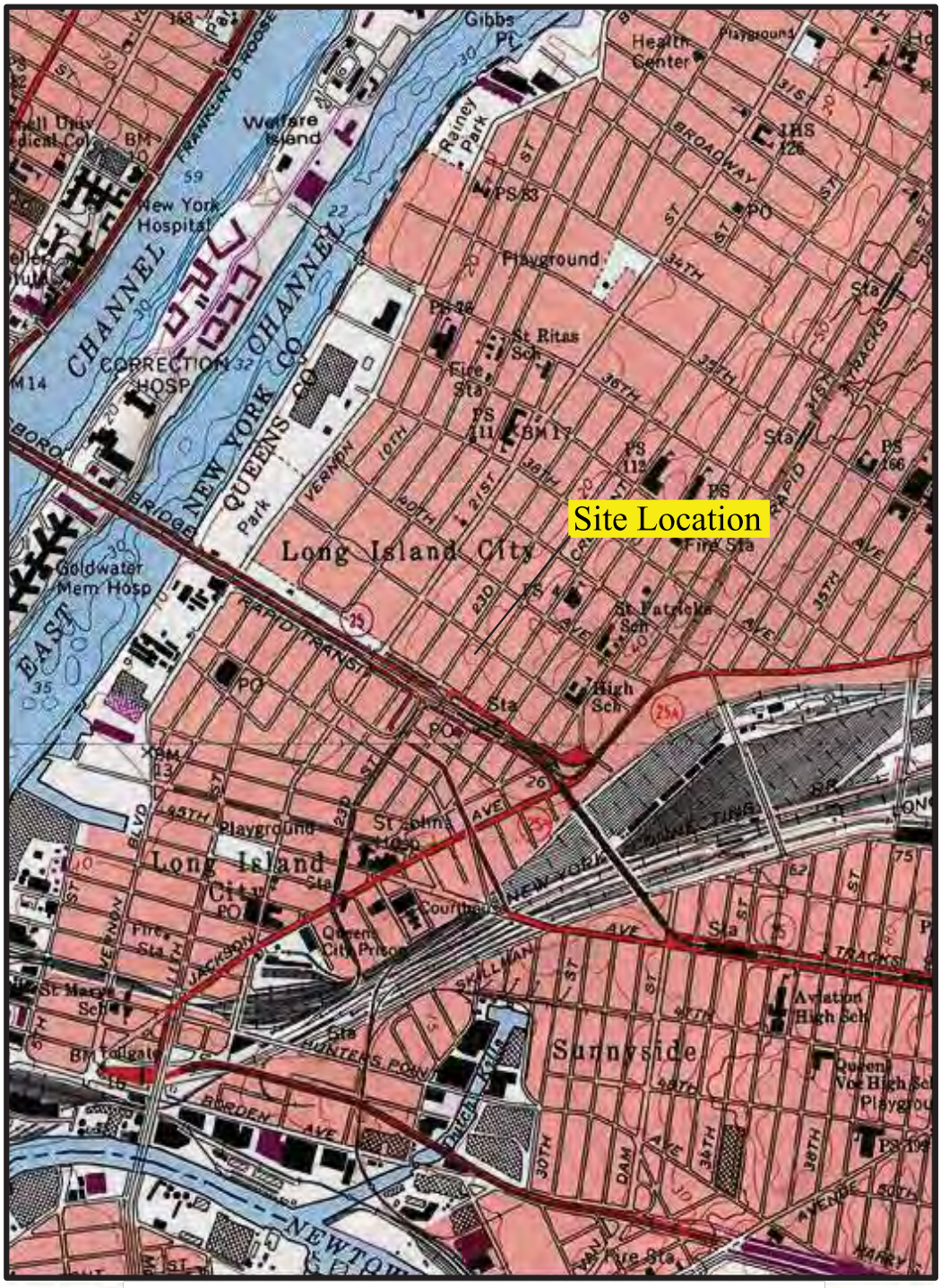
7.0 SCHEDULE

The table below presents a schedule for the proposed remedial action and reporting. If the schedule for remediation and development activities changes, it will be updated and submitted to OER. Currently, a 4 month remediation period is anticipated.

Task	Schedule
OER Approval of RAWP	January, 2012
Fact Sheet 2 announcing start of remedy	February, 2012
Mobilization	February, 2012
Soil Excavation	February, 2011
Installation of Vapor Barrier and Sub-slab depressurization	February, 2012
Demobilization	March, 2012
Submittal of Remedial Action Report	March, 2012

FIGURES

Figure 1
Site Location Map



From USGS 7.5 Minute Topographic Map Of Central Park, New York Quadrangle

N

Site Location Map

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
960 S. Broadway, Suite 100, Hicksville, New York 11801
Tel: 516-933-0655 Fax: 516-933-0659

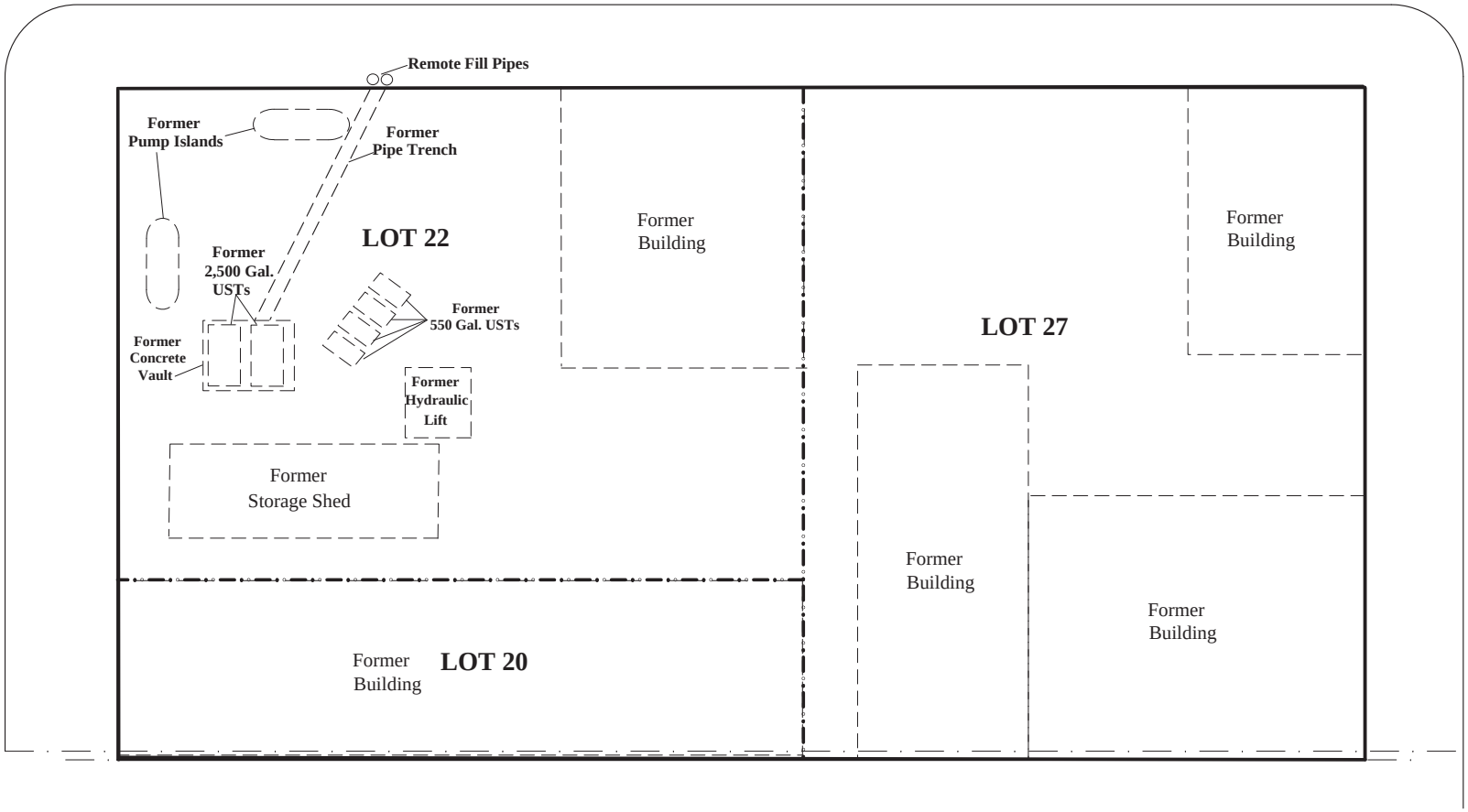
Project No.: 4019-LINY	Figure No.: 1
Updated: 12/12/2011	Scale: Not to scale

Figure 2
Site Boundaries Map

41 ST AVENUE

23 RD STREET

24 RD STREET



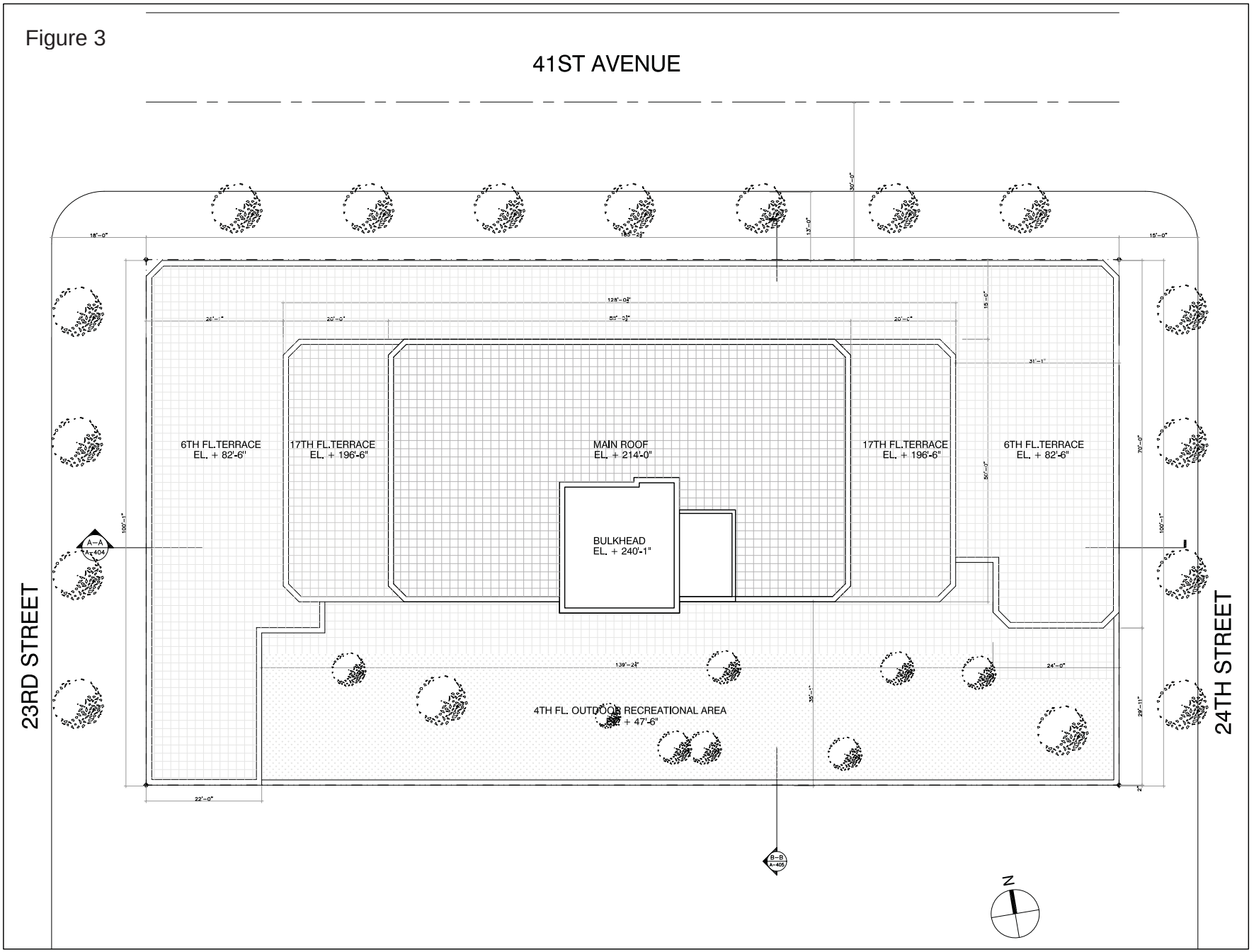
Site Boundaries Map

Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
960 S. Broadway, Suite 100, Hicksville, New York 11801
Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 4019-LINY	Figure No.: 2
Updated: 12/12/2011	Scale: Not to scale

Figure 3
Redevelopment Plan

Figure 3



The general contractor shall check and verify all dimensions and report all errors and omissions to the Architects. Do not scale the drawing. This drawing shall not be used for construction purposes until signed by the Consultants.

REVISIONS

no.	date	description
		WORK IN PROGRESS SET
–	–	–

no.	date	description

ISSUES

KARL FISCHER ARCHITECT
OAQ OAA RAIC AIA
REGISTERED ARCHITECT KARL FISCHER 041886 STATE OF NEW YORK
530 BROADWAY, 9th FLOOR, NEW YORK, NY 10012
TEL: (212) 219-9733 FAX: (212) 219-8980
1420 NOTRE-DAME WEST, MONTREAL, QC H3C 1K9
TEL: (514) 933-4157 FAX: (514) 933-0409
WEB SITE: www.kfarchitect.com E-MAIL:karl@kfarchitect.com

STRUCTURAL ENGINEER

MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
SITE-PLAN
(PRE-SCHEMATIC DESIGN)

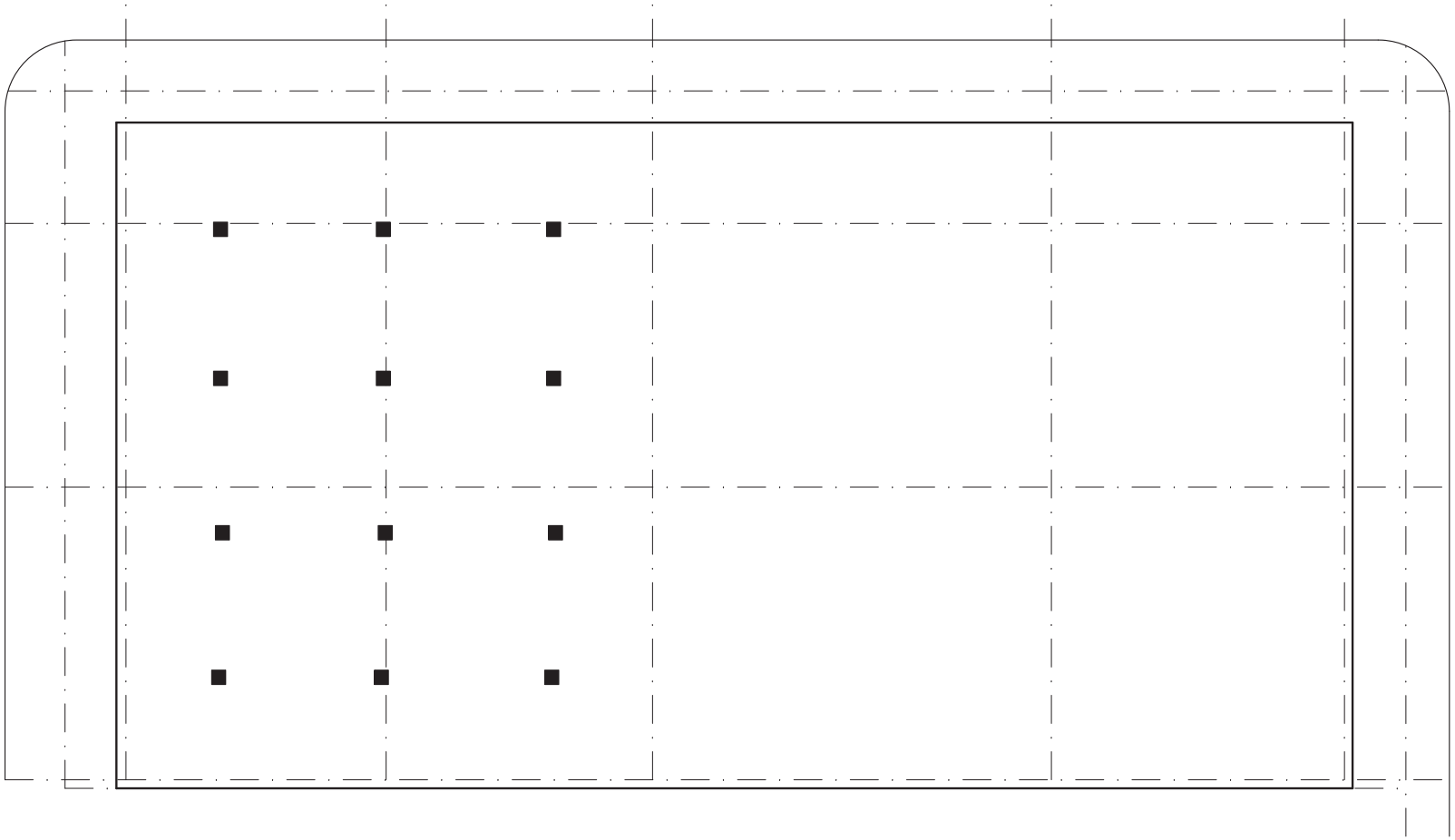
scale	1/8" = 1'-0"	project no.	07-103
date	FEB. 2008	revision no.	
drawn	F.R	drawing no.	A-011
checked	KF		

Figure 4
Map of end-point sample locations

41 ST AVENUE

23 RD STREET

24 RD STREET



LEGEND

■ End-Point Sample

N

End-Point Sample Locations

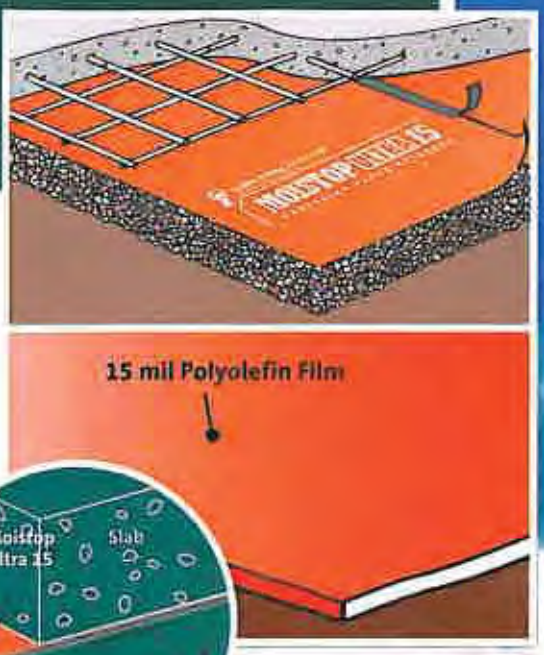
Advanced Cleanup Technologies, Inc.
ENVIRONMENTAL CONSULTANTS
960 S. Broadway, Suite 100, Hicksville, New York 11801
Tel: 516-933-0655 Fax: 516-933-0659

Project No.: 4019-LINY	Figure No.: 4
Updated: 10/07/2011	Scale: Not to scale

Figure 5
Vapor barrier/waterproofing membrane diagrams

MOISTOP ULTRA 15

UNDERSLAB VAPOR RETARDER



Exceptional Against Moisture Vapor Migration

When you pour a concrete slab on grade, you extend an invitation for any moisture underneath the slab to migrate through the concrete in the form of water vapor. If unchecked, this moisture intrusion trapped under the slab could undermine the integrity of not only the slab, but can also damage any finished floor covering applied over it.

Specifying a quality vapor retarder beneath concrete slabs on grade is inexpensive insurance against costly finished floor covering and coating failures. That's why the Fortifiber Building Systems Group® offers the most complete line of underslab products, incuding the most technologically advanced vapor retarder ever made – Moistop Ultra 15.

"Moistop Ultra 15 is specifically designed to deliver long-lasting protection."

Moistop Ultra 15 protects building interiors from damaging water vapor transmission through concrete slabs.

One Chance To Do It Right

With a water vapor permeance of .02 perms and a tensile strength and puncture resistance that outperforms even thicker membranes, Moistop Ultra 15 represents a new standard for concrete underlab products. Moistop Ultra 15 exceeds ASTM E-1745-97 Class "A", "B" and "C" requirements for underslab vapor retarders. Manufactured from ISO certified virgin resins through a unique process, Moistop Ultra 15 is extremely durable and puncture resistant.

Moistop Ultra 15 is economically engineered to deliver a superior level of performance at a comparatively low installed cost. The product not only stands up to the most rugged jobsite abuse, it is also resistant to degradation from burial — delivering life-long protection from unwanted moisture vapor migration through concrete slabs. The product is an integral component in the Fortifiber Building Systems Group's Moisture Control System for flooring, and engineered to address commercial applications.

Hassle-Free Installation

Supplied in 14 foot wide rolls, center-folded to 7 feet for ease of handling and installation, Moistop Ultra 15 rolls out quickly and smoothly over leveled and tamped soil or compacted fill. There is no need to hassle with awkward panels or flimsy films. Simply overlap the material 6 inches and tape the seams with Moistop® Tape.

Specifications & Warranty

The back of this sheet gives more details on Moistop Ultra 15, including specifications, availability and warranty information.

Moistop Ultra 15 is a product manufactured by the Fortifiber Building Systems Group. With more than a seventy year history of proven performance, technical expertise and practical know-how, the company has become a trusted partner to builders, architects and code officials.

- **Exceeds ASTM E-1745 Class "A", "B" and "C" Standards**
- **Exceptional Tear Strength**
- **Puncture Resistant**
- **Moistop® Tape**
  Moistop Tape was designed for use with Moistop Underslab Vapor Retarders. Its excellent adhesion assures tight joints. Available in 4 inch x 108 foot rolls.
- **The Boot®**
  The Boot's unique design makes quick work of sealing around pipes, conduit and other penetrations of any size.

MOISTOP ULTRA 15

Product Description: Moistop Ultra 15 is a superior vapor retarder designed for slabs on-grade to stop the migration of moisture vapor through the slab.

Composition: Moistop Ultra 15 is a 15 mil polyolefin film manufactured with a proprietary formulation of ISO certified virgin resins.

Size & Weight: Moistop Ultra 15 is supplied in 1,960 sq. ft. rolls (168" by 140'); weight is approximately 7.3 lbs./100 sq. ft. Thickness is 15 mils.

Applicable Standards: American Society for Testing & Materials (ASTM):

- *ASTM D-882 – Tensile Properties of Thin Plastic Sheeting*
- *ASTM D-1004 – Standard Test Method for Initial Tear Resistance of Plastic Film and Sheeting*
- *ASTM D-1709 – Impact Resistance of Plastic Film by the Free-Falling Dart Method*
- *ASTM E-96 – Water Vapor Transmission of Materials*
- *ASTM E-154-99 – Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover*
- *ASTM E-1745 – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs*

Physical Properties: Moistop Ultra 15 is continually tested in accordance with ASTM procedures. The values shown in Table 1 are averages obtained in these tests. Moistop Ultra 15 meets all requirements for Class "A", "B" and "C" Underslab Vapor Retarders per ASTM E-1745.

Installation: Follow the installation procedures outlined in ASTM E-1643. After the base for the concrete has been leveled, compacted, and tamped, install the vapor retarder over the base and compacted fill, with the longest dimension parallel to the direction of the pour of the concrete. All joints should be lapped 6" (152 mm) and sealed with Moistop Tape. Seal penetrations with The Boot and Moistop Tape.

Limitations: Product should be covered as soon as possible. Inspect product to ensure it is free of any punctures or damage which may detract from the underslab vapor retarder integrity. Product should be as clean and dry as possible before sealing with Moistop Tape. Not recommended for below grade vertical waterproofing applications.

Availability: The Fortifiber Building Systems Group's products are distributed nationwide. For product information and pricing, please call a Fortifiber distributor near you. If you need assistance locating a participating distributor, please call our Customer Service Department at 1-800-773-4777.

Warranty: Fortifiber Corporation warrants that its products are in compliance with their published specifications and are free from defects in materials and workmanship for a period of two years from the date of purchase. This warranty does not apply to loss due to abuse. Material found to be defective will be replaced at no charge by Fortifiber, but in no event shall Fortifiber be liable for any other costs or damages, including any labor costs.

THIS EXPRESS WARRANTY IS GIVEN IN LIEU OF AND EXCLUDES ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Fortifiber's sole obligations under this warranty are as set forth herein. In no event shall Fortifiber be liable for any lost revenue or profits, direct, indirect, special, incidental or consequential damages of any kind.

SPECIFICATION SUMMARY: Provides vapor retarding system, including sealing joints and protrusions through vapor retarder, with accessories as required for complete installation.

VAPOR RETARDER (UNDERSLAB): Fortifiber/ Moistop Ultra 15 Underslab Vapor Retarder. 15 mil polyolefin film.

REFERENCE SPECIFICATION: ASTM E-1745-97 Class "A", "B" and "C".

Table 1- Physical Properties

Material Characteristic	ASTM Test Method	E-1745 Class "A" Requirements	Moistop Ultra 15 Results
Moisture Vapor Permeance	E-154, Section 7 (E-96, Method A)	.30 Perms	.02 Perms
	E-154, Section 7 (E-96, Method B)	.30 Perms	.02 Perms
Tensile Strength	E-154, Section 9 (Method D-882)	45 lbf/in (min)	70 lbf/in (min)- MD 70 lbf/in (min)- CD
Puncture Resistance	D-1709, Method B	2200 Grams (Min.)	3000 Grams

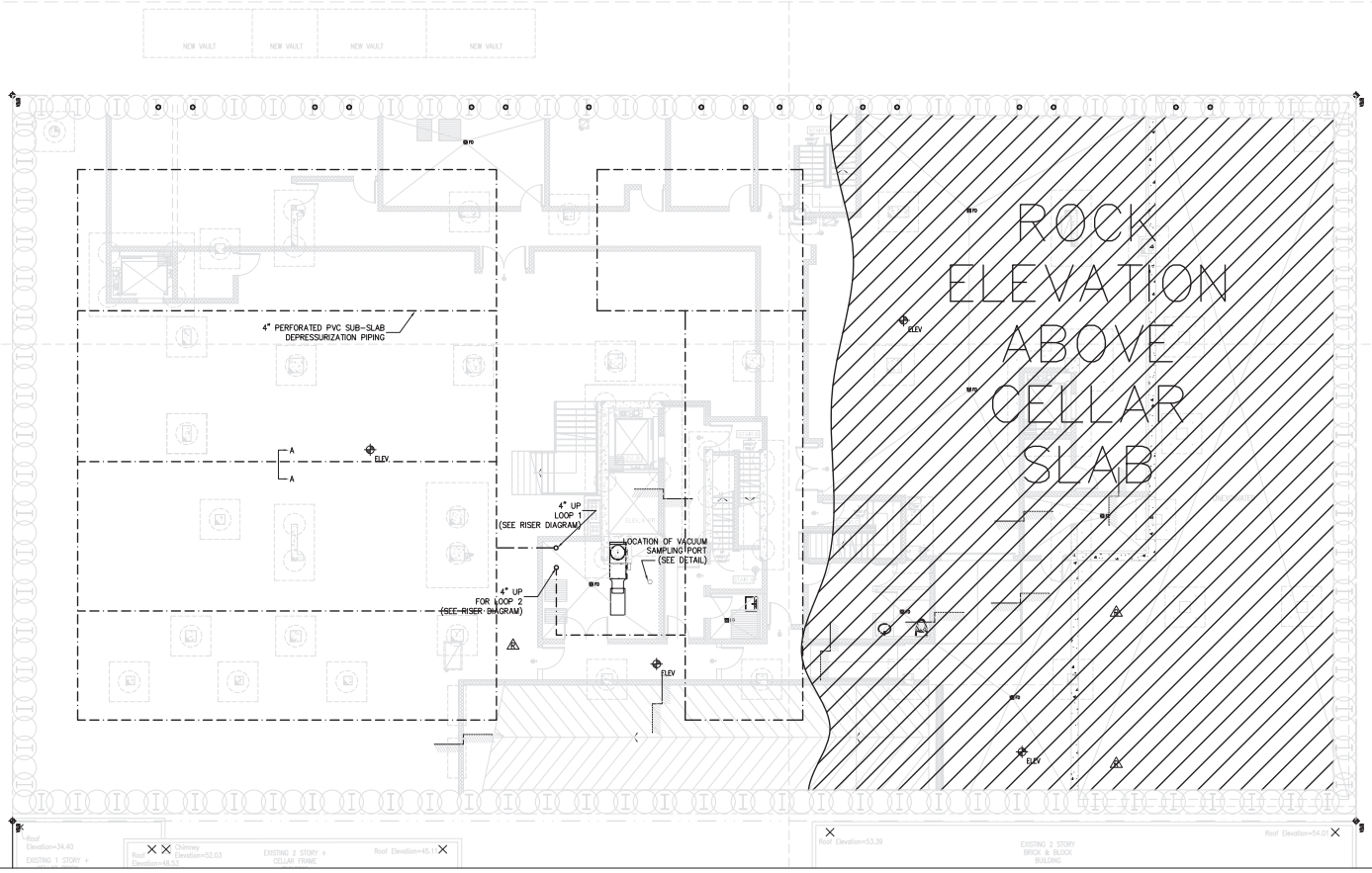
*Moistop Ultra 15 meets all requirements for Class "A", "B" and "C" Underslab Vapor Retarders per ASTM E-1745

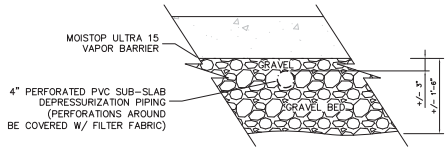
Fortifiber Building Systems Group®
Protecting Your World from the Elements®

Call 1-800-773-4777 or 1-775-333-6400 for sales and technical assistance. On the Internet visit www.fortifiber.com.

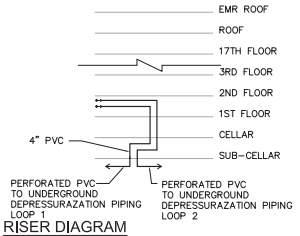
Figure 6
Sub-slab depressurization design diagrams

REV.	DESCRIPTION	DATE
2	LOOP ADDED	1/26/12
1	REVISION	1/13/12

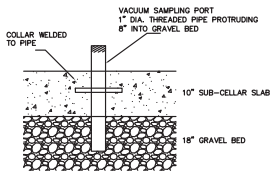




SECTION A-A



RISER DIAGRAM



VACUUM SAMPLING PORT

MEGA CONTRACTING INC.
22-60 46TH STREET
ASTORIA NY 11105

PROJECT:

MIXED USE DEVELOPMENT
23-10 41ST AVENUE
QUEENS, NY

DRAWING:

SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

SCALE: 1/8" = 1'-0"

DATE: 24 MAR. 2011

DWG #: P-001.00

TABLES

Table 1A
Volatile Organic Compounds in Soil

Table 1A

Volatile Organic Compounds in Soil (ug/kg)
EPA Method 8260
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	SB-01 8-9' 12/14/07	SB-02 8-9' 12/14/07	SB-03 8-9' 12/14/07	SB-04 8-9' 12/14/07	SB-05 8-9' 12/14/07	SB-06 8-9' 12/14/07	SB-07 18-19' 2/15/08	SB-08 18-19' 2/19/08	SB-09 17-18' 2/19/08	SB-10 19-20' 2/19/08
1,1,1,2-Tetrachloroethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1,1-Trichloroethane	680	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1,2,2-Tetrachloroethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1,2-Trichloroethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1-Dichloroethane	270	26,000	240,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1-Dichloroethene	330	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,1-Dichloropropene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2,3-Trichlorobenzene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2,3-Trichloropropane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2,4,5-Tetramethylbenzene	NS	NS	NS	<5.4	3,700	90	48	30,000	6,700	<5.8	<5.6	<5.5	<5.5
1,2,4-Trichlorobenzene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2,4-Trimethylbenzene	3,600	52,000	190,000	<5.4	**20,000**	180	99	**140,000**	**44,000**	<5.8	<5.6	<5.5	<5.5
1,2-Dibromo-3-chloropropane	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2-Dichlorobenzene	1,100	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2-Dichloroethane	20	3,100	30,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,2-Dichloropropane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,3,5-Trimethylbenzene	8,400	52,000	190,000	<5.4	6,300	49	25	**41,000**	**12,000**	<5.8	<5.6	<5.5	<5.5
1,3-Dichlorobenzene	2,400	49,000	280,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,3-dichloropropane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,4-Dichlorobenzene	1,800	13,000	130,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
1,4-Dioxane	100	13,000	130,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
2-Butanone	NS	NS	NS	<54	<1100	<54	<53	<5400	<5600	<58	<56	<55	<55
2-Chloroethyl vinyl ether	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
2-Hexanone	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
4-Isopropyltoluene	NS	NS	NS	<5.4	400	<5.4	<5.3	2,800	<560	<5.8	<5.6	<5.5	<5.5
4-Methyl-2-pentanone	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	50	100,000	500,000	<54	<1100	<54	<53	<5400	<5600	<58	<56	<55	<55
Acrolein	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	60	4,800	44,000	<5.4	**320**	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Bromobenzene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Bromochloromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Bromodichloromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Bromoform	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Bromomethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Carbon disulfide	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5
Carbon tetrachloride	760	2,400	22,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Chlorobenzene	1,100	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5

Table 1A Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	SB-01 8-9' 12/14/07	SB-02 8-9' 12/14/07	SB-03 8-9' 12/14/07	SB-04 8-9' 12/14/07	SB-05 8-9' 12/14/07	SB-06 8-9' 12/14/07	SB-07 18-19' 2/15/08	SB-08 18-19' 2/19/08	SB-09 17-18' 2/19/08	SB-10 19-20' 2/19/08
Chlorodifluoromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Chloroethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Chloroform	370	49,000	350,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Chloromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
cis-1,2-Dichloroethene	250	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
cis-1,3-Dichloropropene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Dibromochloromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Dibromomethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Dichlorodifluoromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Diisopropyl ether	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1,000	41,000	390,000	<5.4	**4,200**	14	<5.3	**41,000**	**9,600**	<5.8	<5.6	<5.5	<5.5
Freon-114	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Isopropyl acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NS	NS	NS	<5.4	630	<5.4	<5.3	6,200	1,500	<5.8	<5.6	<5.5	<5.5
m,p-Xylene	260	100,000	500,000	<11	**16,000**	62	11	**57,000**	**28,000**	<12	<11	<11	<11
Methyl Acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	930	100,000	500,000	<5.4	<110	32	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Methylene chloride	50	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
n-Amyl acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NS	100,000	500,000	<5.4	2,600	120	120	34,000	13,000	<5.8	<5.6	<5.5	<5.5
n-Butyl acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NS	NS	NS	<5.4	1,200	10	13	8,500	2,200	<5.8	<5.6	<5.5	<5.5
n-Propyl acetate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	3,900	100,000	500,000	<5.4	2,400	15	11	**24,000**	**6,300**	<5.8	<5.6	<5.5	<5.5
o-Xylene	NS	NS	NS	<5.4	2,700	34	<5.3	2,600	11,000	<5.8	<5.6	<5.5	<5.5
p-Diethylbenzene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
p-Ethyltoluene	NS	NS	NS	<5.4	3,700	28	15	33,000	8,200	<5.8	<5.6	<5.5	<5.5
sec-Butylbenzene	11,000	100,000	500,000	<5.4	480	<5.4	<5.3	4,000	1,000	<5.8	<5.6	<5.5	<5.5
Styrene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
t-Butyl alcohol	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5
tert-Butylbenzene	5,900	100,000	500,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Tetrachloroethene	1,300	19,000	150,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Toluene	700	100,000	500,000	<5.4	**810**	12	<5.3	<540	**4,300**	<5.8	<5.6	<5.5	<5.5
trans-1,2-Dichloroethene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
trans-1,3-Dichloropropene	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Trichloroethene	470	21,000	200,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Trichlorofluoromethane	NS	NS	NS	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Vinyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5
Vinyl chloride	20	900	13,000	<5.4	<110	<5.4	<5.3	<540	<560	<5.8	<5.6	<5.5	<5.5
Total VOCs	NS	NS	NS	0	65,440	646	342	424,100	147,800	0	0	0	0

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
Bolded values signify exceedance of regulatory standard
NA = Not Analyzed
NS = No Standard

Table 1A Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-01 5' 6/24/11	EP-02 5' 6/24/11	EP-03 5' 6/24/11	EP-04 5' 6/24/11	EP-05 8' 6/24/11	ACT-20A 8-10' 8/20/11	ACT-20B 8-10' 8/20/11	SB-22A 0-2' 11/11/11	SB-22B 0-2' 11/11/11	SB-27A 0-2' 11/11/11	SB-27B 0-2' 11/11/11	SB-27C 0-2' 11/11/11	SB-27D 0-2' 11/11/11
1,1,1,2-Tetrachloroethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1,1-Trichloroethane	680	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1,2,2-Tetrachloroethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1,2-Trichloroethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1-Dichloroethane	270	26,000	240,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1-Dichloroethene	330	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,1-Dichloropropene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2,3-Trichlorobenzene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2,3-Trichloropropane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2,4,5-Tetramethylbenzene	NS	NS	NS	3	<5.7	3	27	110	940	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2,4-Trichlorobenzene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2,4-Trimethylbenzene	3,600	52,000	190,000	<5.9	<5.7	1	27	110	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2-Dibromo-3-chloropropane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2-Dibromoethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2-Dichlorobenzene	1,100	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2-Dichloroethane	20	3,100	30,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,2-Dichloropropane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,3,5-Trimethylbenzene	8,400	52,000	190,000	<5.9	<5.7	1	11	46	28	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,3-Dichlorobenzene	2,400	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,3-dichloropropane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,4-Dichlorobenzene	1,800	13,000	130,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
1,4-Dioxane	100	13,000	130,000	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2,2-Dichloropropane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2-Butanone	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2-Chloroethyl vinyl ether	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2-Chlorotoluene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2-Hexanone	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
2-Propanol	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
4-Chlorotoluene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
4-Isopropyltoluene	NS	NS	NS	<5.9	<5.7	<5.6	2	11	10	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
4-Methyl-2-pentanone	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Acetone	50	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<62	<65	<12	<12	<11	<11	<11	<11
Acrolein	NS	NS	NS	<12	<11	<11	<12	<12	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Acrylonitrile	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Benzene	60	4,800	44,000	<5.9	<5.7	<5.6	<5.8	1	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Bromobenzene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Bromochloromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Bromodichloromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Bromoform	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Bromomethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Carbon disulfide	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Carbon tetrachloride	760	2,400	22,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Chlorobenzene	1,100	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4

Table 1A Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-01 5' 6/24/11	EP-02 5' 6/24/11	EP-03 5' 6/24/11	EP-04 5' 6/24/11	EP-05 8' 6/24/11	ACT-20A 8-10' 8/20/11	ACT-20B 8-10' 8/20/11	SB-22A 0-2' 11/11/11	SB-22B 0-2' 11/11/11	SB-27A 0-2' 11/11/11	SB-27B 0-2' 11/11/11	SB-27C 0-2' 11/11/11	SB-27D 0-2' 11/11/11
Chlorodifluoromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Chloroethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Chloroform	370	49,000	350,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Chloromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
cis-1,2-Dichloroethene	250	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
cis-1,3-Dichloropropene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Dibromochloromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Dibromomethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Dichlorodifluoromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Diisopropyl ether	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<12	<12	<11	<11	<11	<11
Ethanol	NS	NS	NS	<12	<11	<11	<12	<12	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Ethyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Ethylbenzene	1,000	41,000	390,000	<5.9	<5.7	<5.6	5	20	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Freon-114	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Hexachlorobutadiene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Isopropyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Isopropylbenzene	NS	NS	NS	<5.9	<5.7	<5.6	1	6	58	<6.5	<12	<12	<11	<11	<11	<11
m,p-Xylene	260	100,000	500,000	<12	<11	1	23	82	<12	<13	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Methyl Acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	3	4	4	4	4	3
Methyl tert-butyl ether	930	100,000	500,000	<5.9	<5.7	<5.6	1	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Methylene chloride	50	100,000	500,000	13	14	12	14	11	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
n-Amyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Naphthalene	NS	100,000	500,000	<5.9	<5.7	2	6	33	36	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
n-Butyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
n-Butylbenzene	NS	NS	NS	<5.9	<5.7	<5.6	2	13	140	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
n-Propyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
n-Propylbenzene	3,900	100,000	500,000	<5.9	<5.7	<5.6	4	15	420	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
o-Xylene	NS	NS	NS	<5.9	<5.7	1	12	40	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
p-Diethylbenzene	NS	NS	NS	1	<5.7	2	19	67	250	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
p-Ethyltoluene	NS	NS	NS	<5.9	<5.7	2	24	93	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
sec-Butylbenzene	11,000	100,000	500,000	<5.9	<5.7	<5.6	1	4	120	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Styrene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	1	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
t-Butyl alcohol	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
tert-Butylbenzene	5,900	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	10	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Tetrachloroethene	1,300	19,000	150,000	1	2	22	2	3	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Toluene	700	100,000	500,000	<5.9	<5.7	1	7	52	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
trans-1,2-Dichloroethene	190	100,000	500,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	1	<5.4
trans-1,3-Dichloropropene	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Trichloroethene	470	21,000	200,000	<5.9	<5.7	1	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Trichlorofluoromethane	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Vinyl acetate	NS	NS	NS	<5.9	<5.7	<5.6	<5.8	<5.9	NA	NA	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Vinyl chloride	20	900	13,000	<5.9	<5.7	<5.6	<5.8	<5.9	<6.2	<6.5	<5.8	<6	<5.5	<5.4	<5.7	<5.4
Total VOCs	NS	NS	NS	17	16	47	189	718	2,012	0	3	4	4	4	5	3

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
NA = Not Analyzed
NS = No Standard

Table 1A Continued

Sample ID Sample Depth [4] Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-06 18-20' 12/9/11	EP-07 18-20' 12/9/11	EP-08 15-17' 12/8/11	EP-09 18-20' 12/9/11	EP-10 15-17' 12/8/11	EP-11 18-20' 12/9/11	EP-12 18-20' 12/9/11	EP-13 15-17' 12/8/11	EP-14 18-20' 12/9/11	EP-15 15-17' 12/8/11	EP-16 15-17' 12/8/11	EP-17 15-17' 12/8/11	EP-18 18-20' 12/9/11
1,1,1,2-Tetrachloroethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1,1-Trichloroethane	680	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1,2,2-Tetrachloroethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1,2-Trichloroethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1-Dichloroethane	270	26,000	240,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1-Dichloroethene	330	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,1-Dichloropropene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2,3-Trichlorobenzene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2,3-Trichloropropane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2,4,5-Tetramethylbenzene	NS	NS	NS	11,000	780	1,800	<5.7	<5.6	<5.5	13	<5.6	160	<5.9	<5.6	<5.6	<6.3
1,2,4-Trichlorobenzene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2,4-Trimethylbenzene	3,600	52,000	190,000	**21,000**	220	2,000	<5.7	<5.6	<5.5	<5.6	<5.6	25	<5.9	<5.6	<5.6	<6.3
1,2-Dibromo-3-chloropropane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2-Dibromoethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2-Dichlorobenzene	1,100	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2-Dichloroethane	20	3,100	30,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,2-Dichloropropane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,3,5-Trimethylbenzene	8,400	52,000	190,000	**10,000**	<650	880	<5.7	<5.6	<5.5	<0.67	<5.6	58	<5.9	<5.6	<5.6	<6.3
1,3-Dichlorobenzene	2,400	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,3-dichloropropane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,4-Dichlorobenzene	1,800	13,000	130,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
1,4-Dioxane	100	13,000	130,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2,2-Dichloropropane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2-Butanone	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2-Chloroethyl vinyl ether	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2-Chlorotoluene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2-Hexanone	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
2-Propanol	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
4-Chlorotoluene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
4-Isopropyltoluene	NS	NS	NS	1,200	37	67	<5.7	<5.6	<5.5	<5.6	<5.6	6.9	<5.9	<5.6	<5.6	<6.3
4-Methyl-2-pentanone	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Acetone	50	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Acrolein	NS	NS	NS	<1400	<11	<12	<11	<11	<11	<11	<11	<12	<12	<11	<11	<13
Acrylonitrile	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Benzene	60	4,800	44,000	**820**	24	1.1	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Bromobenzene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Bromochloromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Bromodichloromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Bromoform	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Bromomethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Carbon disulfide	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<0.62	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Carbon tetrachloride	760	2,400	22,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Chlorobenzene	1,100	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3

Table 1A Continued

Sample ID Sample Depth [4] Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-06 18-20' 12/9/11	EP-07 18-20' 12/9/11	EP-08 15-17' 12/8/11	EP-09 18-20' 12/9/11	EP-10 15-17' 12/8/11	EP-11 18-20' 12/9/11	EP-12 18-20' 12/9/11	EP-13 15-17' 12/8/11	EP-14 18-20' 12/9/11	EP-15 15-17' 12/8/11	EP-16 15-17' 12/8/11	EP-17 15-17' 12/8/11	EP-18 18-20' 12/9/11
Chlorodifluoromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Chloroethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Chloroform	370	49,000	350,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Chloromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
cis-1,2-Dichloroethene	250	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
cis-1,3-Dichloropropene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Dibromochloromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Dibromomethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Dichlorodifluoromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Diisopropyl ether	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Ethanol	NS	NS	NS	<1400	<11	<12	<11	<11	<11	<11	<11	<12	<12	<11	<11	<13
Ethyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Ethylbenzene	1,000	41,000	390,000	**10,000**	16	17	<5.7	<5.6	<5.5	<5.6	<5.6	<1.6	<5.9	<5.6	<5.6	<6.3
Freon-114	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Hexachlorobutadiene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Isopropyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Isopropylbenzene	NS	NS	NS	2,400	35	59	<5.7	<5.6	<5.5	<5.6	<5.6	<1.1	<5.9	<5.6	<5.6	<6.3
m,p-Xylene	260	100,000	500,000	**32,000**	**330**	**740**	<11	<11	<11	<11	<11	15	<12	<11	<11	<13
Methyl Acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Methyl tert-butyl ether	930	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Methylene chloride	50	100,000	500,000	<570	<5	9.1	<8.2	<7.1	<8	6.4	<8	<6.4	<5.8	<5	<7.2	<8.6
n-Amyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Naphthalene	NS	100,000	500,000	4,000	36	110	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
n-Butyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
n-Butylbenzene	NS	NS	NS	1,800	33	140	<5.7	<5.6	<5.5	<5.6	<5.6	<3.8	<5.9	<5.6	<5.6	<6.3
n-Propyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
n-Propylbenzene	3,900	100,000	500,000	**4,500**	23	21	<5.7	<5.6	<5.5	<5.6	<5.6	<2.2	<5.9	<5.6	<5.6	<6.3
o-Xylene	NS	NS	NS	12,000	220	310	<5.7	<5.6	<5.5	<5.6	<5.6	21	<5.9	<5.6	<5.6	<6.3
p-Diethylbenzene	NS	NS	NS	11,000	<690	1,300	<5.7	<5.6	<5.5	<3.7	<5.6	140	<5.9	<5.6	<5.6	<6.3
p-Ethyltoluene	NS	NS	NS	21,000	1200	1,400	<5.7	<5.6	<5.5	<5.6	<5.6	66	<5.9	<5.6	<5.6	<6.3
sec-Butylbenzene	11,000	100,000	500,000	920	24	55	<5.7	<5.6	<5.5	<5.6	<5.6	<1	<5.9	<5.6	<5.6	<6.3
Styrene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
t-Butyl alcohol	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
tert-Butylbenzene	5,900	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Tetrachloroethene	1,300	19,000	150,000	<720	<3.4	6.5	<5.7	<5.6	<5.5	<5.6	<5.6	<5.6	<5.9	<5.6	<5.6	<6.3
Toluene	700	100,000	500,000	**9,200**	56	33	<5.7	<5.6	<5.5	<5.6	<5.6	<1.4	<5.9	<5.6	<5.6	<6.3
trans-1,2-Dichloroethene	190	100,000	500,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
trans-1,3-Dichloropropene	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Trichloroethene	470	21,000	200,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Trichlorofluoromethane	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Vinyl acetate	NS	NS	NS	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Vinyl chloride	20	900	13,000	<720	<5.6	<5.8	<5.7	<5.6	<5.5	<5.6	<5.6	<6.1	<5.9	<5.6	<5.6	<6.3
Total VOCs	NS	NS	NS	152,840	3,034	8,949	0	0	0	19	0	492	0	0	0	0

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[4] Sample depth from bottom of excavation
Bolded values signify exceedance of regulatory standard
NA = Not Analyzed
NS = No Standard

Table 1B
Semi-Volatile Organic Compounds in Soil

Table 1B

Semi-Volatile Organic Compounds in Soil (ug/kg)
EPA Method 8270
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	SB-01 8-9' 12/14/07	SB-02 8-9' 12/14/07	SB-03 8-9' 12/14/07	SB-04 8-9' 12/14/07	SB-05 8-9' 12/14/07	SB-06 8-9' 12/14/07	SB-07 18-19' 2/15/08	SB-08 18-19' 2/19/08	SB-09 17-18' 2/19/08	SB-10 19-20' 2/19/08
1,2,4-Trichlorobenzene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
1,2-Dichlorobenzene	NS	100,000	500,000	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
1,3-Dichlorobenzene	NS	49,000	280,000	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
1,4-Dichlorobenzene	NS	13,000	130,000	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
2,4,5-Trichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
2,6-Dinitrotoluene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
2-Chloronaphthalene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
2-Chlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NS	NS	NS	<32	2,300	95	77	12,000	6,100	<35	<33	<33	<33
2-Methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
2-Nitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3´-Dichlorobenzidine	NS	NS	NS	<320	<1700	<320	<320	<3200	<1700	<350	<330	<330	<330
3+4-Methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
4,6-Dinitro-2-methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
4-Chloro-3-methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
4-Chlorophenyl phenyl ether	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
4-Nitroaniline	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
4-Nitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	20,000	100,000	500,000	<32	280	<32	<32	2,300	2,900	<35	<33	<33	<33
Acenaphthylene	100,000	100,000	500,000	<32	<170	<32	<32	740	600	<35	<33	<33	<33
Acetophenone	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aniline	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	NA	NA	NA
Anthracene	100,000	100,000	500,000	<32	490	57	40	4,800	2,800	<35	<33	<33	<33
Atrazine	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1,000	1,000	5,600	<32	**1,100**	55	37	**3,700**	**3,000**	<35	<33	<33	<33
Benzo(a)pyrene	1,000	1,000	1,000	<32	**1,400**	35	<32	**2,500**	**1,900**	<35	<33	<33	<33
Benzo(b)fluoranthene	1,000	1,000	5,600	<32	**2,000**	44	32	**3,700**	**2,600**	<35	<33	<33	<33
Benzo(g,h,i)perylene	100,000	100,000	500,000	<32	730	<32	<32	760	580	<35	<33	<33	<33
Benzo(k)fluoranthene	800	3,900	56,000	<32	690	<32	<32	**1,200**	**960**	<35	<33	<33	<33
Benzoic acid	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 1B Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	SB-01 8-9' 12/14/07	SB-02 8-9' 12/14/07	SB-03 8-9' 12/14/07	SB-04 8-9' 12/14/07	SB-05 8-9' 12/14/07	SB-06 8-9' 12/14/07	SB-07 18-19' 2/15/08	SB-08 18-19' 2/19/08	SB-09 17-18' 2/19/08	SB-10 19-20' 2/19/08
Benzyl alcohol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Bis(2-chloroethyl)ether	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Bis(2-chloroisopropyl)ether	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Bis(2-ethylhexyl)phthalate	NS	NS	NS	140	800	480	100	1,200	1,300	<35	<33	<33	<33
Butyl benzyl phthalate	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Caprolactam	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NS	NS	<32	<170	<32	<32	1,200	460	<35	<33	<33	<33
Chrysene	1,000	3,900	56,000	<32	**1,200**	47	36	**3,200**	**2,400**	<35	<33	<33	<33
Dibenzo(a,h)anthracene	NS	NS	NS	<32	180	<32	<32	<320	190	<35	<33	<33	<33
Dibenzofuran	NS	59,000	350,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Di-n-octyl phthalate	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Fluoranthene	100,000	100,000	500,000	<32	2,200	150	94	11,000	7,900	<35	<33	<33	<33
Fluorene	30,000	100,000	500,000	<32	460	56	46	5,200	4,400	<35	<33	<33	<33
Hexachlorobenzene	NS	1,200	6,000	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Hexachlorobutadiene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Hexachlorocyclopentadiene	NS	NS	NS	<320	<1700	<320	<320	<3200	<1700	<350	<330	<330	<330
Hexachloroethane	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Indeno(1,2,3-c,d)pyrene	500	500	5,600	<32	**810**	<32	<32	**990**	**760**	<35	<33	<33	<33
Isophorone	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Naphthalene	12,000	100,000	500,000	<32	1,700	49	40	11,000	4,800	<35	<33	<33	<33
Nitrobenzene	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
N-Nitrosodimethylamine	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
N-Nitrosodiphenylamine	NS	NS	NS	<32	<170	<32	<32	<320	<170	<35	<33	<33	<33
Parathion	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	800	6,700	6,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	100,000	100,000	500,000	<32	1,800	200	150	13,000	11,000	<35	<33	<33	<33
Phenol	330	100,000	500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	100,000	100,000	500,000	<32	1,900	120	79	8,000	6,700	<35	<33	<33	<33
Pyridine	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	<280	<300	<270
Total SVOCs	NS	NS	NS	140	20,040	1,388	731	86,490	61,350	0	0	0	0

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
Bolded values signify exceedance of regulatory standard
NS = No Standard
NA = Not Analyzed

Table 1B Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-01 5' 6/24/11	EP-02 5' 6/24/11	EP-03 5' 6/24/11	EP-04 5' 6/24/11	EP-05 8' 6/24/11	ACT-20A 8-10' 8/20/11	ACT-20B 8-10' 8/20/11	SB-22A 0-2' 11/11/11	SB-22B 0-2' 11/11/11	SB-27A 0-2' 11/11/11	SB-27B 0-2' 11/11/11	SB-27C 0-2' 11/11/11	SB-27D 0-2' 11/11/11
1,2,4-Trichlorobenzene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
1,2-Dichlorobenzene	NS	100,000	500,000	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
1,3-Dichlorobenzene	NS	49,000	280,000	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
1,4-Dichlorobenzene	NS	13,000	130,000	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
2,4,5-Trichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2,4,6-Trichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2,4-Dichlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2,4-Dimethylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2,4-Dinitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2,4-Dinitrotoluene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
2,6-Dinitrotoluene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
2-Chloronaphthalene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
2-Chlorophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2-Methylnaphthalene	NS	NS	NS	160	72	<280	380	75	<37	<39	<280	<300	<270	<270	<280	<270
2-Methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
2-Nitroaniline	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
2-Nitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
3,3´-Dichlorobenzidine	NS	NS	NS	<290	<280	<280	<280	<280	<370	<390	<280	<300	<270	<270	<280	<270
3+4-Methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
3-Nitroaniline	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
4,6-Dinitro-2-methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
4-Bromophenyl phenyl ether	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
4-Chloro-3-methylphenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
4-Chloroaniline	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
4-Chlorophenyl phenyl ether	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
4-Nitroaniline	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
4-Nitrophenol	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Acenaphthene	20,000	100,000	500,000	210	280	<280	990	65	<37	<39	<280	<300	45	<270	48	<270
Acenaphthylene	NS	NS	NS	97	38	<280	120	46	<37	<39	28	<300	<270	<270	36	<270
Acetophenone	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Aniline	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	<280	<300	<270	<270	<280	<270
Anthracene	100,000	100,000	500,000	400	2,400	41	1,700	150	<37	<39	<280	230	370	<270	650	<270
Atrazine	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Benzo(a)anthracene	1,000	1,000	5,600	**1,300**	**1,300**	160	**3,600**	540	<37	<39	47	220	170	<270	490	<270
Benzo(a)pyrene	1,000	1,000	1,000	**1,400**	**1,100**	170	**3,200**	650	<37	<39	120	220	130	<270	490	<270
Benzo(b)fluoranthene	1,000	1,000	5,600	**1,400**	1,000	160	**2,800**	570	<37	<39	160	190	240	<270	390	<270
Benzo(g,h,i)perylene	100,000	100,000	500,000	1,200	770	150	1,900	570	<37	<39	200	150	96	<270	350	<270
Benzo(k)fluoranthene	800	3,900	56,000	**1,300**	**910**	140	**2,800**	590	<37	<39	180	160	260	<270	340	<270
Benzoic acid	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270

Table 1B Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-01 5' 6/24/11	EP-02 5' 6/24/11	EP-03 5' 6/24/11	EP-04 5' 6/24/11	EP-05 8' 6/24/11	ACT-20A 8-10' 8/20/11	ACT-20B 8-10' 8/20/11	SB-22A 0-2' 11/11/11	SB-22B 0-2' 11/11/11	SB-27A 0-2' 11/11/11	SB-27B 0-2' 11/11/11	SB-27C 0-2' 11/11/11	SB-27D 0-2' 11/11/11
Benzyl alcohol	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	<280	<300	<270	<270	<280	<270
Biphenyl	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Bis(2-chloroethoxy)methane	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Bis(2-chloroethyl)ether	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Bis(2-chloroisopropyl)ether	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Bis(2-ethylhexyl)phthalate	NS	NS	NS	<290	430	<280	<280	390	<37	<39	<280	<300	<270	<270	<280	<270
Butyl benzyl phthalate	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Caprolactam	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Carbazole	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Chrysene	1,000	3,900	56,000	**1,300**	**1,300**	170	**3,400**	550	<37	<39	56	250	170	<270	510	<270
Dibenzo(a,h)anthracene	NS	NS	NS	340	190	42	610	70	<37	<39	43	53	42	<270	100	<270
Dibenzofuran	NS	59,000	350,000	<290	190	<280	430	<280	<37	<39	<280	<300	28	<270	43	<270
Diethyl phthalate	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Dimethyl phthalate	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Di-n-butyl phthalate	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Di-n-octyl phthalate	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Fluoranthene	100,000	100,000	500,000	2,400	2,400	270	7,500	970	<37	<39	41	400	350	<270	820	<270
Fluorene	30,000	100,000	500,000	170	250	<280	800	63	<37	<39	<280	<300	45	<270	50	<270
Hexachlorobenzene	NS	1,200	6,000	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Hexachlorobutadiene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Hexachlorocyclopentadiene	NS	NS	NS	<290	<280	<280	<280	<280	<370	<390	<280	<300	<270	<270	<280	<270
Hexachloroethane	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Indeno(1,2,3-c,d)pyrene	500	500	5,600	**1,000**	**690**	140	**1,800**	**510**	<37	<39	160	130	82	<270	320	<270
Isophorone	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Naphthalene	12,000	100,000	500,000	290	200	<280	550	51	<37	<39	<280	<300	<270	<270	40	<270
Nitrobenzene	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
N-Nitrosodimethylamine	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	<280	<300	<270	<270	<280	<270
N-Nitrosodi-n-propylamine	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
N-Nitrosodiphenylamine	NS	NS	NS	<290	<280	<280	<280	<280	<37	<39	<280	<300	<270	<270	<280	<270
Parathion	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Pentachlorophenol	800	6,700	6,700	**1,500**	**2,400**	160	**6,900**	600	NA	NA	<280	<300	<270	<270	<280	<270
Phenanthrene	100,000	100,000	500,000	NA	NA	NA	NA	NA	<37	<39	33	240	390	<270	690	<270
Phenol	330	100,000	500,000	NA	NA	NA	NA	NA	NA	NA	<280	<300	<270	<270	<280	<270
Pyrene	100,000	100,000	500,000	2,200	2,400	280	6,600	1,000	<37	<39	83	490	360	<270	1,000	<270
Pyridine	NS	NS	NS	<290	<280	<280	<280	<280	NA	NA	<280	<300	<270	<270	<280	<270
Total SVOCs	NS	NS	NS	16,667	18,320	1,883	46,080	7,460	0	0	1,151	2,733	2,778	0	6,367	0

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
Bolded values signify exceedance of regulatory standard
NS = No Standard
NA = Not Analyzed

Table 1B Continued

Sample ID Sample Depth [4] Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-06 18-20' 12/9/11	EP-07 18-20' 12/9/11	EP-08 15-17' 12/8/11	EP-09 18-20' 12/9/11	EP-10 15-17' 12/8/11	EP-11 18-20' 12/9/11	EP-12 18-20' 12/9/11	EP-13 15-17' 12/8/11	EP-14 18-20' 12/9/11	EP-15 15-17' 12/8/11	EP-16 15-17' 12/8/11	EP-17 15-17' 12/8/11	EP-18 18-20' 12/9/11
1,2,4-Trichlorobenzene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
1,2-Dichlorobenzene	1,100	100,000	500,000	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
1,3-Dichlorobenzene	2,400	49,000	280,000	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
1,4-Dichlorobenzene	1,800	13,000	130,000	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4,5-Trichlorophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4,6-Trichlorophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4-Dichlorophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4-Dimethylphenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4-Dinitrophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,4-Dinitrotoluene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2,6-Dinitrotoluene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2-Chloronaphthalene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2-Chlorophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2-Methylnaphthalene	NS	NS	NS	2100	<35	440	<290	<43	<280	<280	<290	<91	<300	<270	<290	<310
2-Methylphenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2-Nitroaniline	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
2-Nitrophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
3,3´-Dichlorobenzidine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
3+4-Methylphenol	NS	NS	NS	<49	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
3-Nitroaniline	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4,6-Dinitro-2-methylphenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Bromophenyl phenyl ether	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Chloro-3-methylphenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Chloroaniline	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Chlorophenyl phenyl ether	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Nitroaniline	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
4-Nitrophenol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Acenaphthene	20,000	100,000	500,000	<46	<280	<54	<290	<40	<280	<280	<290	<290	<300	<270	<290	<310
Acenaphthylene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Acetophenone	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Aniline	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Anthracene	100,000	100,000	500,000	<280	<280	300	<46	330	<280	<55	<72	<170	<300	<270	<290	<310
Atrazine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Benzo(a)anthracene	1,000	1,000	5,600	<65	<280	<140	<150	<120	<280	<280	<31	<110	<59	<270	<290	<310
Benzo(a)pyrene	1,000	1,000	1,000	<52	<280	<130	<130	<110	<280	<280	<290	<110	<51	<270	<290	<310
Benzo(b)fluoranthene	1,000	1,000	5,600	<280	<280	<110	<120	<100	<280	<280	<58	<110	<140	<270	<290	<310
Benzo(g,h,i)perylene	100,000	100,000	500,000	<280	<280	<79	<56	<68	<280	<280	<290	<57	<30	<270	<290	<310
Benzo(k)fluoranthene	800	3,900	56,000	<51	<280	<38	<110	<57	<280	<280	<64	<110	<110	<270	<290	<310
Benzoic acid	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	300	<300	<270	<290	<310

Table 1B Continued

Sample ID Sample Depth [4] Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-06 18-20' 12/9/11	EP-07 18-20' 12/9/11	EP-08 15-17' 12/8/11	EP-09 18-20' 12/9/11	EP-10 15-17' 12/8/11	EP-11 18-20' 12/9/11	EP-12 18-20' 12/9/11	EP-13 15-17' 12/8/11	EP-14 18-20' 12/9/11	EP-15 15-17' 12/8/11	EP-16 15-17' 12/8/11	EP-17 15-17' 12/8/11	EP-18 18-20' 12/9/11
Benzyl alcohol	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Biphenyl	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Bis(2-chloroethoxy)methane	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Bis(2-chloroethyl)ether	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Bis(2-chloroisopropyl)ether	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Bis(2-ethylhexyl)phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Butyl benzyl phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Caprolactam	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Carbazole	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Chrysene	1,000	3,900	56,000	<67	<280	<140	<140	<120	<280	<280	<29	<130	<93	<270	<290	<310
Dibenzo(a,h)anthracene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Dibenzofuran	NS	59,000	350,000	<34	<280	<290	<290	<28	<280	<280	<290	<290	<300	<270	<290	<310
Diethyl phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Dimethyl phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Di-n-butyl phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Di-n-octyl phthalate	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Fluoranthene	100,000	100,000	500,000	<160	<280	<280	310	290	<280	<54	<87	<280	<190	<270	<290	<310
Fluorene	30,000	100,000	500,000	<58	<280	<48	<290	<48	<280	<280	<290	<290	<300	<270	<290	<310
Hexachlorobenzene	NS	1,200	6,000	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Hexachlorobutadiene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Hexachlorocyclopentadiene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Hexachloroethane	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Indeno(1,2,3-c,d)pyrene	500	500	5,600	<280	<280	<72	<61	<85	<280	<280	<290	<47	<300	<270	<290	<310
Isophorone	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Naphthalene	12,000	100,000	500,000	2800	<40	<240	<290	<38	<280	<280	<290	<78	<300	<270	<290	<310
Nitrobenzene	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
N-Nitrosodimethylamine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
N-Nitrosodi-n-propylamine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
N-Nitrosodiphenylamine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Parathion	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Pentachlorophenol	800	6,700	6,700	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Phenanthrene	100,000	100,000	500,000	280	<280	300	<250	330	<280	<55	<72	<170	<120	<270	<290	<310
Phenol	330	100,000	500,000	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Pyrene	100,000	100,000	500,000	<140	<280	<280	<270	320	<280	<44	<65	<250	<170	<270	<290	<310
Pyridine	NS	NS	NS	<280	<280	<290	<290	<280	<280	<280	<290	<290	<300	<270	<290	<310
Total SVOCs	NS	NS	NS	5,180	0	1,040	310	1,270	0	0	0	300	0	0	0	0

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[4] Sample depth from bottom of excavation
NS = No Standard
NA = Not Analyzed

Table 1C
Metals in Soil

Table 1C

Metals in Soil (mg/kg)
EPA Method 6000/7000
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID	Standard			SB-01	SB-02	SB-03	SB-04	SB-05	SB-06	SB-07	SB-08	SB-09	SB-10
Sample Depth	UUSCO [1]	RRSCO [2]	CSCO [3]	8-9'	8-9'	8-9'	8-9'	8-9'	8-9'	18-19'	18-19'	17-18'	19-20'
Sample Date				12/14/07	12/14/07	12/14/07	12/14/07	12/14/07	12/14/07	2/15/08	2/19/08	2/19/08	2/19/08
Aluminum	NS	NS	NS	4,100	4,300	6,200	3,200	4,600	9,200	7,300	6,600	6,300	4,500
Antimony	NS	NS	NS	<1.1	<1.1	<1.1	<1.1	<1.1	1.6	<1.2	<1.1	<1.1	<1.1
Arsenic	13	16	16	<1.1	5.1	1.5	<1.1	1.1	2.8	<1.2	<1.1	<1.1	<1.1
Barium	350	400	400	24	33	23	23	19	33	40	36	34	29
Beryllium	7.2	72	72	0.2	0.24	0.35	0.18	0.29	0.36	0.37	0.32	0.32	0.26
Cadmium	2.5	43	43	<0.54	0.57	<0.54	<0.53	<0.54	0.71	<0.58	<0.56	<0.55	<0.55
Calcium	NS	NS	NS	570	6100	810	710	730	1100	1300	1100	980	1900
Chromium	30	110	110	12	8.8	12	8.1	9.8	18	14	11	11	10
Cobalt	NS	NS	NS	2.4	3.7	7.4	3.2	4.8	6.7	6.7	6.3	6	5.2
Copper	50	270	270	12	43	13	8.3	8.8	12	13	11	11	10
Iron	NS	NS	NS	6,000	6,600	8,800	4,900	7,500	15,000	12,000	10,000	10,000	8,400
Lead	63	400	400	3.7	64	3.9	8.3	4.6	7.8	4.2	3.8	3.7	3.3
Magnesium	NS	NS	NS	1,400	2,800	2,500	1,300	1,500	2,500	3,500	3,100	3,000	3,200
Manganese	1,600	2,000	2,000	42	200	150	120	250	250	350	320	290	260
Mercury	0.18	0.81	0.81	0.0078	0.063	0.0062	0.013	0.0056	0.035	0.0072	0.0068	0.0057	<0.0055
Nickel	30	310	310	7.7	9.1	14	7.2	9.5	15	13	11	11	11
Potassium	NS	NS	NS	570	640	1,100	510	620	1,100	1,300	1,100	1,100	1,000
Selenium	3.9	180	1,500	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.1	<1.1	<1.1
Silver	2	180	1,500	<0.54	<0.56	<0.54	<0.53	<0.54	<0.56	<0.58	<0.56	<0.55	<0.55
Sodium	NS	NS	NS	<110	130	130	<110	<110	220	<120	<110	<110	190
Thallium	NS	NS	NS	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<2.2	<1.1	<1.1
Vanadium	NS	NS	NS	14	12	18	9.5	14	22	20	17	16	14
Zinc	109	10,000	10,000	20	93	30	26	23	45	NA	NA	NA	NA

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
NS = No Standard
NA = Not Analyzed

Table 1C Continued

Sample ID	Standard			EP-01	EP-02	EP-03	EP-04	EP-05	ACT-20A	ACT-20B	SB-22A	SB-22B	SB-27A	SB-27B	SB-27C	SB-27D
Sample Depth	UUSCO [1]	RRSCO [2]	CSCO [3]	5'	5'	5'	5'	8'	8-10'	8-10'	0-2'	0-2'	0-2'	0-2'	0-2'	0-2'
Sample Date				6/24/11	6/24/11	6/24/11	6/24/11	6/24/11	8/20/11	8/20/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11	11/11/11
Aluminum	NS	NS	NS	NA	NA	NA	NA	NA	5,200	7,700	3,760	13,600	3,750	4,150	3,280	3,970
Antimony	NS	NS	NS	NA	NA	NA	NA	NA	1.4	1.9	<0.551	<0.572	<0.545	<0.534	<0.551	<0.535
Arsenic	13	16	16	7.17	3.42	2.87	5.86	3.11	<1.2	<1.3	1.76	5.28	1.27	1.57	1.37	1.29
Barium	350	400	400	80.8	46.5	39	107	33.6	28	64	25.3	50.2	28.5	22.9	34.1	20.6
Beryllium	7.2	72	72	NA	NA	NA	NA	NA	0.25	0.44	<0.441	<0.457	<0.436	<0.427	<0.441	<0.428
Cadmium	2.5	43	43	0.504	0.287	0.228	0.749	0.466	<0.62	<0.65	<0.441	<0.457	<0.436	<0.427	<0.441	<0.428
Calcium	NS	NS	NS	NA	NA	NA	NA	NA	3,800	1,400	903	1,180	1,720	2,210	2,880	1,000
Chromium	30	110	110	16.6	15.3	15.1	15.5	11.4	8.5	18	11.7	17.2	11.9	11.8	9.21	10.7
Cobalt	NS	NS	NS	NA	NA	NA	NA	NA	5.4	7.4	<0.441	<0.457	<0.436	<0.427	<0.441	<0.428
Copper	50	270	270	NA	NA	NA	NA	NA	12	18	12.9	27	10.3	9.12	10.3	7.11
Iron	NS	NS	NS	NA	NA	NA	NA	NA	7,000	12,000	9,610	16,500	10,600	10,300	8,530	9,800
Lead	63	400	400	**188**	**82.2**	46.7	**231**	42	11	4.9	19.7	**250**	22.1	16.6	**112**	3.19
Magnesium	NS	NS	NS	NA	NA	NA	NA	NA	3,800	2,300	715	782	772	802	774	768
Manganese	1,600	2,000	2,000	NA	NA	NA	NA	NA	88	430	213	245	288	185	197	222
Mercury	0.18	0.81	0.81	**0.356**	**0.346**	**0.417**	**0.528**	**0.418**	0.041	0.0086	0.0186	**0.304**	0.0249	0.0157	**0.235**	0.00972
Nickel	30	310	310	NA	NA	NA	NA	NA	11	16	9.49	12.1	10.7	9.33	8.67	10
Potassium	NS	NS	NS	NA	NA	NA	NA	NA	940	2,100	533	714	840	702	653	751
Selenium	3.9	180	1,500	<0.573	<0.512	<0.570	<0.568	<0.529	NA	NA	<0.551	<0.572	<0.545	<0.534	<0.551	<0.535
Silver	2	180	1,500	<0.458	<0.409	<0.456	<0.454	<0.423	NA	NA	<0.441	<0.121	<0.436	<0.427	<0.441	<0.428
Sodium	NS	NS	NS	NA	NA	NA	NA	NA	140	160	40.8	48.3	49	41.7	43.9	47.3
Thallium	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	0.739	0.956	0.889	0.799	0.95	1.05
Vanadium	NS	NS	NS	NA	NA	NA	NA	NA	12	21	13.5	22.5	14	13	11.2	13.3
Zinc	109	10,000	10,000	NA	NA	NA	NA	NA	27	42	41.2	**119**	34.7	26.8	55.9	19.1

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006

[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 1C Continued

Sample ID	Standard			EP-06	EP-07	EP-08	EP-09	EP-10	EP-11	EP-12	EP-13	EP-14	EP-15	EP-16	EP-17	EP-18
Sample Depth [4]	UUSCO [1]	RRSCO [2]	CSCO [3]	18-20'	18-20'	15-17'	18-20'	15-17'	18-20'	18-20'	15-17'	18-20'	15-17'	15-17'	15-17'	18-20'
Sample Date				12/9/11	12/9/11	12/8/11	12/9/11	12/8/11	12/9/11	12/9/11	12/8/11	12/9/11	12/8/11	12/8/11	12/8/11	12/9/11
Aluminum	NS	NS	NS	2510	2390	3600	3480	3990	2110	2620	2680	3970	4400	1990	2010	1580
Antimony	NS	NS	NS	<0.563	<0.515	<0.566	<0.572	<0.529	<0.571	<0.52	<0.522	<0.57	<0.582	<0.565	<0.555	<0.608
Arsenic	13	16	16	0.824	0.737	1.3	1.24	1.4	1.1	0.893	1.12	1.42	1.46	0.92	0.865	0.658
Barium	350	400	400	44.3	35.4	39.4	36.3	41	27.8	37.3	39.6	41	39.6	21.4	23.8	27.8
Beryllium	7.2	72	72	<0.45	<0.412	<0.453	<0.457	<0.423	<0.457	<0.416	<0.417	<0.456	<0.466	<0.452	<0.444	<0.487
Cadmium	2.5	43	43	<0.45	<0.412	<0.453	<0.457	<0.423	<0.457	<0.416	<0.417	<0.456	<0.466	<0.452	<0.444	<0.487
Calcium	NS	NS	NS	5730	6610	3930	3180	3100	6830	3910	2990	3070	1820	986	872	888
Chromium	30	110	110	8.56	7.95	10.6	11.3	12.5	6.94	8.32	9.51	11.2	13.4	5.96	6.33	4.84
Cobalt	NS	NS	NS	<0.45	<0.412	<0.453	<0.457	<0.423	<0.457	<0.416	<0.417	<0.456	<0.466	<0.452	<0.444	<0.487
Copper	50	270	270	9.43	11.3	12.7	12.6	15.2	9.95	12.1	11.9	14.8	13.6	8.74	6.94	5.45
Iron	NS	NS	NS	8370	9570	11200	10700	12800	10000	9900	9250	11600	12400	7180	6830	5390
Lead	63	400	400	4.76	2.76	18.8	6.95	10.1	2.54	3.21	6.46	19.9	12.2	2.47	2.28	2.01
Magnesium	NS	NS	NS	3670	4490	2890	2940	2990	4200	2900	2530	2640	2730	1480	1320	993
Manganese	1,600	2,000	2,000	158	142	223	242	248	167	264	281	250	297	73.5	239	59.9
Mercury	0.18	0.81	0.81	<0.0102	<0.00939	0.0289	0.0155	0.0148	<0.0104	<0.00685	0.012	0.039	0.0183	<0.0106	<0.0107	<0.0113
Nickel	30	310	310	7.86	8.35	9.48	10	10.8	7.63	10.1	8.86	10.7	12.1	6.92	8.14	4.43
Potassium	NS	NS	NS	914	845	883	990	998	719	778	689	985	1080	503	466	381
Selenium	3.9	180	1,500	<0.563	<0.515	<0.566	<0.572	<0.529	<0.571	<0.52	<0.522	<0.57	<0.582	<0.565	<0.555	<0.608
Silver	2	180	1,500	<0.45	<0.412	<0.453	<0.457	<0.423	<0.457	<0.416	<0.417	<0.456	<0.466	<0.452	<0.444	<0.487
Sodium	NS	NS	NS	89.1	74.6	76.8	77.5	78.2	78.4	72.8	77.7	72.1	69.3	57.2	55.3	56.3
Thallium	NS	NS	NS	<0.563	<0.515	<0.566	<0.572	<0.529	<0.571	<0.52	<0.522	<0.57	<0.582	<0.565	<0.555	<0.608
Vanadium	NS	NS	NS	12.7	11.9	15.2	15.6	18.2	14.6	13.1	11.4	15.9	19.1	9.49	9	7.3
Zinc	109	10,000	10,000	20.5	23.1	33.9	34.7	33.3	18.6	36	23.5	49.4	51.4	16.4	14.3	12.1

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006

[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006

[4] Sample depth from bottom of excavation

NS = No Standard

NA = Not Analyzed

Table 1D
PCBs and Pesticides in Soil

Table 1D

PCBs and Pesticides in Soil (ug/Kg)
EPA Method 8081/8082
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	SB-01 8-9' 12/14/07	SB-02 8-9' 12/14/07	SB-03 8-9' 12/14/07	SB-04 8-9' 12/14/07	SB-05 8-9' 12/14/07	SB-06 8-9' 12/14/07	SB-07 18-19' 2/15/08	SB-08 18-19' 2/19/08	SB-09 17-18' 2/19/08	SB-10 19-20' 2/19/08
Aroclor 1016	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1221	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1232	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1242	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1248	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1254	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1260	100	1,000	1,000	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44
Aroclor 1262	100	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1268	100	1,000	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4´-DDD	3.3	2,600	92,000	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
4,4´-DDE	3.3	1,800	62,000	<2.2	2.6	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
4,4´-DDT	3.3	1,700	47,000	<4.3	<4.4	<4.3	<4.2	<4.3	<4.5	<4.7	<4.4	<4.4	<4.4
Aldrin	5	19	680	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
alpha-BHC	20	97	3,400	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
beta-BHC	36	72	3,000	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Chlordane	94	910	24,000	<8.6	<8.9	<8.6	<8.4	<8.6	<9	<9.3	<8.9	<8.8	<8.8
Chlorobenzilate	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DBCP	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	40	100,000	500,000	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Dieldrin	5	39	1,400	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Endosulfan I	2,400	4,800	200,000	<4.3	<4.4	<4.3	<4.2	<4.3	<4.5	<4.7	<4.4	<4.4	<4.4
Endosulfan II	2,400	4,800	200,000	<4.3	<4.4	<4.3	<4.2	<4.3	<4.5	<4.7	<4.4	<4.4	<4.4
Endosulfan sulfate	2,400	4,800	200,000	<13	<13	<13	<13	<13	<13	<14	<13	<13	<13
Endrin	14	2,200	89,000	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Endrin aldehyde	NS	NS	NS	<13	<13	<13	<13	<13	<13	<14	<13	<13	<13
Endrin ketone	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	100	280	9,200	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Heptachlor	42	420	15,000	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Heptachlor epoxide	NS	NS	NS	<2.2	<2.2	<2.2	<2.1	<2.2	<2.2	<2.3	<2.2	<2.2	<2.2
Hexachlorobenzene	330	NA	6,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	NS	NS	NS	<43	<44	<43	<42	<43	<45	<47	<44	<44	<44

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
NS = No Standard
NA = Not Analyzed

Table 1D Continued

Sample ID Sample Depth Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	ACT-20A 8-10' 8/20/11	ACT-20B 8-10' 8/20/11	SB-22A 0-2' 11/11/11	SB-22B 0-2' 11/11/11	SB-27A 0-2' 11/11/11	SB-27B 0-2' 11/11/11	SB-27C 0-2' 11/11/11	SB-27D 0-2' 11/11/11
Aroclor 1016	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1221	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1232	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1242	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1248	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1254	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1260	100	1,000	1,000	<49	<52	<45	<47	<44	<43	<45	<42
Aroclor 1262	100	1,000	1,000	NA	NA	<45	<47	<44	<43	<45	<42
Aroclor 1268	100	1,000	1,000	NA	NA	<45	<47	<44	<43	<45	<42
4,4´-DDD	3.3	2,600	92,000	<2.5	<2.6	<2.3	<2.4	1.6	<2.1	1.2	<2.1
4,4´-DDE	3.3	1,800	62,000	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
4,4´-DDT	3.3	1,700	47,000	<4.9	<5.2	<2.3	<2.4	1.5	<2.1	1.5	<2.1
Aldrin	5	19	680	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	2.8	<2.1
alpha-BHC	20	97	3,400	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
beta-BHC	36	72	3,000	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Chlordane	94	910	24,000	<9.9	<10	<2.3	8.7	31	<2.1	19	<2.1
Chlorobenzilate	NS	NS	NS	NA	NA	8.7	<2.4	<2.2	<2.1	<2.3	<2.1
DBCP	NS	NS	NS	NA	NA	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
delta-BHC	40	100,000	500,000	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	4.7
Dieldrin	5	39	1,400	<2.5	<2.6	<2.3	<2.4	0.72	<2.1	<2.3	<2.1
Endosulfan I	2,400	4,800	200,000	<4.9	<5.2	<2.3	0.75	<2.2	<2.1	3.2	<2.1
Endosulfan II	2,400	4,800	200,000	<4.9	<5.2	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Endosulfan sulfate	2,400	4,800	200,000	<15	<16	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Endrin	14	2,200	89,000	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Endrin aldehyde	NS	NS	NS	<15	<16	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Endrin ketone	NS	NS	NS	NA	NA	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
gamma-BHC	100	280	9,200	<2.5	<2.6	0.85	<2.4	<2.2	<2.1	<2.3	<2.1
Heptachlor	42	420	15,000	<2.5	<2.6	<2.3	0.68	<2.2	<2.1	0.38	<2.1
Heptachlor epoxide	NS	NS	NS	<2.5	<2.6	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Hexachlorobenzene	330	NA	6,000	NA	NA	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Hexachlorocyclopentadiene	NS	NS	NS	NA	NA	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Methoxychlor	NS	NS	NS	NA	NA	<2.3	<2.4	<2.2	<2.1	<2.3	<2.1
Toxaphene	NS	NS	NS	<49	<52	<11	<12	<11	<11	<11	<11

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
NS = No Standard
NA = Not Analyzed

Table 1D Continued

Sample ID Sample Depth [4] Sample Date	UUSCO [1]	Standard RRSCO [2]	CSCO [3]	EP-06 18-20' 12/9/11	EP-07 18-20' 12/9/11	EP-08 15-17' 12/8/11	EP-09 18-20' 12/9/11	EP-10 15-17' 12/8/11	EP-11 18-20' 12/9/11	EP-12 18-20' 12/9/11	EP-13 15-17' 12/8/11	EP-14 18-20' 12/9/11	EP-15 15-17' 12/8/11	EP-16 15-17' 12/8/11	EP-17 15-17' 12/8/11	EP-18 18-20' 12/9/11
Aroclor 1016	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1221	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1232	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1242	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1248	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1254	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1260	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1262	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
Aroclor 1268	100	1,000	1,000	<45	<44	<46	<47	<45	<45	<44	<46	<47	<47	<43	<46	<50
4,4´-DDD	3.3	2,600	92,000	1.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
4,4´-DDE	3.3	1,800	62,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
4,4´-DDT	3.3	1,700	47,000	1.2	<2.2	2	0.36	1.6	<2.2	<2.2	1.3	**6.4**	1.7	<2.2	<2.3	<2.5
Aldrin	5	19	680	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
alpha-BHC	20	97	3,400	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
beta-BHC	36	72	3,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Chlordane	94	910	24,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Chlorobenzilate	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
DBCP	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
delta-BHC	40	100,000	500,000	<2.3	5.6	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	7.4	<2.4	<2.2	<2.3	<2.5
Dieldrin	5	39	1,400	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	0.48	0.68	<2.2	<2.3	<2.5
Endosulfan I	2,400	4,800	200,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Endosulfan II	2,400	4,800	200,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Endosulfan sulfate	2,400	4,800	200,000	1.4	<2.2	<2.3	<2.3	0.46	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Endrin	14	2,200	89,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Endrin aldehyde	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Endrin ketone	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
gamma-BHC	100	280	9,200	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Heptachlor	42	420	15,000	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Heptachlor epoxide	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Hexachlorobenzene	330	NA	6,000	<2.3	<2.2	<2.3	<2.3	1.9	4.5	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Hexachlorocyclopentadiene	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Methoxychlor	NS	NS	NS	<2.3	<2.2	<2.3	<2.3	<2.2	<2.2	<2.2	<2.3	<2.3	<2.4	<2.2	<2.3	<2.5
Toxaphene	NS	NS	NS	<11	<11	<12	<12	<11	<11	<11	<11	<12	<12	<11	<12	<12

[1] Unrestricted Use Soil Cleanup Objectives, Table 375-6.8(a), 6 NYCRR 375, NYSDEC 2006
[2] Restricted Residential Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[3] Commercial Soil Cleanup Objectives, Table 375-6.8(b), 6 NYCRR 375, NYSDEC 2006
[4] Sample depth from bottom of excavation
Bolded values signify exceedance of regulatory standard
NS = No Standard
NA = Not Analyzed

Table 2A
Volatile Organic Compounds in Groundwater

Table 2A

Volatile Organic Compounds in Groundwater (ug/l)
EPA Method 8260
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Date	Standard [1]	TW-01 2/14/05	TW-02 2/14/05	TW-03 2/14/05	TW-04 2/14/05	TW-05 2/14/05	TW-06 2/14/05	TW-07 2/19/08	TW-08 2/15/08	TW-09 2/15/08	TW-10 2/15/08
1,1,1,2-Tetrachloroethane	5	<15.5	<15.5	<1.55	<0.31	<15.5	<0.62	<1	<1	<1	<1
1,1,1-Trichloroethane	5	<20.0	<20.0	<2.00	1.00	<20.0	1.89	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	0.2	<10.5	<10.5	<1.05	<0.21	<10.5	<0.42	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NA	NA	NA	NA	NA	NA	<1	<1	<1	<1
1,1,2-Trichloroethane	1	<14.0	<14.0	<1.40	<0.28	<14.0	<0.56	<1	<1	<1	<1
1,1-Dichloroethane	5	<22.0	<22.0	<2.20	<0.44	<22.0	<0.88	<1	<1	<1	<1
1,1-Dichloroethene	0.7	<15.5	<15.5	<1.55	<0.31	<15.5	<0.62	<1	<1	<1	<1
1,1-Dichloropropene	5	<15.0	<15.0	<1.50	<0.30	<15.0	<0.60	<1	<1	<1	<1
1,2,3-Trichlorobenzene	5	<14.0	<14.0	<1.40	<0.28	<14.0	<0.56	<1	<1	<1	<1
1,2,3-Trichloropropane	0.04	<21.0	<21.0	<2.10	<0.42	<21.0	<0.84	<1	<1	<1	<1
1,2,4,5-Tetramethylbenzene	5	**52.3**	**59.7**	**30.3**	<0.34	**89.9**	**8.69**	<1	<1	<1	<1
1,2,4-Trichlorobenzene	5	<18.0	<18.0	<1.80	<0.36	<18.0	<0.72	<1	<1	<1	<1
1,2,4-Trimethylbenzene	5	**1,450**	**1,240**	**535**	**1.56**	**2,150**	**276**	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NS	<15.0	<15.0	<1.50	<0.30	<15.0	<0.60	<1	<1	<1	<1
1,2-Dichlorobenzene	2	<15.0	<15.0	<1.50	<0.30	<15.0	<0.60	<1	<1	<1	<1
1,2-Dichloroethane	0.6	<14.0	<14.0	<1.40	<0.28	<14.0	<0.56	<1	<1	<1	<1
1,2-Dichloropropane	1	<10.0	<10.0	<1.00	<0.20	<10.0	<0.40	<1	<1	<1	<1
1,3,5-Trimethylbenzene	5	**402**	**390**	**121**	<0.42	**609**	**66**	<1	<1	<1	<1
1,3-Dichlorobenzene	3	<12.5	<12.5	<1.25	<0.25	<12.5	<0.50	<1	<1	<1	<1
1,3-dichloropropane	4	<13.0	<13.0	<1.30	<0.26	<13.0	<0.52	<1	<1	<1	<1
1,4-Dichlorobenzene	3	<15.0	<15.0	<1.50	<0.30	<15.0	<0.60	<1	<1	<1	<1
1,4-Dioxane	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	5	<33.0	<33.0	<3.30	<0.66	<33.0	<1.32	<1	<1	<1	<1
2-Butanone	50	NA	NA	NA	NA	NA	NA	<10	<10	<10	<10
2-Chloroethyl vinyl ether	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	5	<20.5	<20.5	<2.05	<0.41	<20.5	<0.82	<1	<1	<1	<1
2-Hexanone	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Propanol	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	5	<17.0	<17.0	<1.70	<0.34	<17.0	<0.68	<1	<1	<1	<1
4-Isopropyltoluene	5	<12.0	**32.4**	**14.9**	<0.24	**46.7**	4.38	<1	<1	<1	<1
4-Methyl-2-pentanone	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	50	<39.5	<39.5	<3.95	<0.79	<39.5	<1.58	<10	<10	<10	<10
Acrolein	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.7	**1,480**	**9,930**	**2,560**	0.64	**1,390**	**62.3**	<1	<1	<1	<1
Bromobenzene	5	<16.0	<16.0	<1.60	<0.32	<16.0	<0.64	<1	<1	<1	<1
Bromochloromethane	5	<17.5	<17.5	<1.75	<0.35	<17.5	<0.70	<1	<1	<1	<1
Bromodichloromethane	50	<11.5	<11.5	<1.15	<0.23	<11.5	<0.46	<1	<1	<1	<1
Bromoform	50	<11.0	<11.0	<1.10	<0.22	<11.0	<0.44	<1	<1	<1	<1
Bromomethane	5	<28.0	<28.0	<2.80	<0.56	<28.0	<1.12	<1	<1	<1	<1
Carbon disulfide	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5	<17.0	<17.0	<1.70	<0.34	<17.0	<0.68	<1	<1	<1	<1
Chlorobenzene	5	<16.0	<16.0	<1.60	<0.32	<16.0	<0.64	<1	<1	<1	<1

Table 2A Contiuned

Sample ID Sample Date	Standard [1]	TW-01 2/14/05	TW-02 2/14/05	TW-03 2/14/05	TW-04 2/14/05	TW-05 2/14/05	TW-06 2/14/05	TW-07 2/19/08	TW-08 2/15/08	TW-09 2/15/08	TW-10 2/15/08
Chlorodifluoromethane	NS	<21.5	<21.5	<2.15	<0.43	<21.5	<0.86	<1	<1	<1	<1
Chloroethane	5	<27.5	<27.5	<2.75	<0.55	<27.5	NA	<1	<1	<1	<1
Chloroform	7	<16.5	<16.5	<1.65	<0.33	<16.5	NA	<1	<1	<1	<1
Chloromethane	NS	<28.5	<28.5	<2.85	<0.57	<28.5	NA	<1	<1	<1	<1
cis-1,2-Dichloroethene	5	<20.0	<20.0	29.50	<0.40	**42.8**	<0.80	<1	<1	<1	<1
cis-1,3-Dichloropropene	0.4	<16.0	<16.0	<1.60	<0.32	<16.0	<0.64	<1	<1	<1	<1
Dibromochloromethane	50	<13.0	<13.0	<1.30	<0.26	<13.0	<0.52	<1	<1	<1	<1
Dibromomethane	5	<12.0	<12.0	<1.20	<0.24	<12.0	<0.48	<1	<1	<1	<1
Dichlorodifluoromethane	5	<18.0	<18.0	<1.80	<0.36	<18.0	<0.72	<1	<1	<1	<1
Diisopropyl ether	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethanol	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5	**2,510**	**2,210**	**811**	1.73	**2,840**	**347**	<1	<1	<1	<1
Freon-114	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	5	<47.0	<47.0	<4.70	<0.94	<47.0	<1.88	<1	<1	<1	<1
Isopropyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	5	**93.7**	**102**	**107**	<0.29	**127**	17.6	<1	<1	<1	<1
m,p-Xylene	NS	9,120	6,630	1,610	6.20	11,400	1,280	<2	<2	<2	<2
Methyl Acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	10	<20.5	**424**	**78.8**	**89.5**	**68.2**	**2,420**	<1	<1	<1	<1
Methylene chloride	5	<9.50	<9.50	<0.95	<0.19	<9.50	<0.38	<1	<1	<1	<1
n-Amyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10	**447**	**592**	**468**	0.79	**808**	**129**	<1	<1	<1	<1
n-Butyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	5	<14.5	<14.5	<1.45	<0.29	<14.5	<0.58	<1	<1	<1	<1
n-Propyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	5	**176**	**133**	**126**	<0.32	**262**	**30**	<1	<1	<1	<1
o-Xylene	NS	2,990	2,960	545	2.32	4,670	473	<1	<1	<1	<1
p-Diethylbenzene	NS	<15.5	<15.5	7.39	<0.31	<15.5	<0.62	<1	<1	<1	<1
p-Ethyltoluene	NS	1,130	921	446	1.21	1,690	187	<1	<1	<1	<1
sec-Butylbenzene	5	<17.0	<17.0	**11.4**	<0.34	<17.0	1.92	<1	<1	<1	<1
Styrene	50	<17.5	<17.5	<1.75	<0.35	<17.5	<0.70	<1	<1	<1	<1
t-Butyl alcohol	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	5	<16.0	<16.0	<1.60	<0.32	<16.0	<0.64	<1	<1	<1	<1
Tetrachloroethene	5	<16.0	<16.0	<1.60	**6.68**	<16.0	**2.45**	<1	<1	1.0	<1
Toluene	5	**7,230**	**1,530**	**372**	**7.25**	**4,120**	**227**	<1	<1	<1	<1
trans-1,2-Dichloroethene	5	<20.0	<20.0	**5.91**	<0.40	<20.0	<0.80	<1	<1	<1	<1
trans-1,3-Dichloropropene	NS	<15.0	<15.0	<1.50	<0.30	<15.0	<0.60	<1	<1	<1	<1
Trichloroethene	5	50.70	<20.0	<2.00	<0.40	<20.0	<0.80	<1	<1	<1	<1
Trichlorofluoromethane	5	<20.0	<20.0	<2.00	<0.40	<20.0	<0.80	<1	<1	<1	<1
Vinyl acetate	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	2	<19.0	<19.0	**4.15**	<0.38	<19.0	<0.76	<1	<1	<1	<1
TOTAL VOCs	NS	27,132	27,154	7,883	118	30,314	5,532	0	0	1	0

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 2A Continued

Sample ID Sample Date	Standard [1]	MW-01 8/25/06	MW-02 8/25/06	MW-03 8/25/06	MW-04 11/3/06	MW-05 11/3/06	MW-06 11/3/06	MW-07 11/3/06
1,1,1,2-Tetrachloroethane	5	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	5	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	0.2	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	0.7	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloropropene	5	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	5	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	0.04	NA	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetramethylbenzene	5	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	5	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	5	**4,070**	**1,460**	1.30	**2,730**	**2,530**	**5,130**	**8.08**
1,2-Dibromo-3-chloropropane	0.04	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NS	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	2	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	0.6	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	1	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	5	**1,120**	**408**	<0.56	**2,180**	**1,430**	**1,420**	2.45
1,3-Dichlorobenzene	3	NA	NA	NA	NA	NA	NA	NA
1,3-dichloropropane	4	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	3	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	NS	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	5	NA	NA	NA	NA	NA	NA	NA
2-Butanone	50	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl vinyl ether	NS	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	5	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	50	NA	NA	NA	NA	NA	NA	NA
2-Propanol	NS	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	5	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	5	<54.0	**23.1**	<0.54	**250**	**146**	**92.5**	<0.54
4-Methyl-2-pentanone	NS	NA	NA	NA	NA	NA	NA	NA
Acetone	50	NA	NA	NA	NA	NA	NA	NA
Acrolein	5	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	5	NA	NA	NA	NA	NA	NA	NA
Benzene	0.7	**14,300**	**7,260**	**0.75**	**3,600**	**3,330**	**184**	**486**
Bromobenzene	5	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	5	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	50	NA	NA	NA	NA	NA	NA	NA
Bromoform	50	NA	NA	NA	NA	NA	NA	NA
Bromomethane	5	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NS	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	5	NA	NA	NA	NA	NA	NA	NA

Table 2A Continued

Sample ID Sample Date	Standard [1]	MW-01 8/25/06	MW-02 8/25/06	MW-03 8/25/06	MW-04 11/3/06	MW-05 11/3/06	MW-06 11/3/06	MW-07 11/3/06
Chlorodifluoromethane	NS	NA	NA	NA	NA	NA	NA	NA
Chloroethane	5	NA	NA	NA	NA	NA	NA	NA
Chloroform	7	NA	NA	NA	NA	NA	NA	NA
Chloromethane	NS	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	5	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	0.4	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	50	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	5	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	5	NA	NA	NA	NA	NA	NA	NA
Diisopropyl ether	NS	NA	NA	NA	NA	NA	NA	NA
Ethanol	NS	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5	**5,170**	**3,030**	0.82	**2,140**	**1,910**	**3,070**	**94.2**
Freon-114	NS	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	5	NA	NA	NA	NA	NA	NA	NA
Isopropyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	5	**206**	**120**	<0.64	**382**	**242**	**222**	**17.2**
m,p-Xylene	NS	**18,000**	**9,210**	2.96	**7,300**	**6,440**	**10,000**	**37.2**
Methyl Acetate	NS							
Methyl tert-butyl ether	10	**4,310**	**3,410**	<0.74	**537**	**383**	<37.0	**26.3**
Methylene chloride	5	NA	NA	NA	NA	NA	NA	NA
n-Amyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10	**716**	**589**	1.61	**939**	**645**	**986**	**23.0**
n-Butyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	5	**85.3**	**24.4**	<0.58	**402**	**250**	**203**	2.49
n-Propyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	5	**539**	**191**	<0.64	**1,020**	**700**	**728**	**42.5**
o-Xylene	NS	**7,900**	**1,360**	<0.68	**3,030**	**2,730**	**2,010**	2.24
p-Diethylbenzene	NS	NA	NA	NA	NA	NA	NA	NA
p-Ethyltoluene	NS	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	5	<58.0	**11.5**	<0.58	**125**	**75.6**	**58.7**	1.66
Styrene	50	NA	NA	NA	NA	NA	NA	NA
t-Butyl alcohol	NS	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	5	<56.0	<5.60	<0.56	<11.2	<5.60	<28.0	<0.56
Tetrachloroethene	5	NA	NA	NA	NA	NA	NA	NA
Toluene	5	**55,500**	**4,630**	1.21	**17,800**	**16,100**	**427**	**13.9**
trans-1,2-Dichloroethene	5	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NS	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	5	NA	NA	NA	NA	NA	NA	NA
Vinyl acetate	NS	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	2	NA	NA	NA	NA	NA	NA	NA
TOTAL VOCs	NS	111,916	31,727	9	42,435	36,912	24,531	757

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 2A Continued

Sample ID Sample Date	Standard [1]	MW-08 3/17/11	MW-09 3/17/11	MW-10 3/17/11	MW-11 3/17/11	ACT-20A 8/20/11	ACT-20B 8/20/11
1,1,1,2-Tetrachloroethane	5	NA	NA	NA	NA	<1	<1
1,1,1-Trichloroethane	5	NA	NA	NA	NA	<1	<1
1,1,2,2-Tetrachloroethane	0.2	NA	NA	NA	NA	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NA	NA	NA	NA	<1	<1
1,1,2-Trichloroethane	1	NA	NA	NA	NA	<1	<1
1,1-Dichloroethane	5	NA	NA	NA	NA	<1	<1
1,1-Dichloroethene	0.7	NA	NA	NA	NA	<1	<1
1,1-Dichloropropene	5	NA	NA	NA	NA	<1	<1
1,2,3-Trichlorobenzene	5	NA	NA	NA	NA	<1	<1
1,2,3-Trichloropropane	0.04	NA	NA	NA	NA	<1	<1
1,2,4,5-Tetramethylbenzene	5	NA	NA	NA	NA	**9**	<1
1,2,4-Trichlorobenzene	5	NA	NA	NA	NA	<1	<1
1,2,4-Trimethylbenzene	5	NA	NA	NA	NA	**7**	<1
1,2-Dibromo-3-chloropropane	0.04	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NS	NA	NA	NA	NA	<1	<1
1,2-Dichlorobenzene	2	NA	NA	NA	NA	<1	<1
1,2-Dichloroethane	0.6	NA	NA	NA	NA	<1	<1
1,2-Dichloropropane	1	NA	NA	NA	NA	<1	<1
1,3,5-Trimethylbenzene	5	NA	NA	NA	NA	<1	<1
1,3-Dichlorobenzene	3	NA	NA	NA	NA	<1	<1
1,3-dichloropropane	4	NA	NA	NA	NA	<1	<1
1,4-Dichlorobenzene	3	NA	NA	NA	NA	<1	<1
1,4-Dioxane	NS	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	5	NA	NA	NA	NA	<1	<1
2-Butanone	50	NA	NA	NA	NA	<10	<10
2-Chloroethyl vinyl ether	NS	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	5	NA	NA	NA	NA	<1	<1
2-Hexanone	50	NA	NA	NA	NA	NA	NA
2-Propanol	NS	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	5	NA	NA	NA	NA	<1	<1
4-Isopropyltoluene	5	NA	NA	NA	NA	1	<1
4-Methyl-2-pentanone	NS	NA	NA	NA	NA	NA	NA
Acetone	50	NA	NA	NA	NA	13	<10
Acrolein	5	NA	NA	NA	NA	NA	NA
Acrylonitrile	5	NA	NA	NA	NA	NA	NA
Benzene	0.7	<0.7	<0.7	<0.7	<0.7	**4**	<1
Bromobenzene	5	NA	NA	NA	NA	<1	<1
Bromochloromethane	5	NA	NA	NA	NA	<1	<1
Bromodichloromethane	50	NA	NA	NA	NA	<1	<1
Bromoform	50	NA	NA	NA	NA	<1	<1
Bromomethane	5	NA	NA	NA	NA	<1	<1
Carbon disulfide	NS	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5	NA	NA	NA	NA	<1	<1
Chlorobenzene	5	NA	NA	NA	NA	<1	<1

Table 2A Continued

Sample ID Sample Date	Standard [1]	MW-08 3/17/11	MW-09 3/17/11	MW-10 3/17/11	MW-11 3/17/11	ACT-20A 8/20/11	ACT-20B 8/20/11
Chlorodifluoromethane	NS	NA	NA	NA	NA	<1	<1
Chloroethane	5	NA	NA	NA	NA	<1	<1
Chloroform	7	NA	NA	NA	NA	<1	<1
Chloromethane	NS	NA	NA	NA	NA	<1	<1
cis-1,2-Dichloroethene	5	NA	NA	NA	NA	<1	<1
cis-1,3-Dichloropropene	0.4	NA	NA	NA	NA	<1	<1
Dibromochloromethane	50	NA	NA	NA	NA	<1	<1
Dibromomethane	5	NA	NA	NA	NA	<1	<1
Dichlorodifluoromethane	5	NA	NA	NA	NA	<1	<1
Diisopropyl ether	NS	NA	NA	NA	NA	NA	NA
Ethanol	NS	NA	NA	NA	NA	NA	NA
Ethyl acetate	NS	NA	NA	NA	NA	NA	NA
Ethylbenzene	5	<1	<1	<1	<1	3	<1
Freon-114	NS	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	5	NA	NA	NA	NA	<1	<1
Isopropyl acetate	NS	NA	NA	NA	NA	NA	NA
Isopropylbenzene	5	NA	NA	NA	NA	2	<1
m,p-Xylene	NS	<2	<2	<2	<2	<2	<2
Methyl Acetate	NS	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	10	<1	<1	1	<1	2	<1
Methylene chloride	5	NA	NA	NA	NA	<1	<1
n-Amyl acetate	NS	NA	NA	NA	NA	NA	NA
Naphthalene	10	NA	NA	NA	NA	5	<1
n-Butyl acetate	NS	NA	NA	NA	NA	NA	NA
n-Butylbenzene	5	NA	NA	NA	NA	1	<1
n-Propyl acetate	NS	NA	NA	NA	NA	NA	NA
n-Propylbenzene	5	NA	NA	NA	NA	5	<1
o-Xylene	NS	<1	<1	<1	<1	1	<1
p-Diethylbenzene	NS	NA	NA	NA	NA	3	<1
p-Ethyltoluene	NS	NA	NA	NA	NA	<1	<1
sec-Butylbenzene	5	NA	NA	NA	NA	2	<1
Styrene	50	NA	NA	NA	NA	<1	<1
t-Butyl alcohol	NS	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	5	NA	NA	NA	NA	<1	<1
Tetrachloroethene	5	NA	NA	NA	NA	<1	1
Toluene	5	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	5	NA	NA	NA	NA	<1	<1
trans-1,3-Dichloropropene	NS	NA	NA	NA	NA	<1	<1
Trichloroethene	5	NA	NA	NA	NA	<1	<1
Trichlorofluoromethane	5	NA	NA	NA	NA	<1	<1
Vinyl acetate	NS	NA	NA	NA	NA	NA	NA
Vinyl chloride	2	NA	NA	NA	NA	<1	<1
Total VOCs	NS	0	0	1	0	58	1

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 2B
Semi-Volatile Organic Compounds in Groundwater

Table 2B

Semi-Volatile Organic Compounds in Groundwater (ug/Kg)
EPA Method 6010 B
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Date	Standard [1]	TW-01 2/14/05	TW-02 2/14/05	TW-03 2/14/05	TW-04 2/14/05	TW-05 2/14/05	TW-06 2/14/05	TW-08 2/15/08	TW-09 2/15/08	TW-10 2/15/08
1,2,4-Trichlorobenzene	5	<0.63	<0.63	<0.63	<0.63	<0.63	<2.40	<1	<1	<1
1,2-Dichlorobenzene	2	<0.74	<0.74	<0.74	<0.74	<0.74	<2.80	<1	<1	<1
1,3-Dichlorobenzene	3	<0.70	<0.70	<0.70	<0.70	<0.70	<2.68	<1	<1	<1
1,4-Dichlorobenzene	3	<0.68	<0.68	<0.68	<0.68	<0.68	<2.60	<1	<1	<1
2,4,5-Trichlorophenol	NS	<1.72	<1.72	<1.72	<1.72	<1.72	<6.56	<1	<1	<1
2,4,6-Trichlorophenol	NS	<1.28	<1.28	<1.28	<1.28	<1.28	<4.88	<1	<1	<1
2,4-Dichlorophenol	0.3	<1.40	<1.40	<1.40	<1.40	<1.40	<5.32	<1	<1	<1
2,4-Dimethylphenol	50	2.62	1.63	1.32	<0.71	5.03	<2.72	<1	<1	<1
2,4-Dinitrophenol	10	<5.30	<5.30	<5.30	<5.30	<5.30	<20.2	<10	<10	<10
2,4-Dinitrotoluene	5	<0.97	<0.97	<0.97	<0.97	<0.97	<3.68	<1	<1	<1
2,6-Dinitrotoluene	0.07	<0.68	<0.68	<0.68	<0.68	<0.68	<2.60	<1	<1	<1
2-Chloronaphthalene	10	<0.71	<0.71	<0.71	<0.71	<0.71	<2.72	<1	<1	<1
2-Chlorophenol	NS	<1.40	<1.40	<1.40	<1.40	<1.40	<5.32	<1	<1	<1
2-Methylnaphthalene	42	6.11	0.96	<1.02	<1.02	4.37	<3.88	<1	<1	<1
2-Methylphenol	NS	<1.20	<1.20	<1.20	<1.20	<1.20	<4.56	<1	<1	<1
2-Nitroaniline	5	<1.34	<1.34	<1.34	<1.34	<1.34	<5.12	<1	<1	<1
2-Nitrophenol	NS	<10.4	<10.4	<10.4	<10.4	<10.4	<39.7	<1	<1	<1
3,3´-Dichlorobenzidine	5	7.87	<0.79	<0.79	<0.79	6.66	<3.00	<10	<10	<10
3+4-Methylphenol	NS	<0.65	<0.65	<0.65	<0.65	<0.65	<2.48	<1	<1	<1
3-Nitroaniline	5	<1.95	<1.95	<1.95	<1.95	<1.95	<7.44	<1	<1	<1
4,6-Dinitro-2-methylphenol	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NS	<4.57	<4.57	<4.57	<4.57	<4.57	<17.4	<1	<1	<1
4-Chloro-3-methylphenol	NS	<0.71	<0.71	<0.71	<0.71	<0.71	<2.72	<1	<1	<1
4-Chloroaniline	5	<0.71	<0.71	<0.71	<0.71	<0.71	<2.72	<1	<1	<1
4-Chlorophenyl phenyl ether	NS	<1.72	<1.72	<1.72	<1.72	<1.72	<6.56	<1	<1	<1
4-Nitroaniline	5	<2.46	<2.46	<2.46	<2.46	<2.46	<9.36	<1	<1	<1
4-Nitrophenol	NS	<1.66	<1.66	<1.66	<1.66	<1.66	<6.32	<10	<10	<10
Acenaphthene	20	1.35	0.36	0.34	<0.62	1.81	<2.36	<1	<1	<1
Acenaphthylene	NS	0.66	<0.69	0.26	<0.69	3.02	<2.64	<1	<1	<1
Acetophenone	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aniline	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	50	1.12	0.28	0.52	<0.80	3.2	<3.04	<1	<1	<1
Atrazine	7.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NS	0.57	<0.88	<0.88	<0.88	2.18	<3.36	<1	<1	2
Benzo(a)pyrene	NS	0.39	<0.98	<0.98	<0.98	1.69	<3.72	<1	<1	1.7
Benzo(b)fluoranthene	0.002	**0.31**	<0.93	<0.93	<0.93	**1.34**	<3.56	<1	<1	**1.9**
Benzo(g,h,i)perylene	NS	<1.01	<1.01	<1.01	<1.01	0.9	<3.84	<1	<1	1.1
Benzo(k)fluoranthene	0.002	**0.34**	<1.02	<1.02	<1.02	**1.5**	<3.88	<1	<1	**1.6**
Benzoic acid	NS	<2.95	<2.95	<2.95	<2.95	<2.95	<11.2	NA	NA	NA

Table 2B Continued

Sample ID Sample Date	Standard [1]	TW-01 2/14/05	TW-02 2/14/05	TW-03 2/14/05	TW-04 2/14/05	TW-05 2/14/05	TW-06 2/14/05	TW-08 2/15/08	TW-09 2/15/08	TW-10 2/15/08
Benzyl alcohol	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	5	<0.74	<0.74	<0.74	<0.74	<0.74	<2.80	<1	<1	<1
Bis(2-chloroethyl)ether	1	<0.78	<0.78	<0.78	<0.78	<0.78	<2.96	<1	<1	<1
Bis(2-chloroisopropyl)ether	NS	<0.96	<0.96	<0.96	<0.96	<0.96	<3.64	<1	<1	<1
Bis(2-ethylhexyl)phthalate	5	0.95	1.48	0.74	0.45	2.38	3.66	<1	1.4	1.6
Butyl benzyl phthalate	NS	2.3	<0.90	<0.90	<0.90	1.37	<3.44	<1	<1	<1
Caprolactam	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	<0.75	<0.75	<0.75	<0.75	<0.75	<2.84	<1	<1	<1
Chrysene	0.002	**0.55**	<0.99	<0.99	<0.99	**2.04**	<3.76	<1	<1	**2.2**
Dibenzo(a,h)anthracene	NS	<0.96	<0.96	<0.96	<0.96	<0.96	<3.64	<1	<1	<1
Dibenzofuran	NS	1.2	0.3	0.5	<1.15	3.58	<4.40	<1	<1	<1
Diethyl phthalate	50	<0.48	<0.48	<0.48	<0.48	<0.48	<1.84	<1	<1	<1
Dimethyl phthalate	50	<0.94	<0.94	<0.94	<0.94	<0.94	<3.60	<1	<1	<1
Di-n-butyl phthalate	50	0.37	1.18	1.25	0.34	1.03	2.76	<1	<1	<1
Di-n-octyl phthalate	50	<0.83	<0.83	<0.83	<0.83	<0.83	<3.16	<1	<1	<1
Fluoranthene	50	1.81	0.45	1.14	<0.87	6.4	<3.32	<1	<1	4.2
Fluorene	50	2.16	0.5	0.69	<0.68	4.76	<2.60	<1	<1	<1
Hexachlorobenzene	0.04	<0.71	<0.71	<0.71	<0.71	<0.71	<2.72	<1	<1	<1
Hexachlorobutadiene	0.5	<0.56	<0.56	<0.56	<0.56	<0.56	<2.12	<1	<1	<1
Hexachlorocyclopentadiene	5	<4.14	<4.14	<4.14	<4.14	<4.14	<15.8	<10	<10	<10
Hexachloroethane	5	<0.70	<0.70	<0.70	<0.70	<0.70	<2.68	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	0.002	<0.99	<0.99	<0.99	<0.99	**0.85**	<3.76	<1	<1	**1.4**
Isophorone	50	<0.63	<0.63	<0.63	<0.63	<0.63	<2.40	<1	<1	<1
Naphthalene	10	**318**	**266**	**185**	0.45	**465**	64.9	<1	<1	<1
Nitrobenzene	0.4	<0.69	<0.69	<0.69	<0.69	<0.69	<2.64	<1	<1	<1
N-Nitrosodimethylamine	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	NS	<0.86	<0.86	<0.86	<0.86	<0.86	<3.28	<1	<1	<1
N-Nitrosodiphenylamine	50	<0.98	<0.98	<0.98	<0.98	<0.98	<3.72	<1	<1	<1
Parathion	0.065	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	NS	<4.47	<4.47	<4.47	<4.47	<4.47	<17.0	<10	<10	<10
Phenanthrene	50	4.6	1.11	2.78	<0.84	12.0	<3.20	<1	<1	2.4
Phenol	NS	2.29	9.75	6.37	<1.59	3.23	<6.04	<1	<1	<1
Pyrene	50	1.54	0.38	0.88	<0.96	5.08	<3.64	<1	<1	4.1
Pyridine	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total SVOCs	NS	357	284	202	1	539	71	0	1	24

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 2B Continued

Sample ID Sample Date	Standard [1]	ACT-20A 8/20/11	ACT-20B 8/20/11
1,2,4-Trichlorobenzene	5	<1	<1
1,2-Dichlorobenzene	2	<1	<1
1,3-Dichlorobenzene	3	<1	<1
1,4-Dichlorobenzene	3	<1	<1
2,4,5-Trichlorophenol	NS	NA	NA
2,4,6-Trichlorophenol	NS	NA	NA
2,4-Dichlorophenol	0.3	NA	NA
2,4-Dimethylphenol	50	NA	NA
2,4-Dinitrophenol	10	NA	NA
2,4-Dinitrotoluene	5	<1	<1
2,6-Dinitrotoluene	0.07	<1	<1
2-Chloronaphthalene	10	<1	<1
2-Chlorophenol	NS	NA	NA
2-Methylnaphthalene	42	1.4	<1
2-Methylphenol	NS	NA	NA
2-Nitroaniline	5	<1	<1
2-Nitrophenol	NS	NA	NA
3,3´-Dichlorobenzidine	5	<10	<10
3+4-Methylphenol	NS	NA	NA
3-Nitroaniline	5	<1	<1
4,6-Dinitro-2-methylphenol	NS	NA	NA
4-Bromophenyl phenyl ether	NS	<1	<1
4-Chloro-3-methylphenol	NS	NA	NA
4-Chloroaniline	5	<1	<1
4-Chlorophenyl phenyl ether	NS	<1	<1
4-Nitroaniline	5	<1	<1
4-Nitrophenol	NS	NA	NA
Acenaphthene	20	<1	<1
Acenaphthylene	NS	<1	<1
Acetophenone	NS	NA	NA
Aniline	5	NA	NA
Anthracene	50	<1	<1
Atrazine	7.5	NA	NA
Benzo(a)anthracene	NS	<1	<1
Benzo(a)pyrene	NS	<1	<1
Benzo(b)fluoranthene	0.002	<1	<1
Benzo(g,h,i)perylene	NS	<1	<1
Benzo(k)fluoranthene	0.002	<1	<1
Benzoic acid	NS	NA	NA

Table 2B Continued

Sample ID Sample Date	Standard [1]	ACT-20A 8/20/11	ACT-20B 8/20/11
Benzyl alcohol	NS	NA	NA
Biphenyl	NS	NA	NA
Bis(2-chloroethoxy)methane	5	<1	<1
Bis(2-chloroethyl)ether	1	<1	<1
Bis(2-chloroisopropyl)ether	NS	<1	<1
Bis(2-ethylhexyl)phthalate	5	1.4	1.2
Butyl benzyl phthalate	NS	<1	<1
Caprolactam	NS	NA	NA
Carbazole	NS	<1	<1
Chrysene	0.002	<1	<1
Dibenzo(a,h)anthracene	NS	<1	<1
Dibenzofuran	NS	<1	<1
Diethyl phthalate	50	<1	<1
Dimethyl phthalate	50	<1	<1
Di-n-butyl phthalate	50	2	1.3
Di-n-octyl phthalate	50	<1	<1
Fluoranthene	50	<1	<1
Fluorene	50	<1	<1
Hexachlorobenzene	0.04	<1	<1
Hexachlorobutadiene	0.5	<1	<1
Hexachlorocyclopentadiene	5	<10	<10
Hexachloroethane	5	<1	<1
Indeno(1,2,3-c,d)pyrene	0.002	<1	<1
Isophorone	50	<1	<1
Naphthalene	10	2.9	<1
Nitrobenzene	0.4	<1	<1
N-Nitrosodimethylamine	NS	NA	NA
N-Nitrosodi-n-propylamine	NS	<1	<1
N-Nitrosodiphenylamine	50	<1	<1
Parathion	0.065	NA	NA
Pentachlorophenol	NS	NA	NA
Phenanthrene	50	<1	<1
Phenol	NS	NA	NA
Pyrene	50	<1	<1
Pyridine	50	NA	NA
Total SVOCs	NS	8	3

[1] NYS DEC TOGS 1.1.1, June, 1998
NS = No Standard
NA = Not Analyzed

Table 2C
Unfiltered Metals in Groundwater

Table 4C

Metals in Unfiltered Ground Water (mg/L)
EPA Method 6000/7000
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Date	Standard	TW-01 2/14/05	TW-02 2/14/05	TW-03 2/14/05	TW-04 2/14/05	TW-05 2/14/05	TW-06 2/14/05	TW-07 2/15/08	TW-08 2/19/08	TW-09 2/19/08	TW-10 2/19/08
Aluminum	0.1	**19.4**	**30.3**	**45.3**	**87.9**	**13.8**	**801**	**17**	**76**	**94**	**100**
Antimony	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	**0.009**	<0.025	<0.025	<0.025
Arsenic	0.05	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	**0.007**	<0.025	<0.025	<0.025
Barium	1	0.4	0.64	0.99	0.9	0.54	**6.06**	0.17	0.95	0.95	**1.3**
Beryllium	0.003	0.0017	0.0024	0.003	0.0025	0.0027	**0.038**	0.0011	**0.007**	**0.006**	**0.006**
Cadmium	0.005	**0.0064**	**0.009**	**0.012**	**0.019**	**0.008**	**0.1**	<0.005	<0.025	<0.025	<0.025
Calcium	NS	107	121	126	69.1	139	1440	14	35	35	49
Chromium	0.05	**0.26**	**0.27**	**0.42**	**0.41**	**0.25**	**1.35**	**0.044**	**0.27**	**0.27**	**0.26**
Cobalt	0.005	**0.017**	**0.022**	**0.034**	**0.2**	**0.019**	**0.65**	**0.02**	**0.13**	**0.13**	**0.12**
Copper	0.2	0.15	0.099	**0.21**	**0.33**	0.14	**2.32**	0.04	**0.23**	**0.23**	**0.28**
Iron	0.3	**71.5**	**117**	**149**	**189**	**109**	**344**	**25**	**140**	**140**	**210**
Lead	0.05	**0.23**	**0.091**	**0.37**	**0.17**	**0.25**	**0.57**	0.019	**0.12**	**0.12**	**0.22**
Magnesium	35	21.6	25.3	**50.3**	**48.3**	**58.1**	**992**	8	30	30	**63**
Manganese	0.3	**5.99**	**3.44**	**2.79**	**14.9**	**5.53**	**84.7**	**0.75**	**5.1**	**5**	**7.8**
Mercury	0.0007	0.00026	0.00035	0.00057	0.00026	0.0003	0.0006	<0.00025	<0.001	0.0034	<0.001
Nickel	0.1	0.09	**0.11**	**0.15**	**0.29**	0.1	**1.49**	0.03	**0.15**	**0.15**	**0.28**
Potassium	NS	15.3	20.2	30.7	16.8	10.3	159	3.7	19	19	41
Selenium	0.01	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.01	<0.05	<0.05	<0.05
Silver	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	20	**121**	**162**	**149**	10.8	**29.8**	**54.4**	6.9	19	19	10
Thallium	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.025	<0.025	<0.025
Vanadium	0.014	**0.057**	**0.11**	**0.18**	**0.33**	**0.08**	**0.44**	**0.05**	**0.29**	**0.28**	**0.36**
Zinc	10	0.7	0.45	0.94	0.95	0.64	3.54	0.08	0.39	0.38	0.82

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

NS = No Standard

NA = Not Analyzed

Table 4C Continued

Sample ID Sample Date	Standard	ACT-20A 8/20/11	ACT-20B 8/20/11
Aluminum	0.1	**12**	**190**
Antimony	0.003	<0.01	**0.039**
Arsenic	0.05	<0.01	0.026
Barium	1	0.43	**1.6**
Beryllium	0.003	<0.001	<0.001
Cadmium	0.005	<0.005	<0.005
Calcium	NS	390	200
Chromium	0.05	**0.062**	**0.44**
Cobalt	0.005	**0.012**	**0.16**
Copper	0.2	0.04	**0.45**
Iron	0.3	**27**	**330**
Lead	0.05	**0.15**	**0.11**
Magnesium	35	**200**	**92**
Manganese	0.3	**2.1**	**9.5**
Mercury	0.0007	<0.0002	<0.0002
Nickel	0.1	**0.5**	**0.32**
Potassium	NS	69	51
Selenium	0.01	<0.01	**0.06**
Silver	NS	NA	NA
Sodium	20	**120**	**24**
Thallium	0.008	<0.01	<0.01
Vanadium	0.014	**0.035**	**0.47**
Zinc	10	0.26	0.96

[1] NYS DEC TOGS 1.1.1, June, 1998

Bolded values signify exceedance of regulatory standard

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Table 2D
Filtered Metals in Groundwater

Table 2D

Metals in Filtered Ground Water (mg/L)
EPA Method 6000/7000
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Date	Standard [1]	TW-07 2/15/08	TW-08 2/19/08	TW-09 2/19/08	TW-10 2/19/08
Aluminum	0.1	0.03	<0.01	<0.01	<0.01
Antimony	0.003	<0.005	<0.005	<0.005	<0.005
Arsenic	0.05	<0.005	<0.005	<0.005	<0.005
Barium	1	<0.005	<0.005	0.021	0.029
Beryllium	0.003	<0.001	<0.001	<0.001	<0.001
Cadmium	0.005	<0.005	<0.005	<0.005	<0.005
Calcium	NS	3.3	8	32	38
Chromium	0.05	<0.005	<0.005	<0.005	<0.005
Cobalt	0.005	<0.005	<0.005	<0.005	<0.005
Copper	0.2	<0.01	<0.01	<0.01	<0.01
Iron	0.3	0.08	<0.01	<0.01	<0.01
Lead	0.05	<0.005	<0.005	<0.005	<0.005
Magnesium	35	0.73	1.4	9.4	12
Manganese	0.3	0.03	0.2	0.09	0.1
Mercury	0.0007	<0.00025	<0.00025	<0.00025	<0.00025
Nickel	0.1	<0.01	<0.01	<0.01	<0.01
Potassium	NS	<1	2.2	3.7	3.1
Selenium	0.01	<0.01	<0.01	<0.01	<0.01
Silver	NS	NA	NA	NA	NA
Sodium	20	13	17	**31**	**35**
Thallium	0.008	<0.005	<0.005	<0.005	<0.005
Vanadium	0.014	<0.005	<0.005	<0.005	<0.005
Zinc	10	<0.01	0.01	0.02	0.02

[1] NYS DEC TOGS 1.1.1, June, 1998
Bolded values signify exceedance of regulatory standard
NS = No Standard
NA = Not Analyzed

Table 2D Continued

Sample ID Sample Date	Standard [1]	ACT-20A 8/20/11	ACT-20B 8/20/11
Aluminum	0.1	0.05	0.02
Antimony	0.003	<0.01	<0.01
Arsenic	0.05	<0.01	<0.01
Barium	1	0.32	0.13
Beryllium	0.003	<0.001	<0.001
Cadmium	0.005	<0.005	<0.005
Calcium	NS	380	190
Chromium	0.05	<0.005	<0.005
Cobalt	0.005	<0.005	0.006
Copper	0.2	NA	NA
Iron	0.3	0.17	<0.01
Lead	0.05	<0.005	<0.005
Magnesium	35	**190**	25
Manganese	0.3	**1.8**	**0.7**
Mercury	0.0007	<0.0002	<0.0002
Nickel	0.1	0.02	<0.01
Potassium	NS	69	<1
Selenium	0.01	<0.02	0.021
Silver	NS	NA	NA
Sodium	20	**120**	**30**
Thallium	0.008	<0.01	<0.01
Vanadium	0.014	<0.005	<0.005
Zinc	10	0.26	0.05

[1] NYS DEC TOGS 1.1.1, June, 1998
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Table 2E
PCBs and Pesticides in Groundwater

Table 2E

PCBs and Pesticides in Groundwater (ug/L)
EPA Method 8081/8082
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Date	Standard [1]	TW-07 2/15/08	TW-08 2/19/08	TW-09 2/19/08	TW-10 2/19/08
Aroclor 1016	10	<1	<1	<1	<1
Aroclor 1221	10	<1	<1	<1	<1
Aroclor 1232	10	<1	<1	<1	<1
Aroclor 1242	10	<1	<1	<1	<1
Aroclor 1248	10	<1	<1	<1	<1
Aroclor 1254	10	<1	<1	<1	<1
Aroclor 1260	10	<1	<1	<1	<1
Aroclor 1262	10	NA	NA	NA	NA
Aroclor 1268	10	NA	NA	NA	NA
4,4´-DDD	2.9	<0.05	<0.05	<0.05	<0.05
4,4´-DDE	2.1	<0.05	<0.05	<0.05	<0.05
4,4´-DDT	2.1	<0.1	<0.1	<0.1	<0.1
Aldrin	0.041	<0.05	<0.05	<0.05	<0.05
alpha-BHC	0.11	<0.05	<0.05	<0.05	<0.05
beta-BHC	0.2	<0.05	<0.05	<0.05	<0.05
Chlordane	0.54	<0.2	<0.2	<0.2	<0.2
Chlorobenzilate	NS	NA	NA	NA	NA
DBCP	NS	NA	NA	NA	NA
delta-BHC	0.3	<0.05	<0.05	<0.05	<0.05
Dieldrin	0.044	<0.05	<0.05	<0.05	<0.05
Endosulfan I	0.9	<0.1	<0.1	<0.1	<0.1
Endosulfan II	0.9	<0.1	<0.1	<0.1	<0.1
Endosulfan sulfate	1	<0.3	<0.3	<0.3	<0.3
Endrin	0.1	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	NS	<0.3	<0.3	<0.3	<0.3
Endrin ketone	NS	NA	NA	NA	NA
gamma-BHC	0.06	<0.05	<0.05	<0.05	<0.05
Heptachlor	0.1	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	0.02	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	NS	NA	NA	NA	NA
Hexachlorocyclopentadiene	NS	NA	NA	NA	NA
Methoxychlor	NS	NA	NA	NA	NA
Toxaphene	0.06	<1	<1	<1	<1

[1] NYS DEC TOGS 1.1.1, June, 1998
NS = No Standard
NA = Not Analyzed

Table 2E Continued

Sample ID Sample Date	Standard [1]	ACT-20A 8/20/11	ACT-20B 8/20/11
Aroclor 1016	10	<1	<1
Aroclor 1221	10	<1	<1
Aroclor 1232	10	<1	<1
Aroclor 1242	10	<1	<1
Aroclor 1248	10	<1	<1
Aroclor 1254	10	<1	<1
Aroclor 1260	10	<1	<1
Aroclor 1262	10	NA	NA
Aroclor 1268	10	NA	NA
4,4´-DDD	2.9	<0.05	<0.05
4,4´-DDE	2.1	<0.05	<0.05
4,4´-DDT	2.1	<0.1	<0.1
Aldrin	0.041	<0.05	<0.05
alpha-BHC	0.11	<0.05	<0.05
beta-BHC	0.2	<0.05	<0.05
Chlordane	0.54	<0.2	<0.2
Chlorobenzilate	NS	NA	NA
DBCP	NS	NA	NA
delta-BHC	0.3	<0.05	<0.05
Dieldrin	0.044	<0.05	<0.05
Endosulfan I	0.9	<0.1	<0.1
Endosulfan II	0.9	<0.1	<0.1
Endosulfan sulfate	1	<0.3	<0.3
Endrin	0.1	<0.05	<0.05
Endrin aldehyde	NS	<0.3	<0.3
Endrin ketone	NS	NA	NA
gamma-BHC	0.06	<0.05	<0.05
Heptachlor	0.1	<0.05	<0.05
Heptachlor epoxide	0.02	<0.05	<0.05
Hexachlorobenzene	NS	NA	NA
Hexachlorocyclopentadiene	NS	NA	NA
Methoxychlor	NS	NA	NA
Toxaphene	0.06	<1	<1

[1] NYS DEC TOGS 1.1.1, June, 1998
NS = No Standard
NA = Not Analyzed

Table 3
Soil Vapor Analytical Data Summary

Table 3

Volatile Organic Compounds in Soil Vapor (ug/m3)
EPA Method TO-15
23-10 41st Avenue
Long Island City, NY

ACT Project No.: 4019-LINY

Sample ID Sample Depth Sample Date	NYSDOH [1]	SV-1 12' 8/20/11	SV-2 10' 8/20/11	SV-3 8' 8/20/11	SV-4 8' 8/20/11	SV-5 6' 8/20/11	SV-6 6' 8/20/11
1,1,1,2-Tetrachloroethane	NS	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	100	36.58	48.59	**169.23**	**256.57**	<10.92	<10.92
1,1,2,2-Tetrachloroethane	NS	<1.37	<1.37	<13.74	<2.75	<13.74	<13.74
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	<0.77	<0.77	<7.67	<1.53	<7.67	<7.67
1,1,2-Trichloroethane	NS	<1.09	<1.09	<10.92	<2.18	<10.92	<10.92
1,1-Dichloroethane	NS	<0.81	<0.81	<8.10	<1.62	<8.10	<8.10
1,1-Dichloroethene	NS	<0.40	<0.40	<3.97	<0.79	<3.97	<3.97
1,1-Dichloropropene	NS	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	NS	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	NS	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetramethylbenzene	NS	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NS	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	NS	23.12	18.69	<24.60	11.31	1180.6	<24.60
1,2-Dibromo-3-chloropropane	NS	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NS	<1.54	<1.54	<15.38	<3.08	<15.38	<15.38
1,2-Dichlorobenzene	NS	<3.01	<3.01	<30.08	<6.02	<30.08	<30.08
1,2-Dichloroethane	NS	<2.03	<2.03	<20.26	<4.05	<20.26	<20.26
1,2-Dichloropropane	NS	<2.31	<2.31	<23.12	<4.62	<23.12	<23.12
1,2-Dichlorotetrafluoroethane	NS	<1.40	<1.40	<13.99	<2.80	<13.99	<13.99
1,3,5-Trimethylbenzene	NS	<2.46	<2.46	<24.60	<4.92	590.28	<24.60
1,3-Butadiene	NS	<2.21	<2.21	<22.10	<4.42	<22.10	<22.10
1,3-Dichlorobenzene	NS	<1.20	<1.20	<12.03	<2.41	<12.03	<12.03
1,3-Dichloropropane	NS	5.29	5.96	<30.08	<6.02	<30.08	<30.08
1,4-Dichlorobenzene	NS	NA	NA	NA	NA	NA	NA
1,4-Dioxane	NS	<3.60	<3.60	<36.01	<7.20	<36.01	<36.01
2,2,4-Trimethylpentane	NS	7.46	6.53	79.31	<4.67	653,100	886,350
2,2-Dichloropropane	NS	NA	NA	NA	NA	NA	NA
2-Butanone	NS	11.78	23.27	<29.46	<5.89	<29.46	<29.46
2-Chloroethyl vinyl ether	NS	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NS	NA	NA	NA	NA	NA	NA
2-Hexanone	NS	<2.05	<2.05	<20.46	<4.09	<20.46	<20.46
2-Propanol	NS	<12.28	<12.28	<122.75	<24.55	<122.75	<122.75
3-Chloropropene	NS	<1.57	<1.57	<15.66	<3.13	<15.66	<15.66
4-Chlorotoluene	NS	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NS	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NS	<4.10	<4.10	<41.01	<8.20	<41.01	<41.01
Acetone	NS	76.1	156.95	71.34	76.1	<23.78	<23.78
Acrolein	NS	NA	NA	NA	NA	NA	NA
Acrylonitrile	NS	<2.17	<2.17	<21.69	<4.34	<21.69	<21.69
Benzene	NS	2.07	12.77	<6.38	<1.28	4,149.6	7,341.6
Benzyl Chloride	NS	<1.04	<1.04	<10.36	<2.07	<10.36	<10.36
Bromobenzene	NS	NA	NA	NA	NA	NA	NA
Bromochloromethane	NS	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NS	<1.33	<1.33	<13.26	<2.65	<13.26	<13.26
Bromoform	NS	<2.07	<2.07	<20.70	<4.14	<20.70	<20.70
Bromomethane	NS	<0.78	<0.78	<7.77	<1.55	<7.77	<7.77
Carbon disulfide	NS	<1.56	<1.56	<15.55	<3.11	<15.55	<15.55
Carbon tetrachloride	NS	<2.52	<2.52	<25.18	<5.04	<25.18	<25.18
Chlorobenzene	NS	<0.92	<0.92	<9.22	<1.84	<9.22	<9.22

Table 3 Continued

Sample ID Sample Depth Sample Date	NYSDOH [1]	SV-1 12' 8/20/11	SV-2 10' 8/20/11	SV-3 8' 8/20/11	SV-4 8' 8/20/11	SV-5 6' 8/20/11	SV-6 6' 8/20/11
Chlorodifluoromethane	NS	<1.69	<1.69	<16.86	<3.37	<16.86	<16.86
Chloroethane	NS	<2.64	<2.64	<26.40	<5.28	<26.40	<26.40
Chloroform	NS	6.82	19.48	<9.74	<1.95	<9.74	<9.74
Chloromethane	NS	<2.07	<2.07	<20.67	<4.13	<20.67	<20.67
cis-1,2-Dichloroethene	NS	<0.79	20.63	<7.93	<1.59	<7.93	<7.93
cis-1,3-Dichloropropene	NS	<2.27	<2.27	<22.71	<4.54	<22.71	<22.71
Cyclohexane	NS	<0.69	<0.69	<6.89	<1.38	<6.89	<6.89
Dibromochloromethane	NS	NA	NA	NA	NA	NA	NA
Dibromomethane	NS	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NS	<0.99	<0.99	<9.90	<1.98	<9.90	<9.90
Diisopropyl ether	NS	NA	NA	NA	NA	NA	NA
Ethanol	NS	<3.77	<3.77	<37.66	<7.53	<37.66	<37.66
Ethyl acetate	NS	<18.01	<18.01	<180.05	<36.01	<180.05	<180.05
Ethylbenzene	NS	13.01	12.58	<8.68	7.37	4,771.8	11,713
Freon-114	NS	NA	NA	NA	NA	NA	NA
Heptane	NS	<2.05	24.55	<20.46	<4.09	<20.46	<20.46
Hexachlorobutadiene	NS	<5.34	<5.34	<53.35	<10.67	<53.35	<53.35
Hexane	NS	<1.76	11.64	<17.64	<3.53	9,525.6	3,492.7
Isopropyl acetate	NS	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NS	NA	NA	NA	NA	NA	NA
m,p-Xylene	NS	52.15	52.15	<21.73	35.2	5,215.2	<21.73
Methyl Acetate	NS	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	NS	<0.70	<0.70	<7.04	<1.41	879.75	95.01
Methylene chloride	NS	<0.69	<0.69	<6.95	<1.39	<6.95	<6.95
n-Amyl acetate	NS	NA	NA	NA	NA	NA	NA
Naphthalene	NS	NA	NA	NA	NA	NA	NA
n-Butyl acetate	NS	NA	NA	NA	NA	NA	NA
n-Butylbenzene	NS	NA	NA	NA	NA	NA	NA
n-Propyl acetate	NS	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NS	NA	NA	NA	NA	NA	NA
o-Xylene	NS	19.99	19.56	<8.69	10.87	1,868.8	<8.69
p-Diethylbenzene	NS	NA	NA	NA	NA	NA	NA
p-Ethyltoluene	NS	24.06	24.56	<24.56	19.15	1,718.9	<24.56
Propylene	NS	<0.86	<0.86	<8.60	<1.72	<8.60	<8.60
sec-Butylbenzene	NS	NA	NA	NA	NA	NA	NA
Styrene	NS	<0.85	<0.85	<8.51	<1.70	<8.51	<8.51
t-Butyl alcohol	NS	151.4	148.37	<60.56	87.81	<60.56	<60.56
tert-Butylbenzene	NS	NA	NA	NA	NA	NA	NA
Tetrachloroethene	100	**1,221.3**	**3,935.3**	**6,785.0**	**196.8**	<13.57	<13.57
Tetrahydrofuran	NS	<1.47	<1.47	<14.74	<2.95	<14.74	<14.74
Toluene	NS	64.01	75.3	27.86	52.71	677.7	<7.53
trans-1,2-Dichloroethene	NS	<0.79	<0.79	<7.93	<1.59	<7.93	<7.93
trans-1,3-Dichloropropene	NS	<0.91	<0.91	<9.08	<1.82	<9.08	<9.08
Trichloroethene	5	**64.48**	**247.16**	<10.75	<2.15	<10.75	<10.75
Trichlorofluoromethane	NS	140.55	61.84	<11.24	61.84	<11.24	<11.24
Vinyl acetate	NS	<1.76	<1.76	<17.60	<3.52	<17.60	<17.60
Vinyl bromide	NS	<0.88	<0.88	<8.76	<1.75	<8.76	<8.76
Vinyl chloride	NS	<0.51	<0.51	<5.12	<1.02	<5.12	<5.12
Total VOCs	NS	1,884	4,877	6,964	559	683,678	908,992

[1] NYSDOH "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York", October 2006.
Bolded values signify exceedance of regulatory standard
NS = No Standard
NA = Not Analyzed

APPENDICES

Appendix 1
Citizen Participation Plan

APPENDIX 1

CITIZEN PARTICIPATION PLAN

The NYC Office of Environmental Remediation and Queensboro Development, LLC have established this Citizen Participation Plan because the opportunity for citizen participation is an important component of the NYC Brownfield Cleanup Program. This Citizen Participation Plan describes how information about the project will be disseminated to the Community during the remedial process. As part of its obligations under the NYC BCP, Queensboro Development, LLC will maintain a repository for project documents and provide public notice at specified times throughout the remedial program. This Plan also takes into account potential environmental justice concerns in the community that surrounds the project Site. Under this Citizen Participation Plan, project documents and work plans are made available to the public in a timely manner. Public comment on work plans is strongly encouraged during public comment periods. Work plans are not approved by the NYC Office of Environmental Remediation (OER) until public comment periods have expired and all comments are formally reviewed. An explanation of cleanup plans in the form of a public meeting or informational session is available upon request to OER's project manager assigned to this Site, Mr. Michael Mandac, who can be contacted about these issues or any others questions, comments or concerns that arise during the remedial process at (212) 788-8841

Project Contact List. OER has established a Site Contact List for this project to provide public notices in the form of fact sheets to interested members of the Community. Communications will include updates on important information relating to the progress of the cleanup program at the Site as well as to request public comments on the cleanup plan. The Project Contact List includes owners and occupants of adjacent buildings and homes, principal administrators of nearby schools, hospitals and day care centers, the public water supplier that serves the area, established document repositories, the representative Community Board, City Council members, other elected representatives and any local Brownfield Opportunity Area (BOA) grantee organizations. Any member of the public or organization will be added to the Site Contact List on request. A copy of the Site Contact List is maintained by OER's project manager. If you would like to be added to the Project Contact List, contact NYC OER at (212) 788-8841 or by email at brownfields@cityhall.nyc.gov.

Repositories. A document repository is maintained in the nearest public library that maintains evening and weekend hours. This document repository is intended to house, for community review, all principal documents generated during the cleanup program including Remedial Investigation plans and reports, Remedial Action work plans and reports, and all public notices and fact sheets produced during the lifetime of the remedial project. Queensboro Development, LLC will inspect the repositories to ensure that they are fully populated with project information. The repository for this project is:

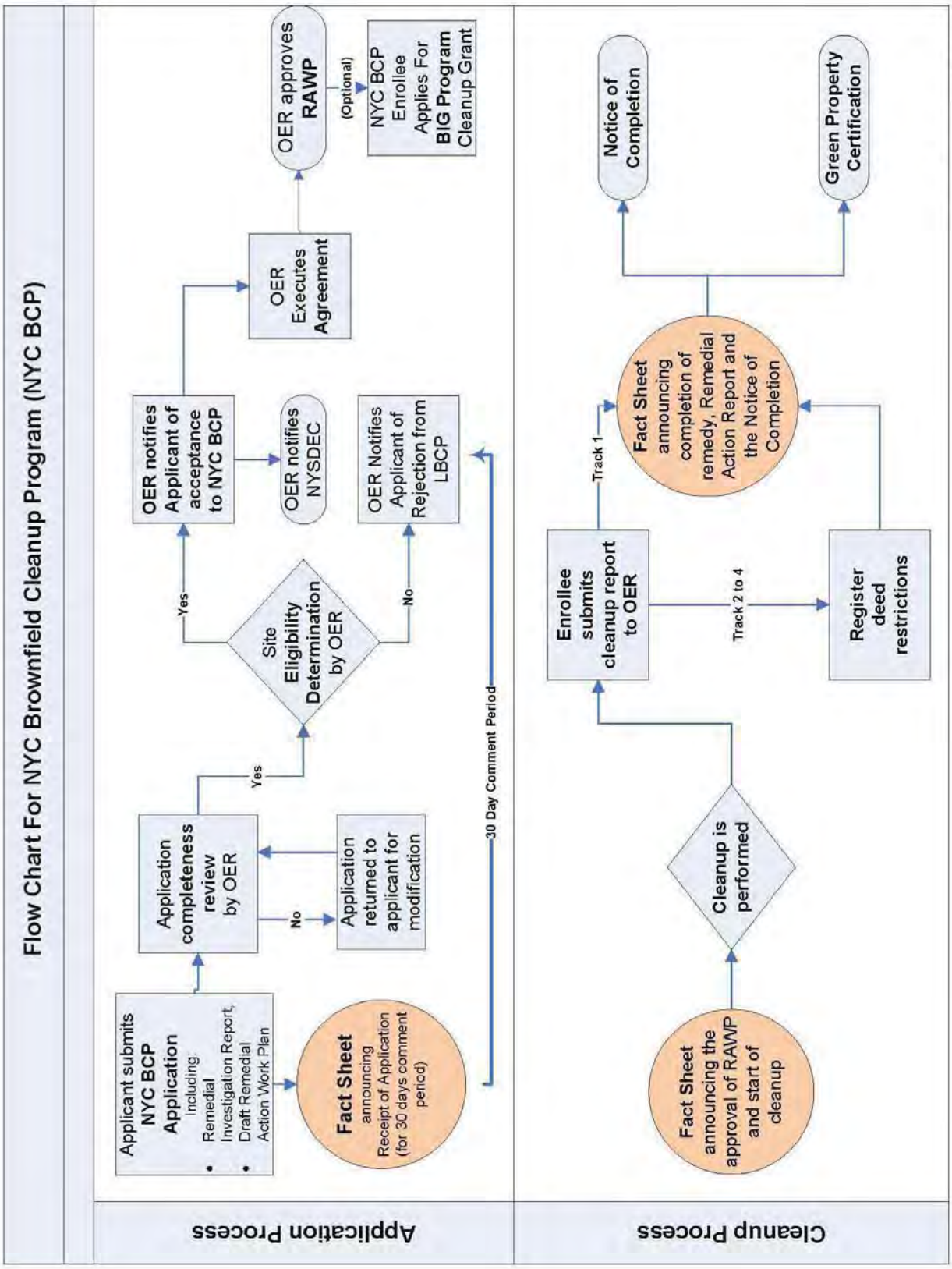
Repository Name:	Long Island City Community Library
Repository Address:	3744 21st Street, Long Island City, NY 11101
Repository Telephone:	718-752-3700
Repository Hours:	Monday(10am-8pm); Tuesday(1-6pm); Wednesday(10am-6pm)
	Thursday(1-8pm); Friday(10am-6pm); Saturday(10am-5:30pm)

Digital Documentation. NYC OER strongly encourages the use of digital documents in repositories as a means of minimizing paper use while also increasing convenience in access and ease of use.

Identify Issues of Public Concern. Queensboro Development, LLC is unaware of any specific issues of concern to stakeholders proximate to the project site.

Public Notice and Public Comment. Public notice to all members of the Project Contact List is required at three major steps during the performance of the cleanup program (listed below) and at other points that may be required by OER. Notices will include Fact Sheets with descriptive project summaries, updates on recent and upcoming project activities, repository information, and important phone and email contact information. All notices will be prepared by Queensboro Development, LLC, reviewed and approved by OER prior to distribution and mailed by Queensboro Development, LLC. Public comment is solicited in public notices for all work plans developed under the NYC Brownfield Cleanup Program. Final review of all work plans by OER will consider all public comments. Approval will not be granted until the public comment period has been completed.

Citizen Participation Milestones. Public notice and public comment activities occur at several steps during a typical NYC BCP project. See flow chart on the following page, which



identifies when during the NYC BCP public notices are issued: These steps include:

- **Public Notice of the availability of the Remedial Investigation Report and Remedial Action Work Plan and a 30-day public comment period on the Remedial Action Work Plan.**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the availability of the Remedial Investigation Report and Remedial Action Work Plan and the initiation of a 30-day public comment period on the Remedial Action Work Plan. The Fact Sheet summarizes the findings of the RIR and provides details of the RAWP. The public comment period will be extended an additional 15 days upon public request. A public meeting or informational session will be conducted by OER upon request.

- **Public Notice announcing the approval of the RAWP and the start of remediation**

  Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the approval of the RAWP and the start of remediation.

- **Public Notice announcing the completion of remediation, designation of Institutional and Engineering Controls and issuance of the Notice of Completion**

Public notice in the form of a Fact Sheet is sent to all parties listed on the Site Contact List announcing the completion of remediation, providing a list of all Institutional and Engineering Controls implemented for to the Site and announcing the issuance of the Notice of Completion.

Appendix 2
Sustainability Statement

APPENDIX 2

SUSTAINABILITY STATEMENT

This Sustainability Statement documents sustainable activities and green remediation efforts planned under this remedial action.

Reuse of Clean, Recyclable Materials. Reuse of clean, locally-derived recyclable materials reduces consumption of non-renewable virgin resources and can provide energy savings and greenhouse gas reduction.

An estimate of the quantity (in tons) of clean, non-virgin materials (reported by type of material) reused under this plan will be quantified and reported in the RAR.

Reduce Consumption of Virgin and Non-Renewable Resources. Reduced consumption of virgin and non-renewable resources lowers the overall environmental impact of the project on the region by conserving these resources.

An estimate of the quantity (in tons) of virgin and non-renewable resources, the use of which will be avoided under this plan, will be quantified and reported in the RAR.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency. Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

Best efforts will be made to quantify energy efficiencies achieved during the remediation and will be reported in the Remedial Action Report (RAR). Where energy savings cannot be easily quantified, a gross indicator of the amount of energy saved or the means by which energy savings was achieved will be reported.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions.

An estimate of the volume of clean fuels used during remedial activities will be quantified and reported in the RAR.

Recontamination Control. Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later or impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of contamination from off-Site.

An estimate of the area of the Site that utilizes recontamination controls under this plan will be reported in the RAR in square feet.

Storm-water Retention. Storm-water retention improves water quality by lowering the rate of combined storm-water and sewer discharges to NYC's sewage treatment plants during periods of precipitation, and reduces the volume of untreated influent to local surface waters.

An estimate of the enhanced storm-water retention capability of the redevelopment project will be included in the RAR.

Linkage with Green Building. Green buildings provide a multitude of benefits to the city across a broad range of areas, such as reduction of energy consumption, conservation of resources, and reduction in toxic materials use.

The number of Green Buildings that are associated with this brownfield redevelopment property will be reported in the RAR. The total square footage of green building space created as a function of this brownfield redevelopment will be quantified for residential, commercial and industrial/manufacturing uses.

Paperless Brownfield Cleanup Program. Queensboro Development, LLC is participating in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents will replace submission of hard copies for the review of project documents, communications and milestone reports.

Low-Energy Project Management Program. Queensboro Development, LLC is participating in OER's low-energy project management program. Under this program, whenever possible, meetings are held using remote communication technologies, such as videoconferencing and teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation.

Trees and Plantings. Trees and other plantings provide habitat and add to NYC's environmental quality in a wide variety of ways. Native plant species and native habitat provide optimal support to local fauna, promote local biodiversity, and require less maintenance.

An estimate of the land area that will be vegetated, including the number of trees planted or preserved, will be reported in square feet in the RAR.

Appendix 3
Soil/Materials Management Plan

APPENDIX 3

SOIL/MATERIALS MANAGEMENT PLAN

1.1 SOIL SCREENING METHODS

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional and will be reported in the RAR. Soil screening will be performed during invasive work performed during the remedy and development phases prior to issuance of the Notice of Completion.

1.2 STOCKPILE METHODS

Excavated soil from suspected areas of contamination (e.g., hot spots, USTs, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters and other discharge points.

1.3 CHARACTERIZATION OF EXCAVATED MATERIALS

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Soils proposed for reuse on-Site will be managed as defined in this plan.

1.4 MATERIALS EXCAVATION, LOAD-OUT AND DEPARTURE

The PE/QEP overseeing the remedial action will:

- oversee remedial work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this work plan;
- ensure that Site development activities and development-related grading cuts will not interfere with, or otherwise impair or compromise the remedial activities proposed in this RAWP;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site remediation.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Open and uncontrolled mechanical processing of historical fill and contaminated soil on-Site will not be performed without prior OER approval.

1.5 OFF-SITE MATERIALS TRANSPORT

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance. Off-Site queuing will be minimized.

Outbound truck transport routes are south on 24th Street to Queens Plaza. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing 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. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

1.6 MATERIALS DISPOSAL OFF-SITE

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in Queens, New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material. These documents will be included in the RAR.

The Remedial Action Report will include an itemized account of the destination of all material removed from the Site during this remedial action. Documentation associated with disposal of all material will include records and approvals for receipt of the material. This information will be presented in the RAR.

All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization

sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the RAR. A manifest system for off-Site transportation of exported materials will be employed. Manifest information will be reported in the RAR. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e., clean soil removed for development purposes), including transport to a Part 360-16 Registration Facility, a formal request will be made for approval by OER with an associated plan compliant with 6NYCRR Part 360-16. This request and plan will include the location, volume and a description of the material to be recycled, including verification that the material is not impacted by site uses and that the material complies with receipt requirements for recycling under 6NYCRR Part 360. This material will be appropriately handled on-Site to prevent mixing with impacted material.

1.7 MATERIALS REUSE ON-SITE

Soil and fill that is derived from the property that meets the soil cleanup objectives established in this plan may be reused on-Site. The soil cleanup objectives for on-Site reuse are listed in Table 1. 'Reuse on-Site' means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on comparable soil/fill material, and addressed pursuant to the NYC BCP agreement subject to Engineering and Institutional Controls. The PE/QEP will ensure that reused materials are segregated from other materials to be exported from the Site and that procedures defined for material reuse in this RAWP are followed. No material excavated from the Site will be reused onsite.

Organic matter (wood, roots, stumps, etc.) or other waste derived from clearing and grubbing of the Site will not be buried on-Site. Soil or fill excavated from the site for grading or other purposes will not be reused within a cover soil layer or within landscaping berms.

1.8 DEMARCATION

After completion of hotspot removal and any other invasive remedial activities, and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) placement

of a demarcation layer. The demarcation layer will consist of geosynthetic fencing or equivalent material to be placed on the surface of residual soil/fill to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the SMP; or (2) a land survey of the top elevation of residual soil/fill before the placement of cover soils, pavement and associated sub-soils, or other materials or structures or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the remedy is complete. Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the Site and all associated documentation will be presented in the RAR.

This demarcation will constitute the top of the site management horizon. Materials within this horizon require adherence to special conditions during future invasive activities as defined in the Site Management Plan.

1.9 IMPORT OF BACKFILL SOIL FROM OFF-SITE SOURCES

This Section presents the requirements for imported fill materials to be used below the cover layer and within the clean soil cover layer. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. Soil or fill material is not expected to be imported to the Site.

A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;
- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;

- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC.

All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this RAWP. The RAR will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover was placed.

Source Screening and Testing

Inspection of imported fill material will include visual, olfactory and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:

- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

Composite samples of imported material will be taken at a minimum frequency of one sample for every 500 cubic yards of material. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) will be imported from facilities permitted or registered by NYSDEC. Facilities will be identified in the RAR. A PE/QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA material is not acceptable for, and will not be used as cover material.

1.10 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. Discharge to the New York City sewer system will require an authorization and sampling data demonstrating that the groundwater meets the City's discharge criteria. The dewatering fluid will be pretreated as necessary to meet the NYC DEP discharge criteria. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility.

Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by New York State Department of Environmental Conservation.

1.11 STORM-WATER POLLUTION PREVENTION

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. Erosion and sediment control measures identified in this RAWP (silt fences and barriers, and hay bale checks) will be installed around the entire perimeter of the remedial construction area and inspected once a week and after every storm event to ensure that they are operating appropriately. Discharge locations will be inspected to determine whether erosion control measures are effective in preventing significant impacts to receptors. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. All necessary repairs shall be made immediately. Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Undercutting or erosion of the silt fence toe anchor will be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

1.12 CONTINGENCY PLAN

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. These findings will be included in the daily report. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

1.13 ODOR, DUST AND NUISANCE CONTROL

Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, 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. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEP's certifying the Remedial Action Report.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.

- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

This dust control plan is capable of controlling emissions of dust. If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEP's responsible for certifying the Remedial Action Report.

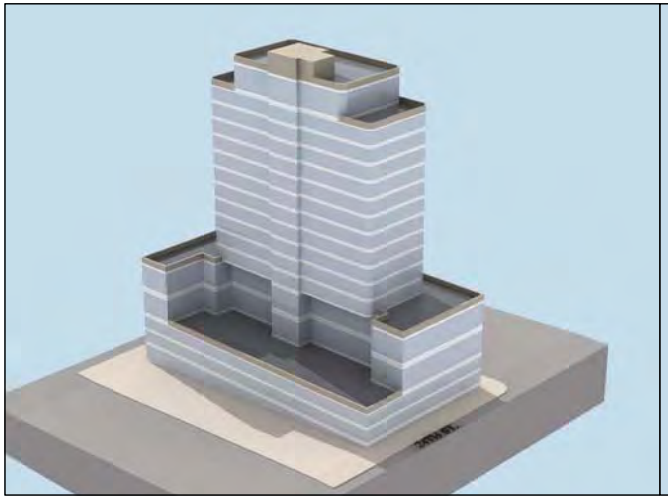
Other Nuisances

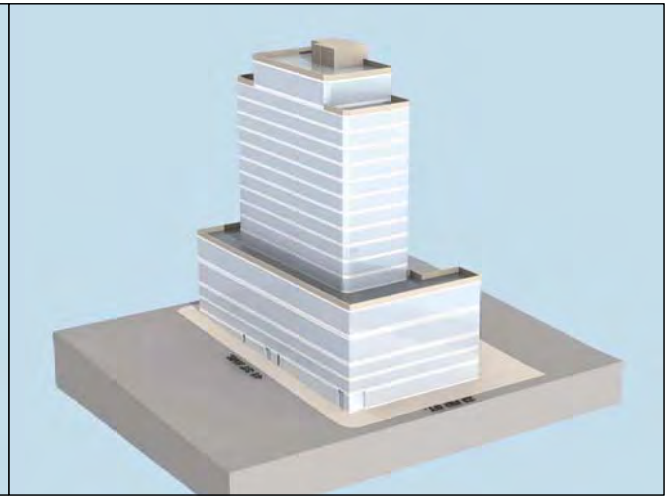
Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

Rodent control will be provided, during Site clearing and grubbing, and during the remedial program, as necessary, to prevent nuisances.

Appendix 4
Proposed Development Plans

RESIDENTIAL / COMMERCIAL PROJECT





23-18 - 41ST AVENUE
QUEENS, NEW YORK

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REVISIONS

no.	date	description
		WORK IN PROGRESS SET
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no.	date	description

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STRUCTURAL ENGINEER

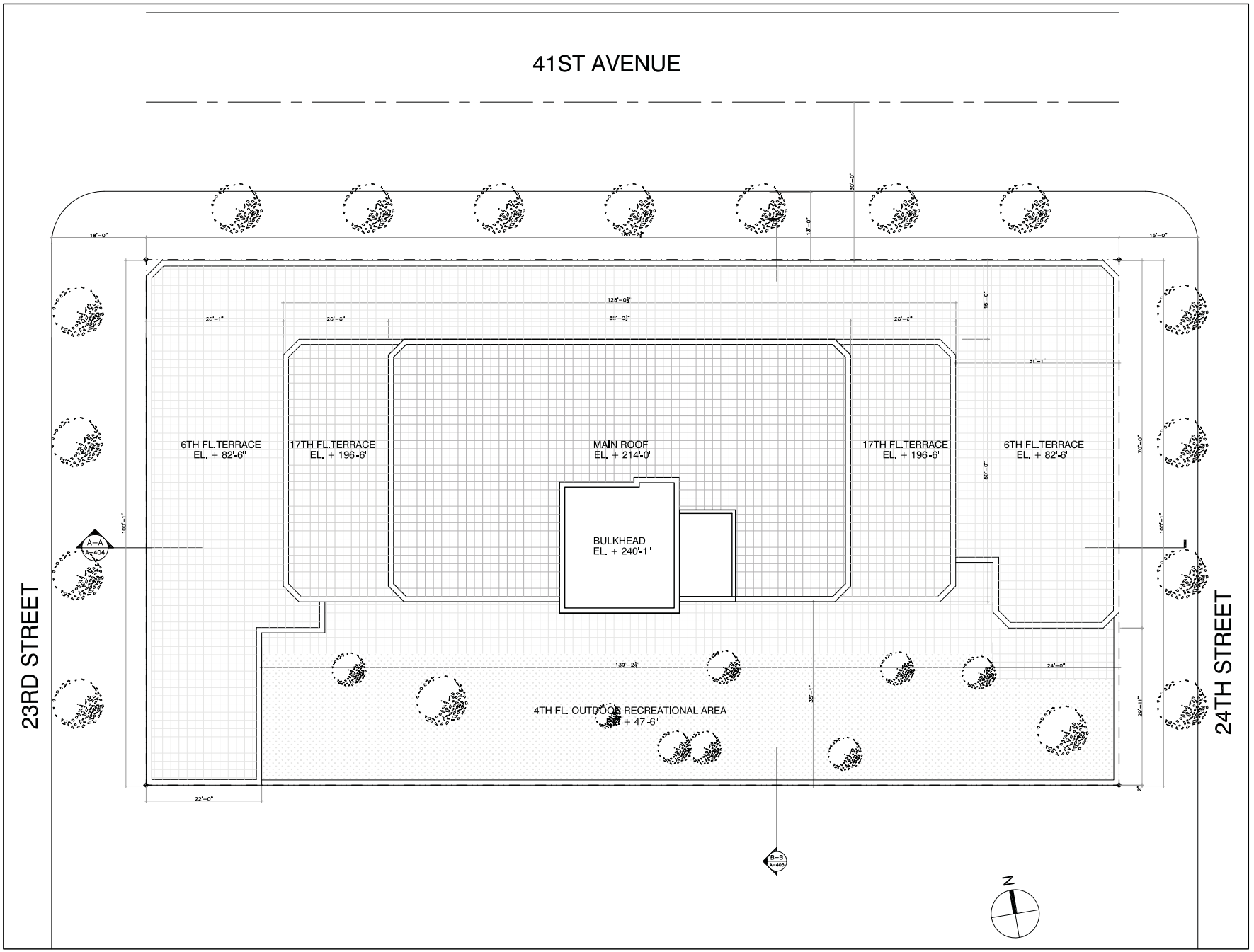
MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
COVER SHEET
(PRE-SCHEMATIC DESIGN)

scale	project no. 07-103
date FEB. 2008	revision no.
drawn F.R	drawing no. A-000
checked KF	



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		WORK IN PROGRESS SET
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no.	date	description

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STRUCTURAL ENGINEER

MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
SITE-PLAN
(PRE-SCHEMATIC DESIGN)

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date	FEB. 2008	revision no.	
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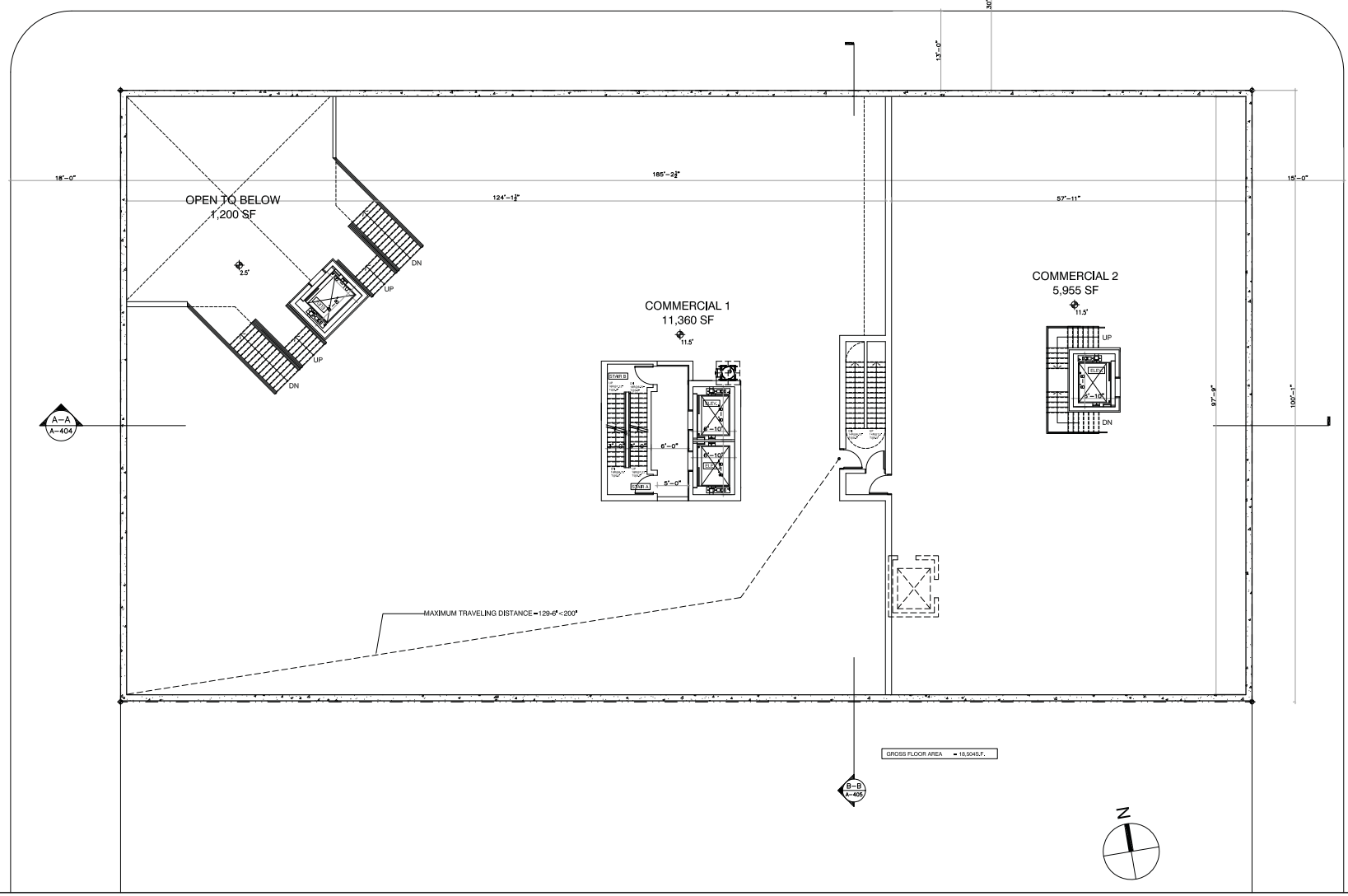
checked	KF		

41ST AVENUE

23RD STREET

24TH STREET



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		WORK IN PROGRESS SET
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no.	date	description

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STRUCTURAL ENGINEER

MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
CELLAR FLOOR PLAN
(PRE-SCHEMATIC DESIGN)

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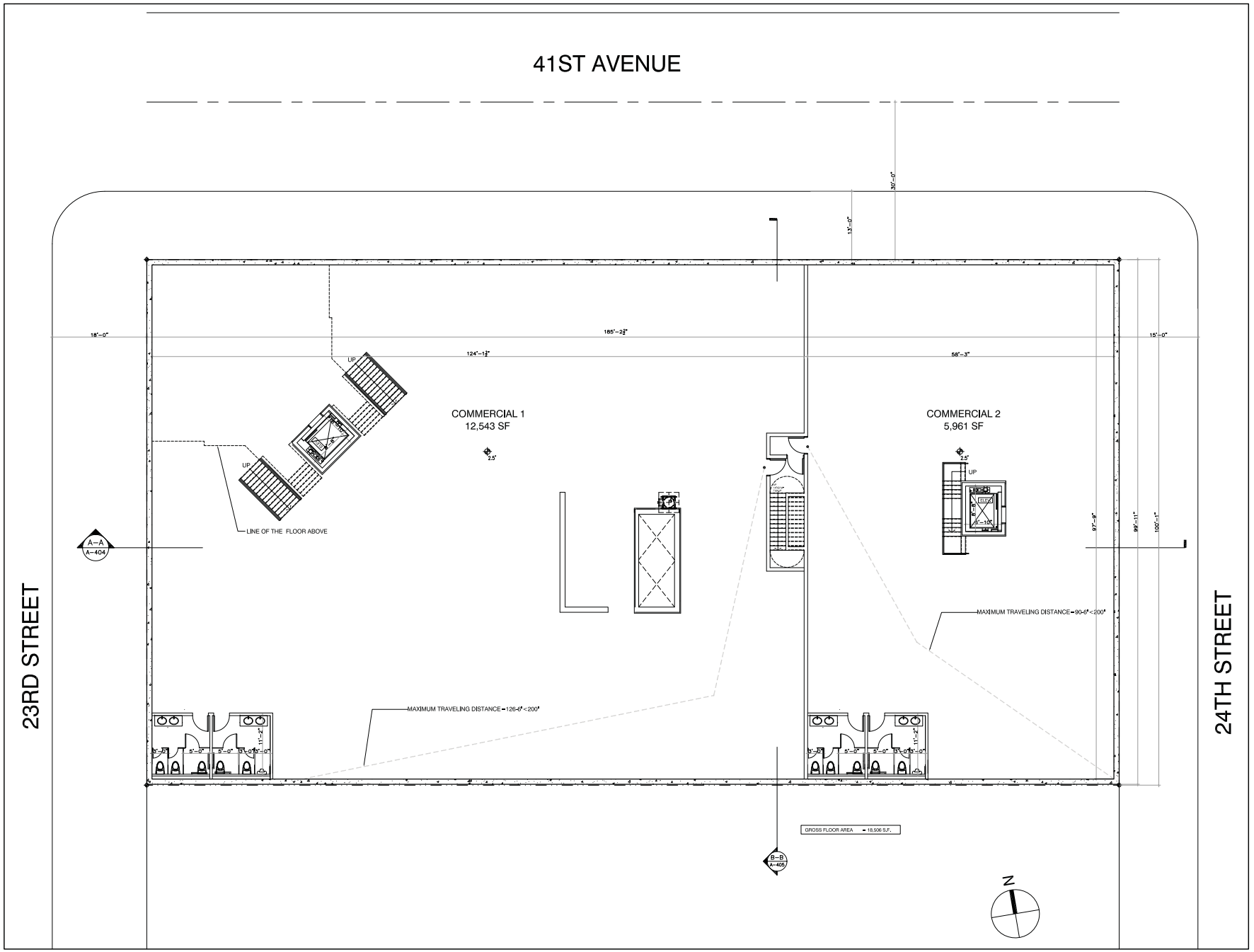

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no.	date	description

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STRUCTURAL ENGINEER

MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
SUB-CELLAR FLOOR-PLAN
(PRE-SCHEMATIC DESIGN)

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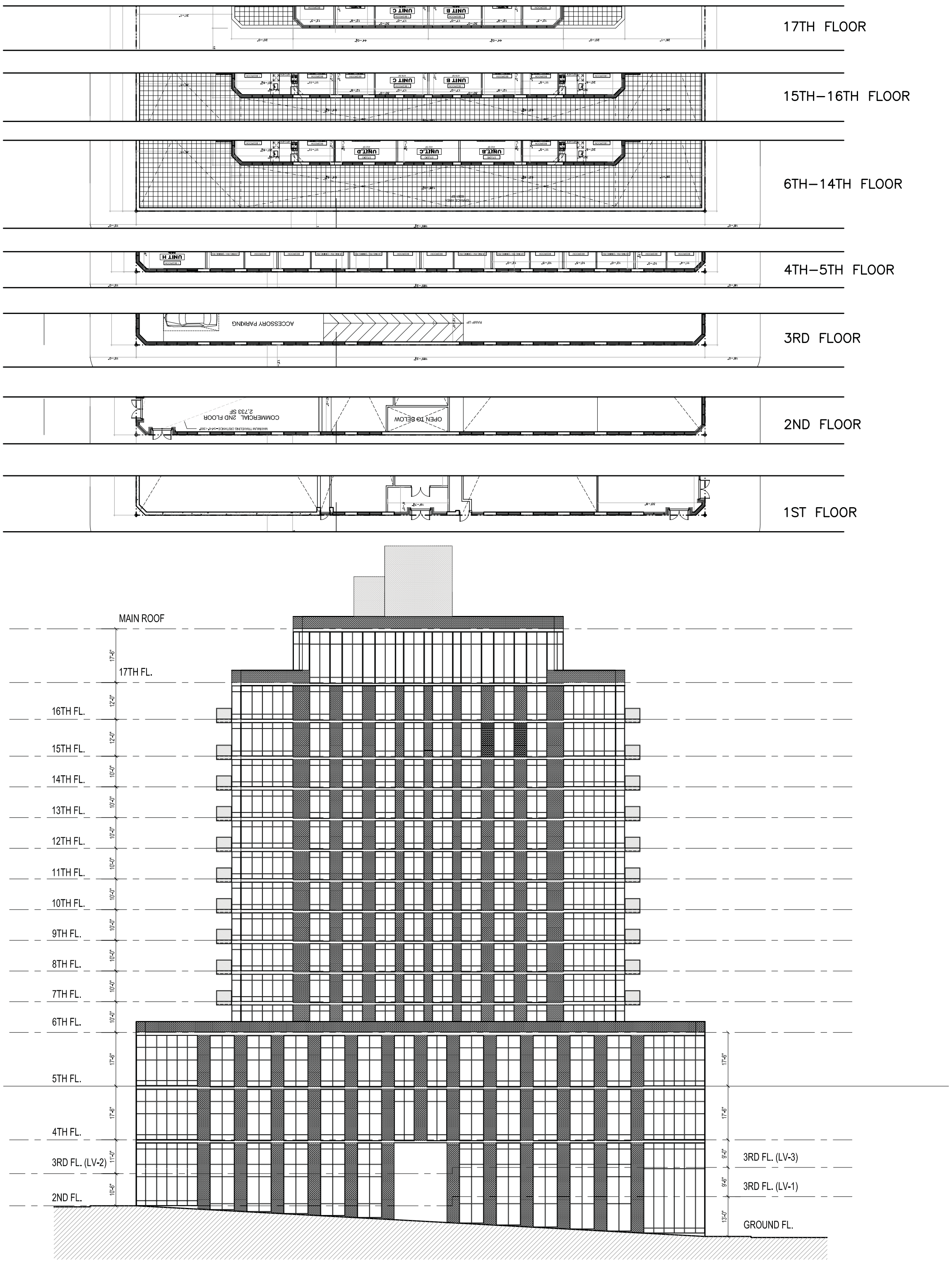

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A-201

drawing title
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(PRE-SCHEMATIC DESIGN)

project title
NEW DEVELOPMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

INTERIOR DESIGNER

MECHANICAL ENGINEER

STRUCTURAL ENGINEER

KARL FISCHER ARCHITECT

REGISTERED ARCHITECT KARL FISCHER STATE OF NEW YORK

ISSUES
no. date description

REVISIONS
no. date description

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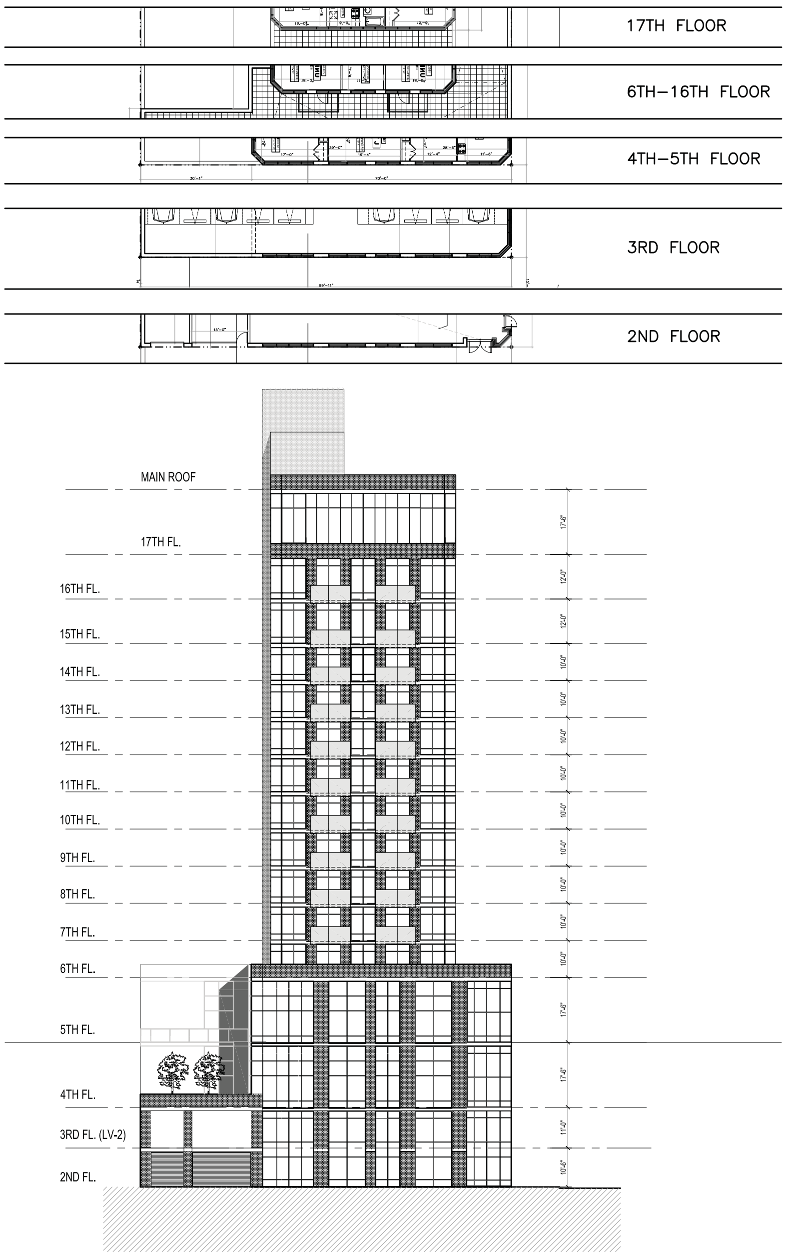

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revision no.
drawn F.R
checked KF
drawing no. A-202

drawing title
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(PRE-SCHEMATIC DESIGN)

project title
NEW DEVELOPMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

INTERIOR DESIGNER

MECHANICAL ENGINEER

STRUCTURAL ENGINEER

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REGISTERED ARCHITECT
KARL FISCHER
021282
STATE OF NEW YORK

REVISIONS

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		WORK IN PROGRESS SET

ISSUES

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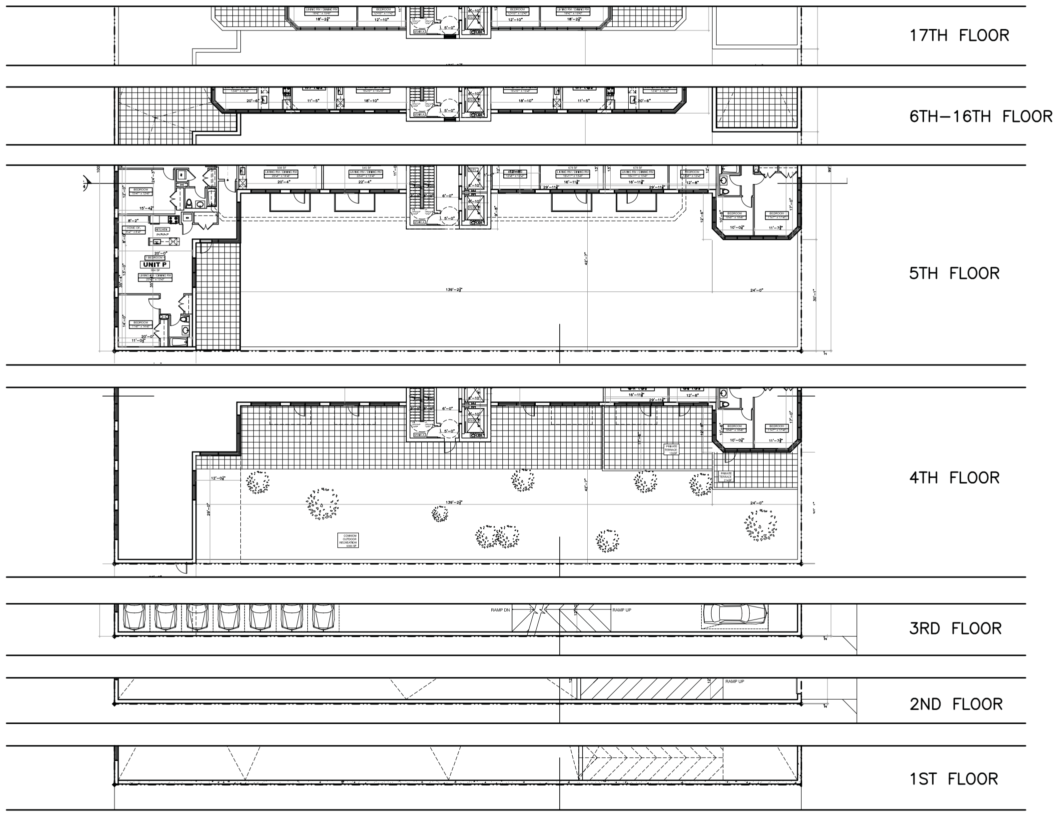

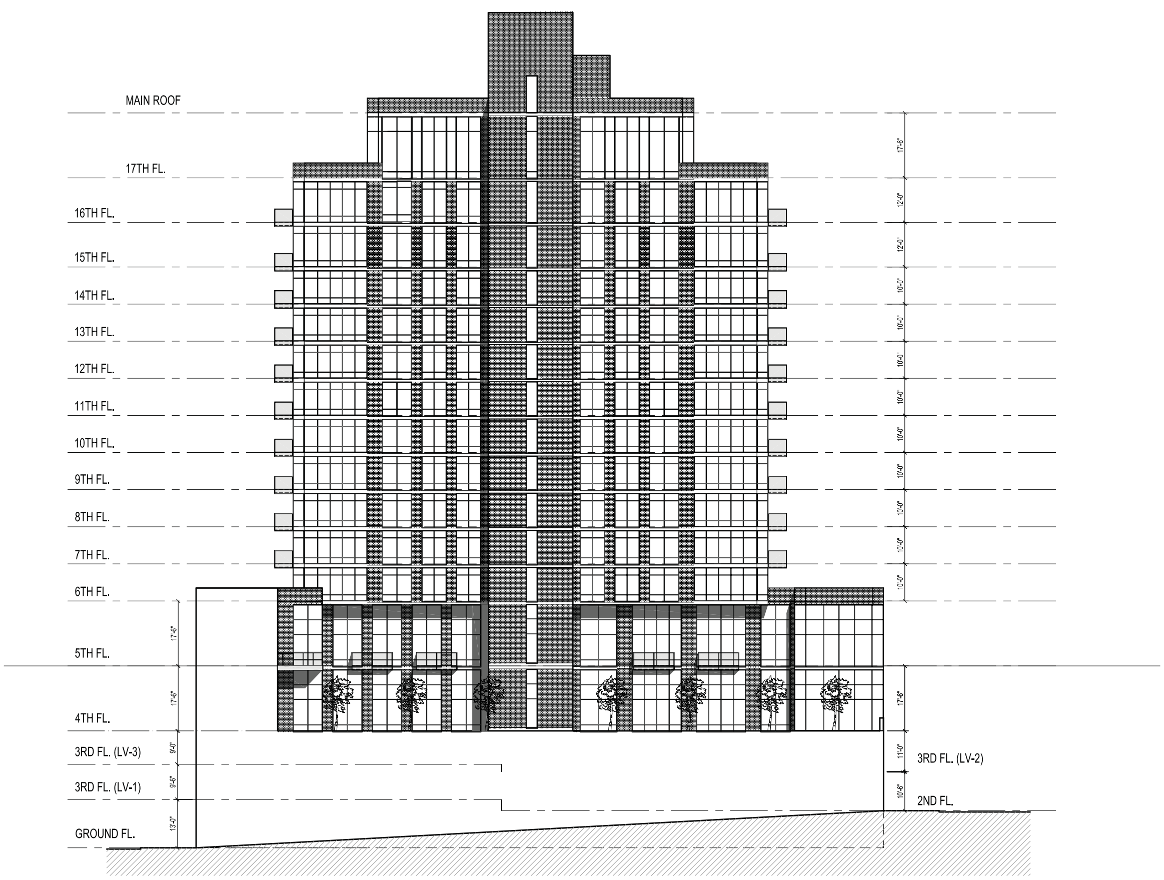

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checked: KF

project no.: 07–103

revision no.:

drawing no.: A-203

drawing title: SOUTH ELEVATION (PRE–SCHEMATIC DESIGN)

project title: NEW DEVELOMENT Block# 413 Lots: 27, 20 23 23–18 41ST AVENUE, QUEENS

INTERIOR DESIGNER

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REGISTERED ARCHITECT KARL FISCHER 021282 STATE OF NEW YORK

ISSUES

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REVISIONS

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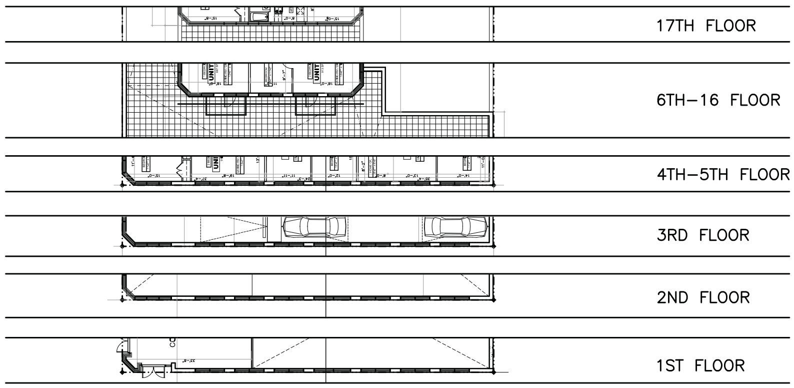

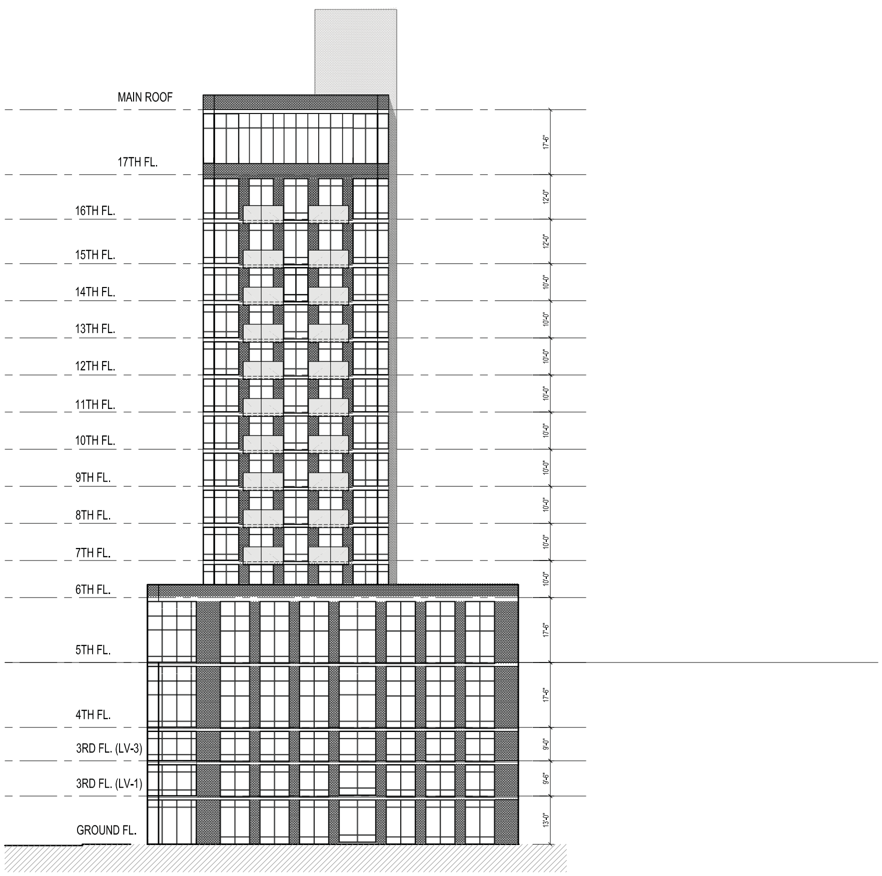

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(PRE-SCHEMATIC DESIGN)

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

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REGISTERED ARCHITECT KARL FISCHER 021282 STATE OF NEW YORK

ISSUES

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REVISIONS

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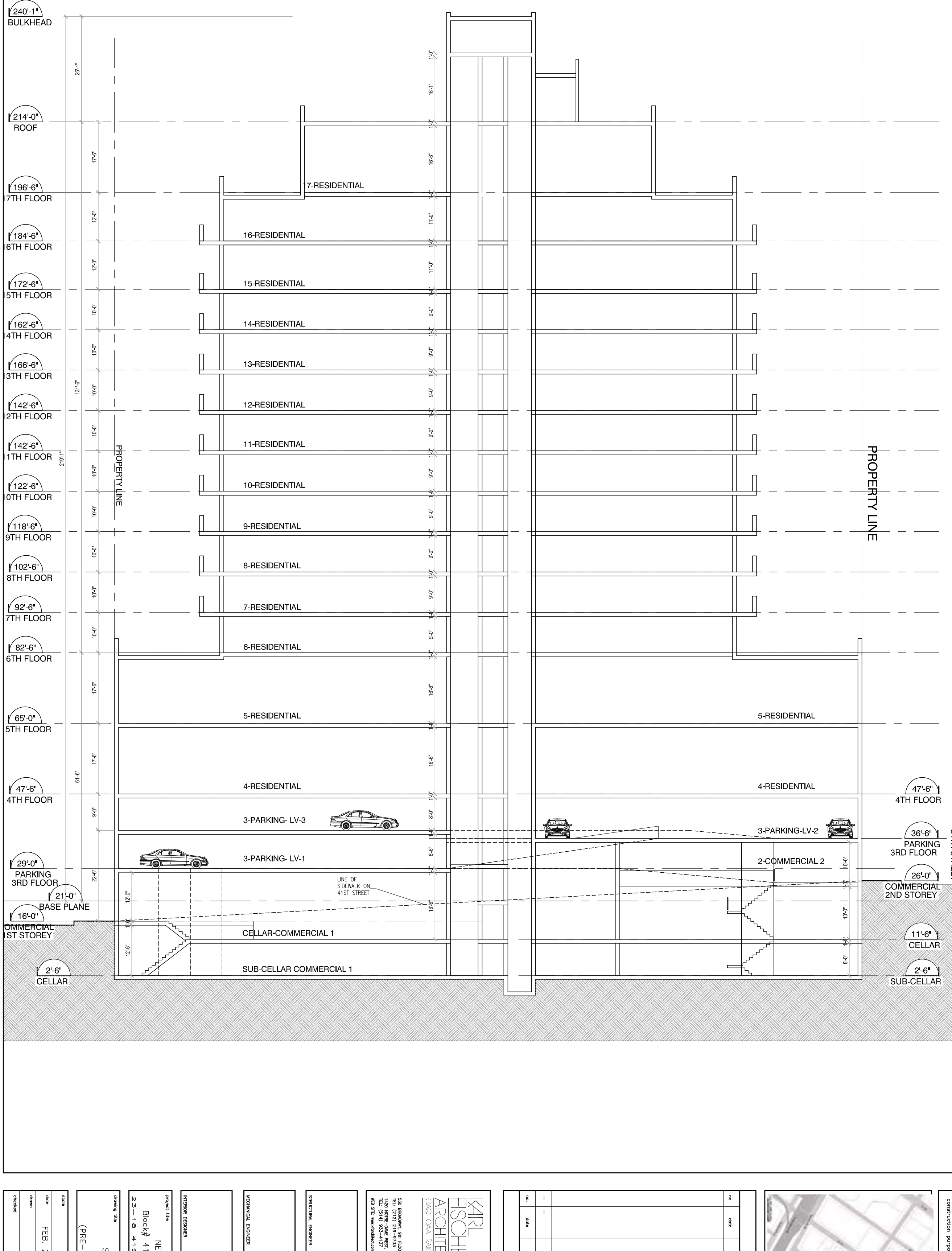

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drawn F.R

checked KF

project no. 07-103

revision no.

drawing no. A-404

drawing title: SECTION-A-A (PRE-SCHEMATIC DESIGN)

project title: NEW DEVELOMENT Block# 413 Lots: 27, 20 23 — 23-18 41ST AVENUE, QUEENS

INTERIOR DESIGNER

MECHANICAL ENGINEER

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WORK IN PROGRESS SET

no.	date	description
ISSUES		

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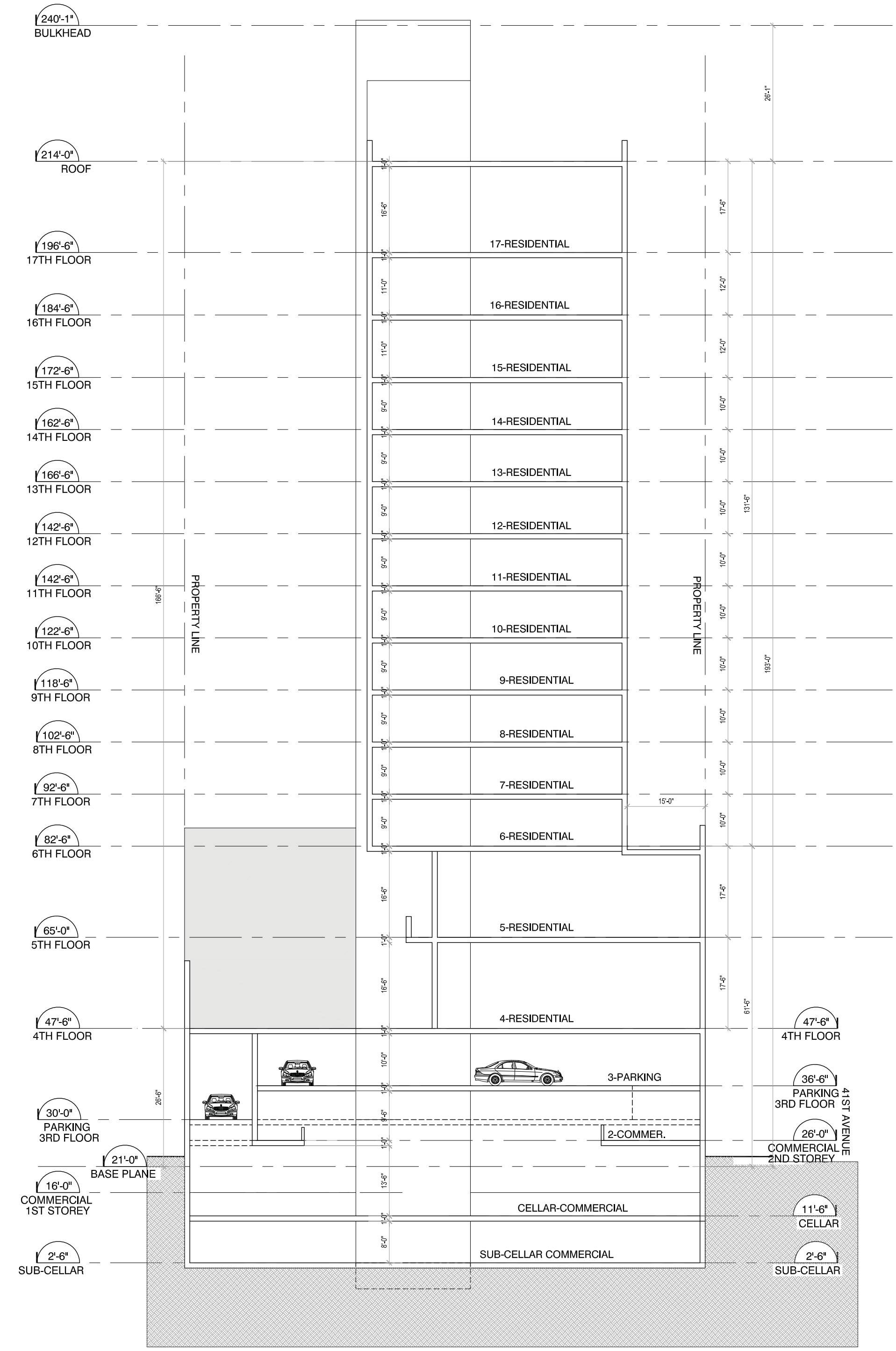

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REVISIONS

no.	date	description

WORK IN PROGRESS SET

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no.	date	description
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REGISTERED ARCHITECT ★ KARL FISCHER ★ STATE OF NEW YORK 021282

STRUCTURAL ENGINEER

MECHANICAL ENGINEER

INTERIOR DESIGNER

project title
NEW DEVELOMENT
Block# 413 Lots: 27, 20 23
23-18 41ST AVENUE, QUEENS

drawing title
SECTION-B-B
(PRE-SCHEMATIC DESIGN)

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date	FEB. 2008	revision no.	
drawn	F.R	drawing no.	A-405
checked	KF		

Appendix 5
Previous Environmental Investigations and Reports

PHASE II
ENVIRONMENTAL SITE ASSESSMENT

41-01 23rd Street
Long Island City, New York 11101

NYSDEC Spill No. 04-12186

March 23, 2005

ACT#: 4019-LINY

Prepared for:

Mr. Angelo Gerasimou
Angelo Holding Corporation
57-25 East Hampton Boulevard
Bayside, New York 11364

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FIGURES

APPENDICES

1.0 INTRODUCTION AND SCOPE OF THE ASSESSMENT

On February 11 and 14, 2005, Advanced Cleanup Technologies, Inc. (ACT) performed a Phase II Environmental Site Assessment at the property located at 41-01 23rd Street, Long Island City, New York. The purpose for this assessment was to determine if former gasoline filling station and auto repair operations had impacted the environmental quality of the subject property. These former operations were identified as a Recognized Environmental Condition in a Phase I Environmental Site Assessment of the subject property by ACT dated January 26 2005.

The scope of the assessment included the performance of a Ground-Penetrating Radar survey over the property and the installation, sampling and analysis of four soil borings and six temporary ground water monitoring wells. The scope of work also included in-field screening of all soil samples and the laboratory analysis of all water samples for volatile and semi-volatile organic compounds and priority pollutant metals. Finally, the scope of work included a comparison of the laboratory results to applicable ground water quality standards contained in NYSDEC TOGS 1.1.1, June, 1998.

A diagram depicting pertinent features of the subject property is provided as Figure 1. Copies of field notes are contained in Appendix A. Laboratory reports are contained in Appendix B.

2.0 FINDINGS AND RESULTS OF THE ASSESSMENT

2.1 Ground-Penetrating Radar Survey

On January 25, 2005, a Ground-Penetrating Radar (GPR) Survey was performed over the exterior portion of property north of the existing building. The purpose for the survey was to determine the presence of any underground storage tanks or other petroleum storage facilities beneath the subject property.

The survey was performed utilizing an SIR-2000 GPR Unit and a 500 megahertz transducer. The transducer was pulled along pre-determined transects, emitting radar into the subsurface. The radar signal reflects off stratigraphical materials and foreign objects in the subsurface and back to the transducer based upon differences in the conductivity and dielectric constant of subsurface features. The radar signal is then converted into an electrical signal which is visually displayed on a video monitor.

The GPR survey covered an area of approximately 2,500 square feet. The radar antenna was pulled along transects at right angles to each other in a 5 foot by 5 foot grid pattern so as to form a rectangular grid over the surface. The survey was performed at a range to allow for the identification of anomalies to a depth of approximately 10 feet below ground surface.

The GPR survey did not identify any anomalies characteristic of underground storage tanks. Based upon physical evidence on the ground surface, the two concrete pads evidently contain underground storage tanks and hydraulic lift assemblies. However, the concrete pades appear to have attenuated the radar signal sufficiently to preclude positive identification of any structures beneath the ground surface.

The GPR survey also did not produce reflections indicative of underground storage tanks in the vicinity of three abandoned fill caps adjacent to the concrete pads. Upon physical inspection of these fill caps, the eastern one was accessed. A large void indicative of an underground storage tank was found beneath this fill cap. Liquid consisting of what appeared to be diesel fuel was found at a depth of 1.5 feet below ground surface and the bottom of the apparent tank was found at 7.3 feet below ground surface. The other fill caps could not be accessed during the current field activities.

The presumed underground storage tank at the location of the easternmost fill cap, along with others associated with the two inaccessible abandoned fill caps may also be encased in concrete and thus not visible with the GPR equipment utilized during the assessment. The area of the concrete pads and abandoned fill caps in the southwest portion of the site should be further investigated to confirm the presence and number of underground storage tanks.

2.2 Soil Quality

Soil quality was investigated during the Phase II assessment by advancing a total of 4 soil borings at the site, as indicated in Figure 2. Sampling locations were selected based upon conditions observed during the Phase I and Phase II inspections and access. Soil boring SB-01 was installed adjacent to the former northern pump island. Soil boring SB-02 was installed as close to the former western pump island as was possible given the presence of wrecked vehicles covering much of this portion of the site. Soil borings SB-03 and SB-04 were installed along the west and east sides of the former remote fill piping, respectively.

The soil borings were installed utilizing a truck-mounted drill rig with a percussion hammer in combination with four foot macrocore soil samplers containing dedicated acetate liners. All sampling equipment was decontaminated between sampling events. Soil samples in each boring were continuously collected from ground surface to 4 feet below ground surface.

Soil samples from each boring were screened in the field utilizing a Photoionization Detector (PID). The maximum PID screening result and its associated depth are indicated in Figure 2. It can be seen that significant soil contamination was detected in soil boring SB-02 at a depth 3 feet below ground surface. The other soil borings contained an order of magnitude less soil contamination, with the lowest PID readings found in soil boring SB-03 located furthest to the south. The in-field soil screening results indicate that the northern pump island is a significant source of gasoline contamination to subsurface soil.

2.3 Ground Water Quality

Ground water quality was determined during the Phase II assessment by installing and sampling 6 temporary ground water monitoring wells throughout exterior portions of the site, as indicated in Figure 3. Temporary wells TW-01 and TW-02 were installed at the approximate locations of soil borings SB-01 and SB-02, respectively. Temporary wells TW-03 and TW-05 were installed adjacent to the southern and northern eastern boundaries of the concrete pad presumably containing abandoned underground storage tanks. Temporary well TW-04 was installed between the former exterior petroleum storage facilities and the service building, while temporary well TW-06 was installed in the southeastern storage yard.

The temporary monitoring wells were installed utilizing a truck-mounted drill rig and percussion hammer in combination with four foot drive rods and a two foot long by 0.02 inch slotted steel well screen. The screened interval was set to intersect the water table at each sampling location utilizing a conductivity meter extended down the temporary well casing. Ground water was encountered at depths ranging from 11 feet below ground surface in TW-02 and TW-03 to 15 feet below ground surface in TW-04.

Ground water samples were collected from each monitoring well utilizing an inertial pump. At each location except TW-04 and TW-06 the water samples contained evidence of separate-phase petroleum. The water sample from TW-06 contained a petroleum odor and a sheen. The water sample from TW-04 did not contain an odor or sheen.

Ground water samples were collected in 40 ml glass vials and placed into a cooler. All water samples were transmitted to Environmental Testing Laboratories, Inc. (ELAP No. 10969) for volatile organic compound analysis in accordance with EPA Method 8260, semi-volatile organic compound analysis in accordance with EPA Method 8270 and priority pollutant metals analysis in accordance with EPA Method 6000. The laboratory results are summarized in Tables, 1 through 3, respectively. Copies of the laboratory reports are contained in Appendix C.

As indicated in Table 1, 18 volatile organic compounds were detected above water quality standards in ground water beneath the site. Of these compounds, 13 are associated with petroleum products and 5 are associated with degreasing solvents and their degradation products. The latter compounds were found only slightly above water quality standards. Of the 13 petroleum-related compounds, 11 were found significantly above water quality standards in ground water from at least 5 of the 6 temporary monitoring wells installed during the Phase II assessment.

The total concentration of gasoline constituents in ground water are depicted as contours in Figure 3. It can be seen from Figure 3 that the highest concentration of gasoline constituents in ground water was found in the vicinity of the two pump islands and the northeast corner of the concrete pad. The concentrations of these constituents suggest the presence of separate-phase petroleum beneath this area of the site.

Significantly lower concentrations of gasoline constituents were found to the south and east. Viewed in combination with the soil screening results discussed above, these results indicate that shallow soil from the vicinity of the former pump islands has significantly impacted ground water beneath the entire western portion of the site. The general gradient of volatile organic compounds in ground water suggests a migration towards the southeast.

A review of Table 2 indicates that only 4 semi-volatile organic compounds were found slightly above water quality standards in ground water beneath the site. As indicated in Table 3, 8 priority pollutant metals were found above water quality standards in ground water from 4 of the 6 temporary monitoring wells. Ground water from temporary well TW-06, located in the southwest storage yard, contained both the greatest number and concentrations of metals in ground water beneath the site

3.0 CONCLUSIONS

Based on the findings described above, ACT concludes that the Phase II Environmental Site Assessment has revealed the following Recognized Environmental Conditions:

- The presence of underground storage tanks beneath the subject property;
- The presence of contaminated soil beneath the subject property;
- The presence of contaminated ground water beneath the subject property.

4.0 RECOMMENDATIONS

Underground Storage Tanks

Several underground gasoline storage tanks are present at two locations in the southwest portion of the site. These tanks may be filled with concrete and/or encased in concrete vaults. They should be accessed, registered, removed from the ground and properly disposed of in accordance with applicable regulations. Any contaminated soil associated with these tanks should also be excavated, removed from the ground and properly disposed of. The cost to perform these tasks is estimated to be $50,000.

Contaminated Soil

Contaminated soil between the former pump islands and southern property boundary should be excavated and disposed of in accordance with applicable regulations. Endpoint soil samples should be collected from the base of the excavation to verify achievement of cleanup objectives. The cost to perform these tasks is estimated to be $75,000.

Contaminated Ground Water

Significant ground water contamination was found beneath the entire western portion of the site. A supplemental Phase II assessment should be perform to verify the direction of ground water flow beneath the site and confirm the aerial extent of ground water contamination. Following removal of contaminated soil, ground water remediation involving a combination of ground water extraction, vapor extraction and air sparging should be installed beneath the site. The NYSDEC will require the operation, maintenance and monitoring of these remedial systems for at least 3 years or until ground water quality meets applicable regulatory standards. The cost to perform these tasks is estimated to be $200,000.

William K. Sisco
Senior Project Manager

Paul P. Stewart
President

5.0 EXCLUSIONS AND DISCLAIMER

The purpose of this assessment was to identify the potential environmental liabilities at the subject site with respect to data which Advanced Cleanup Technologies, Inc. has accumulated during the Phase II Environmental Site Assessment. The conclusions presented in this report are based solely on the observations of the site at the time of the investigation. Data provided, including information provided by others, was utilized in assessing the site conditions. The accuracy of this report is subject to the accuracy of the information provided. Advanced Cleanup Technologies, Inc. is not responsible for areas not seen or information not collected. This report is given without a warranty or guarantee of any kind, expressed or implied. Advanced Cleanup Technologies, Inc. assumes no responsibility for losses associated with the use of this report.

Advanced Cleanup Technologies, Inc.

ENVIRONMENTAL CONSULTANTS

INVESTIGATION SUMMARY REPORT

41-01 23rd Street
Long Island City, New York 11101

January 23, 2008

NYSDEC Spill No. 04-12186

ACT File #: 4019-LINY

Prepared for:

Mr. Angelo Gerasimou
AM Holding of New York Corporation
57-25 East Hampton Boulevard
Bayside, New York 11364

115 Rome Street, Farmingdale, New York 11735 Tel: 631/293-4992 Fax: 631/293-4986
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Website Address: actenvirons.com

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APPENDICES

1.0 INTRODUCTION

The premises located at 41-01 23rd Street, Long Island City, New York (the "Site") is the subject of active New York State Department of Environmental Conservation (NYSDEC) Spill Number 04-12186. Advanced Cleanup Technologies, Inc. (ACT) performed a subsurface investigation at the Site between August 2006 and January 2008. The purpose of the subsurface investigation was to delineate the extent of soil and ground water contamination emanating from the Site. The scope of work was intended to satisfy the NYSDEC requirements specified in the Corrective Action Plan issued as part of an April 6, 2006 Stipulation Agreement.

The scope of work included the installation of six on-site soil borings, three on-site cased monitoring wells and eight off-site cased monitoring wells. The scope of work also included the collection, screening and laboratory analysis of all soil and ground water samples. Finally, the scope of work included surveying all existing monitoring wells and the preparation of ground water flow diagrams. The scope of work was conducted in accordance with December 13, 2006 correspondence from the NYSDEC.

2.0 SITE DESCRIPTION

2.1 Site Location

A Locational Diagram showing the Site and its immediate vicinity is presented in Figure 1. The Site is located in a commercial area in the western portion of the borough of Queens in New York City. The Site is located at the southeast corner of the intersection of 23rd Street and 41st Avenue.

A gasoline service station is located directly to the north across 41st Avenue. A two-story commercial building is located to the south and a vacant lot is located to the east of the Site. A commercial storage yard is located to the west of the Site.

The ground surface in the vicinity of the Site is covered with asphalt and concrete pavement. The closest body of surface water is the East River, which is located approximately 4,000 feet to the west of the Site.

2.2 Site History

The Site formerly contained a single-story 2,000 square foot auto repair building, a one-story metal shed, an asphalt paved parking lot and a storage yard located on approximately 8,000 square feet of land. The auto repair building and the adjacent two-story commercial building to the west were demolished within the past year. The Site presently consists of cleared ground surrounded by a wooden construction fence. A diagram of former site features is contained in Figure 2.

In February 2005, ACT performed a Phase II assessment at the Site. The Phase II assessment included the performance of a Ground-Penetrating Radar survey over the entire Site. Several underground storage tanks (USTs) were identified at two locations in the southwest portion of the Site. Remote fill pipes originating in the sidewalk along 41st Avenue were traced to the general vicinity of a concrete pad containing USTs. Remnants of piping associated with pump islands formerly located along 41st Avenue and 23rd Street were also identified.

The Phase II assessment also included the installation of four soil borings and six temporary ground water monitoring wells. Contaminated soil was identified between the former pump islands and the southern property boundary. Significant ground water contamination was found beneath the western portion of the Site.

In June 2006, four 550 gallon steel USTs, two 2,500 gallon steel USTs encased in a concrete vault and one hydraulic lift were excavated, cleaned out and removed from the Site. A summary of these activities were documented in a Tank Closure Report dated August 9, 2006. A total of 3,100 gallons of oil and water were removed from the USTs and hydraulic lift and disposed of at Clean Water of Staten Island as manifested wastes. No impacted soil was removed and no endpoint soil samples were collected at the time of the UST removals.

2.3 Site Geology and Hydrogeology

The topography of the area is generally level. The vicinity of the Site is approximately 26 feet above mean sea level.[1] The ground surface at the Site consists of disturbed soil. Areas beneath the former pump islands and tankfield contain silty sand intermixed with concrete and brick construction debris.

The subsurface beneath the Site consists of unconsolidated Quaternary deposits from the ground surface to approximately 700 feet below ground surface (bgs). The major aquifer systems beneath the Site are the Unconsolidated Glacial aquifer of the Pleistocene Series and the Magothy and Lloyd aquifers of the Cretaceous Series. The Magothy and Lloyd Aquifers are separated by the Raritan confining unit. Bedrock is located approximately 700 feet bgs.[2] The regional direction of groundwater flow is estimated to be toward the west.[3]

During the current investigation, soil samples collected from borings installed within 10 feet of the ground surface generally consisted of brown, silty fine to medium sand with construction debris. The water table was encountered between 9 and 10 feet bgs. A sampling diagram is contained in Figure 3. Boring logs generated during the current investigation are contained in Appendix A.

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[1] 7.5 Minute Series USGS Topographic Map, Central Park, New York Quadrangle.
[2] Smolensky, D.A., Buxton, H.T., and Shernoff, P.K. (1989). Hydrogeologic Framework of Long Island.
[3] Water Table of Upper Glacial Aquifer on Western Long, NY, March 2000.

In November 2006, ground water was encountered between 8 and 12 feet bgs and determined to flow in a west to southwesterly direction at a horizontal gradient of 0.009 ft/ft. Ground water elevations in two of the monitoring wells installed in the sidewalk bordering the Site (MW-05 and MW-06) were found to vary significantly from water levels collected in other nearby monitoring wells. These variations were attributed to possible localized fluctuations in ground water recharge or survey errors.

On January 7 and 18, 2008, ground water elevations were collected from three monitoring wells installed adjacent to the Site (MW-04 through MW-06) and four monitoring wells recently installed to the north and west of the Site (MW-08 through MW-11). The three on-site monitoring wells and MW-07 could not be located at the time of the current investigation.

Figure 4 represents ground water flow on January 7th and Figure 5 represents ground water flow on January 18th. Both diagrams depict ground water flow in a west to southwesterly direction beneath the Site. Areas of localized recharge and discharge consistent with observations made in 2006 were again noted during both recent monitoring events. These conditions may be attributed to artifical recharge from adjacent water or sewer pipes and ground water depression from nearby buildings or subway tunnels running beneath 41st Avenue and 23rd Street. Neither of these conditions should affect the migration of impacted ground water away from the Site.

3.0 FINDINGS AND RESULTS OF THE INVESTIGATION

3.1 Soil Quality

On December 4, 2007, ACT investigated soil quality beneath the site by advancing six soil borings at the locations identified by the NYSDEC, as indicated in Figure 3. Each boring was installed approximately 15 feet apart in the western portion of the Site where former petroleum storage facilities had been located. Copies of field notes generated during the investigation are contained in Appendix B.

The soil borings were completed between 9 and 10 feet bgs which corresponded to depths intersecting the water table at the time of field activities. All soil borings were installed utilizing a Geoprobe style truck-mounted unit with hydraulic percussion hammer. Soil samples were collected with five foot macro-core samplers containing dedicated acetate liners.

All sampling equipment was decontaminated between sampling events. Soil samples were observed for lithology as well as visual and olfactory evidence of contamination. The soil samples were screened in-field using a Photovac 2020 Photo-ionization detector (PID). The PID is capable of detecting organic vapors at concentrations as low as 0.1 parts per million (ppm).

With the exception of soil boring SB-01, all soil borings exhibited some olfactory evidence of contamination and elevated PID readings. Soil borings SB-03 and SB-04 generally produced PID readings under 50 ppm except at the water table where higher PID readings were observed. Soil borings SB-02, SB-05 and SB-06 each had PID readings greater than 100 ppm in soil samples collected above the water table. Soil boring SB-05 produced the highest PID reading of 1,300 ppm in a soil sample collected from 7 to 8 feet bgs.

Samples of unsaturated soil collected immediately above the water table in each boring were placed into laboratory-issued sampling containers and a cooler with ice prior to being transmitted to Ecotest Laboratories, Inc. (ELAP No. 10320). Each soil sample was analyzed of volatile organic compounds in accordance with EPA Method 8260, semi-volatile organic compounds in accordance with EPA Method 8270, TAL metals in accordance with EPA Method 6000/7000, pesticides in accordance with EPA Method 8081 and PCBs in accordance with EPA Method 8082. The laboratory analyses are summarized in Tables 1 through 3. The results were compared with NYSDEC TAGM (HWR-94-4046, revised December, 2000). Copies of the laboratory reports are contained in Appendix C.

The extent of subsurface soil impacted by gasoline constituents is depicted in Figure 6. Significant gasoline contamination was identified in soil borings SB-02, SB-05 and SB-06 which encompass the area of the Site where the two former pump islands and remote piping were located. The northwest corner of the Site where SB-01 was installed had virtually no gasoline contamination.

The southern portion of Site where SB-03 and SB-04 were installed contained only trace concentrations of gasoline contamination well below regulatory criteria.

As indicated in Table 3, no metals were identified above regulatory criteria in any of the soil samples. No PCBs or pesticides were detected in any of the soil samples with the exception of p,p-DDE which was detected only in soil boring SB-02 well below regulatory criteria.

3.2 Groundwater Quality

Ground water quality was determined during the current investigation over two sampling events. The first event took place in November 2006 and involved the installation and sampling of three on-site monitoring wells in the vicinity of the former petroleum storage facilities (MW-01 through MW-03) and four monitoring wells in the sidewalks adjacent to the Site (MW-04 through MW-07). The second event took place in December 2007 and involved the installation and sampling of four monitoring wells in the sidewalks on the north side of 41st Avenue and the west side of 23rd Street.

The results of the November 2006 sampling event were presented to the NYSDEC in a November 21, 2006 letter report and are summarized in Figure 7. Copies of the laboratory reports from that sampling event are also contained in Appendix C. As indicated in Figure 7, high concentrations of gasoline constituents were identified in ground water beneath the western portion of the Site. However, no separate-phase product was identified in any of the monitoring wells.

In December 2007 monitoring wells MW-08 through MW-11 were installed at offsite locations selected by the NYSDEC. These monitoring wells were intended to evaluate the potential downgradient migration of gasoline constituents from the Site and any possible upgradient contribution from neighboring properties such as the active gasoline service station located north of the Site.

Each monitoring well was installed with a Geoprobe-style drill unit and constructed with five feet of one inch diameter solid PVC riser pipe above 10 feet of 0.02 mil slotted well screen. The well screen was installed between 5 and 15 feet bgs so as to intersect the water. The annulus between the well screen and the borehole was backfilled with sand. A bentonite seal was placed one foot above the well screen and the remainder of the borehole was backfilled with sand to grade. A flush-mounted manhole cover was installed in the concrete sidewalk above each monitoring well.

Ground water samples were obtained from each monitoring well after purging it of several well volumes of development water. Ground water was collected into laboratory-issued sampling containers utilizing an inertial pump with dedicated polyethylene tubing and a decontaminated foot check valve. All of the water samples appeared to be sediment free and without a noticeable petroleum odor.

Each ground water sample was placed into a cooler and transported to Ecotest Laboratories for volatile organic compound analysis in accordance with EPA Method 8260. Copies of the laboratory reports are contained in Appendix C. Laboratory results were compared to NYS Water Quality Standards, NYSDEC TOGS 1.1.1, June, 1998.

No volatile organic compounds were detected in any of the ground water samples from monitoring wells MW-08 through MW-10. Low concentrations of six volatile organic compounds were detected in the ground water sample from monitoring well MW-11 (1 ug/l of 1,3,5-trimethylbenzene, 2 ug/l of 1,2,4-trimethylbenzene, 66 ug/l of methyl-tert butyl ether, 1 ug/l of p-ethyltoluene, 84 ug/l acetone and 16 ug/l of methyl ethyl ketone). Monitoring well MW-11 is located upgradient of the Site and immediately downgradient of the adjacent gasoline service station.

4.0 CONCLUSIONS

The results of the Investigation are contained in this report. Based upon this Investigation, ACT makes the following conclusions concerning the environmental quality of the Site.

- Ground water is present beneath the Site between 8 and 12 feet below ground surface. In the vicinity of the Site, ground water flows in a west to southwest direction with a horizontal gradient of approximately 0.01 ft/ft. Localized mounds and depressions in the water table have been observed along the Site's northern property boundary.

- Contaminated soil was identified above the water table in a limited area of the Site formerly occupied by two pump islands and remote fill piping. Other areas to the northwest and south did not contain impacted soil above the water table. Field screening results demonstrate that gasoline-impacted soil is present within the smear zone of the water table beneath the western portion of the Site.

- Free product was not observed in any of the on-site or off-site monitoring wells. Significant dissolved gasoline contamination was found in ground water beneath the Site.

- Impacted ground water was not detected north or west of the Site except for low level contamination immediately downgradient of the adjacent gasoline service station. Ground water beneath the Site is not impacting water quality beyond the sidewalks adjacent to its northern and western boundaries.

5.0 RECOMMENDATIONS

In light of the above findings, ACT recommends that the following remedial activities should be implemented to address the gasoline contamination in both subsurface soil and groundwater:

- Impacted soil in the western portion of the Site should be excavated, stockpiled and transported offsite to a licensed disposal facility. Endpoint soil samples should be collected and analyzed for gasoline constituents. Remaining soil impacted by residual gasoline contamination should be treated in-place with oxygen-releasing compounds prior to backfilling with clean soil.

- Impacted ground water should be treated with oxygen-releasing compounds to reduce gasoline contamination to ground water standards. Pilot testing should be conducted prior to full-scale ground water treatment. Monitoring wells should be re-installed on-site to replace those destroyed during development of the Site. Ground water monitoring should be conducted to verify the progress of remedial activities.

- A vapor barrier and sub-slab depressurization system should be installed, operated and maintained in any future development of the Site.

The details of the remedial phase of the project will be provided in a Remedial Action Work Plan under separate cover.

Paul P. Stewart
President

William K. Sisco
Senior Project Manager

Appendix 6
Previous Regulatory Correspondence

New York State Department of Environmental Conservation
Petroleum Remediation Unit
Division of Environmental Remediation, Region 2
47-40 21st Street, Long Island City, New York 11101-5407
Phone: (718) 482-6412 • **Fax:** (718) 482-6390
Website: www.dec.state.ny.us

Alexander B. Grannis
Commissioner

June 4, 2008

Mr. Angelo Gerasimou
AM Holding of New York
57-25 East Hampton Boulevard
Bayside, NY 11364

Re: 41-01 23rd Street,
Long Island City, NY
Spill #: 0412186

Dear Mr. Gerasimou:

The New York State Department of Environmental Conservation (the Department) has received and reviewed a Remedial Action Plan (RAP), dated May 5, 2008, and RAP Addendum letters dated May 27, 2008 and June 3, 2008, submitted on your behalf by Advanced Cleanup Technologies, Inc. The Department has determined that the Remedial Action Plan substantially meets the requirements of the Stipulation Agreement, and is hereby approved.

As understood by the Department, the RAP proposes excavation of contaminated soil down to 15 ft bgs. In order to facilitate excavation of the smear zone, a dewatering system will be installed to lower the water table and ground water will be discharged to the NYC Sewer in accordance with NYC dewatering permit requirements. RegenOx and ORC compounds will be added to and mixed with soil at the base of the excavation to remediate any residual impact. A quarterly ground water program will be initiated using existing wells around the site. If quarterly monitoring shows that gasoline constituents remain significantly above Department standards, residual ground water impact will be treated via an enhanced bioremediation plan developed in consultation with the Department.

As per the RAP, specifications for vapor intrusion mitigation methods will be submitted under separate cover once building foundation designs are finalized. At a minimum a 20 mil liner must be installed. The need for additional mitigation measures, including but not limited to sub-slab depressurization, positive pressure, indoor air monitoring, or institutional controls, will be determined by and developed in consultation with the Department once building foundation depth and design are finalized.

Pleased be advised that the Responsible Party and its contractors are solely responsible for safe execution of all invasive, chemical, and other remedial work performed under the work plan, and in particular, are responsible for the structural integrity of excavations and structures and utilities onsite and offsite that may be adversely affected by those excavations, and to obtain any permits or approvals that may be required in that regard. Further, the Responsible Party and its contractors are solely responsible for implementation of all appropriate health and safety measures during

performance of invasive, chemical, and other remedial work performed under the work plan, and to obtain any permits or approvals that may be required in that regard.

As per the Corrective Action Plan attached to the Stipulation Agreement, please implement the approved plan within 45 days of receipt of this notice. Please notify the Department upon scheduling the remedial activities. If you have any questions or comments please contact my office at 718-482-6412.

Sincerely,

Andre Obligado
Engineering Geologist
Region 2

cc: J. Sun (NYSDEC), P. Stewart (ACT, Inc.), G. Heath (NYCDEP)

The City of New York

DEPARTMENT OF ENVIRONMENTAL PROTECTION
59-17 Junction Boulevard
Flushing, New York 11373

Emily Lloyd
Commissioner

Tel. (718) 595-6565
Fax (718) 595-3525
elloyd@dep.nyc.gov

Angela Licata
Deputy Commissioner

Bureau of Environmental Planning & Analysis

Tel. (718) 595-4398
Fax: (718) 595-4479
alicata@dep.nyc.gov

NOTICE TO PROCEED

June 19, 2008

Derek Lee, R.A
Queens Borough Commissioner
New York City Building Department
120-55 Queens Blvd.
Kew Gardens, NY 11424

Re: 41-01 and 41-09 23rd Street &
41-02 to 41-10 24th Street, Long Island City
Hazardous Materials "E" Designation
E-104: Block 413, Lots 20, 22, 27
DEP # 08DEPTECH324Q
NYSDEC Spill Nos. 04-12186

Dear Commissioner Lee:

The New York Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the May 2008 Remedial Action Plan and Health and Safety Plan conducted by Advanced Cleanup Technologies, Inc., on behalf of Mr. Angelo Gerasimou of A.M. Holding of New York Corporation for the above referenced parcels. The proposed development plan slated for this site includes the construction of a 17-story mixed-use building. The subject parcels have been designated with a hazardous materials "E" (E-104) as part of the Long Island City Rezoning (CEQR # 00DCP055Q).

The entire site is approximately 18,500 square feet in area and is rectangular in shape. Lots 22 and 27 are currently vacant while lot 20 contains a two-story mixed use building. The property located at 41-01 23rd street (Block 413, Lot 22) is the subject of an active NYSDEC Spill Number 04-12186 and Hazardous Materials 'E' Designation. The property located at 41-02 to 41-10 24th Street (Block 413 Lot 27) is also subject to Hazardous Materials 'E' Designation. These two lots, along with a third lot located at 41-09 23rd Street (Block 413, Lot 20) have been combined into one lot.

A Phase I Environmental Site Assessment of Lot 22 was completed by ACT on January 2005. The Phase I identified oil staining inside the former auto repair shop, historical gasoline filling station and auto repair operations, and an active NYSDEC spill number at the gasoline station to the north. Lot 22 previously contained a single-story 2,000 square foot auto repair building, a one-story metal shed, four 550 gallon underground gasoline storage tanks and two 2,500 gallon underground gasoline storage tanks. All known petroleum storage facilities were removed from the site in June 2006. In February 2005, a Phase II Environmental Site Assessment was performed on Lot 22. The Phase II included a Ground Penetrating Radar survey over the entire site. Several USTs were identified and remnants of piping associated with pump islands formerly located along 41st Avenue and 23rd Street (former gas station) were also identified. Contaminated soil and groundwater contamination was identified and NYSDEC assigned spill number 0412186 to the site. In January 2008 a second Phase II was conducted at lot 22 which included six onsite soil borings, three onsite conventional monitoring wells and eight offsite conventional monitoring wells. Soil and groundwater samples were collected and analyzed for petroleum constituents, TAL metals, PCBs and

pesticides. Gasoline impacted soils was identified at the water table interface in five of the six soil borings above regulatory criteria.

On September 2005 JMK Environmental Solutions,, Inc., completed a Phase I ESA of Lot 27. The Phase I assessment revealed the presence of a closed NYSDEC spill number 97-14400 which involved petroleum-impacted soil beneath lot 27. Soil beneath two areas of Lot 27 were excavated, endpoint samples analyzed and the excavation backfilled with clean soil. In February 2008 a subsurface investigation of Lot 27 was completed. The investigation included a GPR survey and installation and sampling of four soil borings and four temporary groundwater monitoring wells. The results of the subsurface investigation of Lot 27 revealed the absence of any VOCs, SVOCs, or PCB/Pesticides in soil or groundwater samples above background concentrations or regulatory standards.

DEP has approved the May 2008 Remedial Action Plan and Health and Safety Plan. The remedial activities include the removal of contaminated soils; treatment of inaccessible impacted soil and groundwater using a combination of chemical oxidizer and bioremedial solution; installation of a 20-mil HDPE soil vapor barrier under the basement level of the proposed building; and the installation of a sub slab depressurization system under the basement level of the proposed building to prevent VOCs from entering air inside the proposed building.

DEP has concluded that the applicant may proceed with construction, provided that a Remedial Closure Report, certified by a Professional Engineer, is submitted by the applicant for DEP's review/approval once all DEP remedial requirements have been properly implemented (i.e., proper transportation/disposal manifests from impacted soils removed from the site, **closure of NYSDEC spill # 04-12186**, installation of the vapor barrier and sub slab depressurization system in accordance with manufacturers specifications, photographs, etc.). Therefore, DEP has no objection to the issuance of DOB permits to the applicant for work relating to the proposed development project on the subject parcels, with the understanding that no other permit (i.e. Certificate of Occupancy) will be issued by your agency to the applicant until DEP has reviewed/approved the P.E. certified Remedial Closure Report and has issued a "Notice of Satisfaction" for the proposed project.

If you have any questions or comments, please contact Callista Nazaire at (718) 595-4401.

Sincerely,

John Wuthenow,
Director, Site Assessment

cc: John Wuthenow; Callista Nazaire; Mr Angelo Gerasimou, 57-25 East Hampton Blvd, Bayside, NY 11364; Paul Stewart, Advanced Cleanup Technologies, 115 Rome Street, Farmingdale, NY 11735

Environmental Protection

Caswell F. Holloway
Commissioner

Vincent Sapienza, P.E.
Deputy Commissioner
Bureau of Wastewater Treatment

96-05 Horace Harding Expwy
Corona, NY 11368

Tel. (718) 595-4906
Fax (718) 595-6950
vsapienza@dep.nyc.gov

April 21, 2010

Advanced Cleanup Technologies, Inc.
960 South Broadway, Suite 108
Hicksville, NY 11801
Attn: Paul P. Stewart

Re: Groundwater Discharge
41-01 23rd Street, Queens
File # C-4717

Dear Mr. Stewart:

This Letter of Approval is an amendment to the Letter of Approval issued on April 14, 2010.

This is in response to the April 2010 submission, requesting for permission to discharge up to **9,999 gallons per day** (gpd) of groundwater generated during the dewatering activities at 41-01 23rd Street, Queens, NY 11101, in response to New York State Department of Environmental Conservation Spill No. 0412186. The groundwater will be treated through one 10,000 gallon frac tank and four 200 lb carbon units, as per provided schematic and information, before discharging to an underground 6" pipe. The pipe leads to the existing 12" combined sewer located at 23rd Street between Queens Plaza North and 41st Avenue in Queens, NY.

Based upon the information, schematic and analytical data submitted, you are hereby conditionally authorized, to discharge up to 9,999 gpd of groundwater, treated through the above system, per provided schematic and information, as specified in your submissions, **for a period of ninety days**, to the combined sewer at the above mentioned location. **This Letter of Approval shall expire at midnight on April 13, 2011.**

This conditional approval, however, is subject to your obtaining a groundwater discharge Approval, specifying allowable flow rates, from the Division of Permitting and Connections, Bureau of Water and Sewer Operations, if discharges exceed 10,000 gpd. You are also required to follow manufacturer specifications for the operation and maintenance of the selected equipment. **This Letter of Approval is contingent upon permittee's compliance with any other Federal, State or Local laws applicable to the permitted activity.**

Payment shall be made to and permit obtained from the Bureau of Customer Service for groundwater discharge into the New York City Wastewater System in accordance with the Water and Wastewater Rate Schedule established by the New York City Water Board.

You must notify this section in writing prior to the commencement of discharge. In addition, you are required to hold the groundwater to the maximum extent practicable during heavy wet weather events. Refer to the File # C-4717 in any correspondence to this office.

This Letter of Approval is an Order of the Commissioner of the Department of Environmental Protection. Please be advised that failure to comply with this Letter of Approval may result in the issuance of Notices of Violation (returnable to the New York City Environmental Control Board) and/or revocation of the Letter of Approval. Notices of Violation carry penalties of up to $10,000 a day, per violation.

If you have any questions concerning this matter, please contact Mr. Sean Hulbert, Engineer, at (718) 595-4715.

Sincerely,

Frances Leung, P.E., Chief,
IPP Inspection & Permit Section

Paul Stewart

From: Andre Obligado [aaobliga@gw.dec.state.ny.us]
Sent: Monday, June 13, 2011 11:07 AM
To: Paul Stewart
Cc: Joseph O'Connell; Emanuel Kokinakis; Jonathan Cruickshanks
Subject: RE: 41-01 23rd Street, Long Island City, NY (Spill No. 04-12186)

Paul,

Thank you. The plans are acceptable. Please proceed with the work and please keep me updated on remedial activities.

Sincerely,

Andre Obligado
Engineering Geologist
Division of Environmental Remediation
Petroleum Remediation Unit
NYS Dept. of Enivonmental Conservation
47-40 21st Street
Long Island City, NY 11101
Tel: 718-482-6412
Fax: 718-482-6390

>>> "Paul Stewart" <PaulS@actenvirons.com> 6/13/2011 10:55 AM >>>
Andre,

Cross-Section A-A on the attached SSD Plan (hat was forwarded on May 2nd states that the perforated sub-slab depressurization piping will be wrapped with filter fabric. The riser pipe will be equipped with a sampling port and access for installation of a blower if needed. As a precautionary measure, sub-slab vacuum points will also be installed within the foundation floor. The decision as to whether an active SSD system is needed can be made following installation of the foundation floor and before the riser pipe is installed.

Please contact me if you have any questions concerning the above.

Regards,

Paul P. Stewart
Advanced Cleanup Technologies, Inc.

From: Andre Obligado [mailto:aaobliga@gw.dec.state.ny.us]
Sent: Monday, June 13, 2011 10:40 AM
To: Jonathan Cruickshanks
Cc: Paul Stewart; Emanuel Kokinakis
Subject: RE: 41-01 23rd Street, Long Island City, NY (Spill No. 04-12186)

Jonathan,
Thank you for the clarification. Do you plan to use filter fabric around the piping? Also, will there be an access

location to the riser in case sampling is need or a blower needs to be installed for active venting?
Thank you,

Andre Obligado
Engineering Geologist
Division of Environmental Remediation
Petroleum Remediation Unit
NYS Dept. of Enivonmental Conservation
47-40 21st Street
Long Island City, NY 11101
Tel: 718-482-6412
Fax: 718-482-6390

>>> "Jonathan Cruickshanks" <jcruickshanks@megacontractinginc.com> 6/8/2011 1:52 PM >>>
Andre,

I believe the wrong plan was sent to you. The revision attached eliminated the drainage system because it would not be required due to the construction of the foundation. Our perimeter foundation system is a 40" diameter concrete secant wall toed into the bedrock below eliminating water from gaining entry below the building footprint. A dewatering system will be implemented during excavation and foundations to drain all water within our encased foundation system following DEC/DEP protocol. Indeed the water table is high around our building but our extensive foundation system will prevent water within our building footprint.

Thanks,

Jon Cruickshanks
Project Supervisor
Mega Contracting
P: 718.932.6342
F: 718.545.5983

From: Andre Obligado [mailto:aaobliga@gw.dec.state.ny.us]
Sent: Monday, May 23, 2011 12:52 PM
To: Paul Stewart
Cc: Emanuel Kokinakis; Jonathan Cruickshanks
Subject: Re: 41-01 23rd Street, Long Island City, NY (Spill No. 04-12186)

Paul,
The drainage plan says " if water table is high than the drainage system will be eliminated." Wouldn't a depth to ground water of 6.34 feet below grade be considered a high water table, if the base of the foundation will be at 15 ft bgs? What are the alternative plans if the water table is indeed high as all evidence suggests?

ndre

Andre Obligado
Engineering Geologist
Division of Environmental Remediation
Petroleum Remediation Unit
NYS Dept. of Enivonmental Conservation
47-40 21st Street
Long Island City, NY 11101
Tel: 718-482-6412
Fax: 718-482-6390

CLEAN EARTH

Faster, smarter, greener solutions.

19 July 2011

Mega Contracting Inc.
22-60 46th street
Astoria, NY 11105

RE: Letter of Acceptance for Queensboro Development LLC;
23-01 41st Avenue, Long Island City, NY 11101

Dear Sir/ Ma'am,

Clean Earth of Carteret (CEC) has received the analytical results performed by American Analytical Laboratories (AAL Order No.: 106167) for the above referenced site. Based upon the review of the data and profile provided, CEC can accept the non-hazardous petroleum impacted soil being generated from the site. CEC's acceptance criteria limits us to accept only Non Hazardous petroleum (<1% by volume) impacted soils into our facility. Any soils with free petroleum product or liquids, sludge, or hazardous waste cannot be accepted. A summary of the analysis showed five Total VOCs, five Total SVOCs, five PCBs, and five total Metals were completed. In accordance with CEC's approval requirements, the analysis provided is missing RCRA characteristics and TPH analysis.

Please note that RCRA analysis (every 1200 Tons), TCLP Metals and TPH analysis (every 150 Tons) is required to comply with CEC's Class B permit. In essence of saving time, CEC can collect the samples as required upon arrival at the facility and bill accordingly.

If you should have any questions or require any additional information, please call me at (732) 541-8909.

Sincerely;

John Eshelman
Operations Manager

Appendix 7
Sample Non-Hazardous Soil Disposal Manifest

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLD982109761
Manifest Document No. 9800 1
2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address
USEPA Region 4 – BCX
61 Forsyth St., 11th Fl., Sam Nunn Bld
Atlanta, GA 30303

4. Generator's Phone ( )

5. Transporter 1 Company Name
Robbie D. Woods

6. US EPA ID Number
ALD067138891

A. Transporter's Phone
800-356-7457

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
Greenleaf Treatment Services LLC
100 Waste Research Drive
Macon, GA 31206

10. US EPA ID Number
GAR000007484

C. Facility's Phone
478-788-8899

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. ~~Non-Hazardous, Non-Regulated WASTE WATER~~ Approval: 10347	01	TT	5200	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

#63126

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Site:
BCX Facility
1859 East Adams Street
Jacksonville, Florida

SITE: BCX Facility
BREAK: 2.12
OTHER: V.1

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
KOURTNEY GRINSTEAD, USCG, FOSCR	FOR US EPA FOSC	09	20	04

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
WILLIAM D SMITH		09	20	04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

10445681

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
MARK RHYNE		09	20	04

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

ORIGINAL - RETURN TO GENERATOR

12-BLC-M5

Appendix 8
Specifications for Regenox and ORC Advanced

RegenOx™

CHEMICAL OXIDATION REDEFINED...

RegenOx™ is an advanced in situ chemical oxidation technology designed to treat organic contaminants including high concentration source areas in the saturated and vadose zones*

PRODUCT FEATURES:

- Rapid and sustained oxidation of target compounds
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater aquifers

RegenOx product application

HOW IT WORKS:

RegenOx maximizes in situ performance using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. The product is delivered as two parts that are combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the combined product produces an effective oxidation reaction comparable to that of Fenton's Reagent without a violent exothermic reaction. RegenOx safely, effectively and rapidly destroys a wide range of contaminants in both soil and groundwater (Table 1).

ACHIEVES RAPID OXIDATION VIA A NUMBER OF MECHANISMS

RegenOx directly oxidizes contaminants while its unique catalytic complex generates a suite of highly charged, oxidative free radicals that are responsible for the rapid destruction of contaminants. The mechanisms by which RegenOx operates are:

- Surface- Mediated Oxidation: (see Figure 1 and description below)
- Direct Oxidation: $C_2Cl_4 + 2\ Na_2CO_3 \bullet 3\ H_2O_2 + 2\ H_2O \longleftrightarrow 2CO_2 + 4\ NaCl + 4\ H_2O + 2\ H_2CO_3$
- Free Radical Oxidation:
  - Perhydroxyl Radical ($HO_2\bullet$)
  - Hydroxyl Radical ($OH\bullet$)
  - Superoxide Radical ($O_2\bullet$)

Figure 1. RegenOx™ Surface-Mediated Oxidation

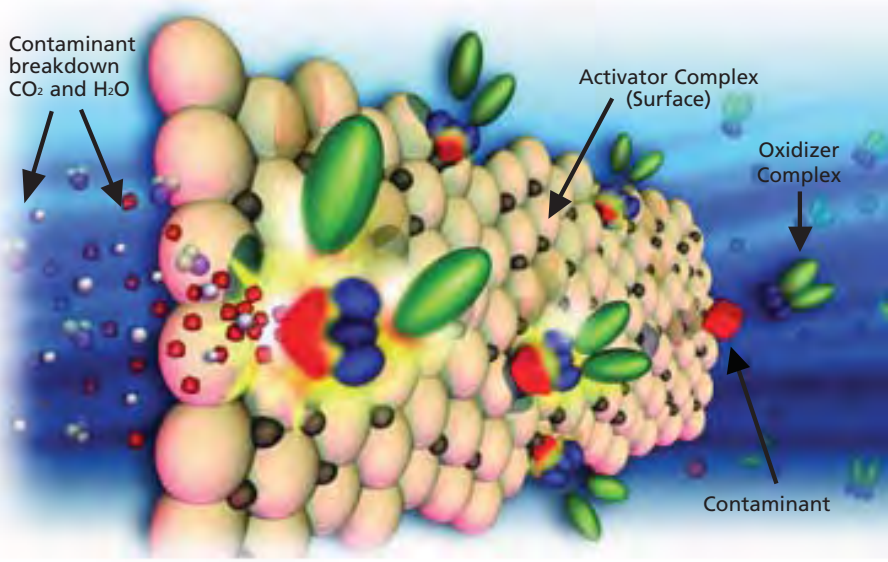


Figure 1. Surface-Mediated Oxidation is responsible for the majority of RegenOx contaminant destruction. This process takes place in two stages. First, the RegenOx activator complex coats the subsurface. Second, the oxidizer complex and contaminant react with the activator complex surface destroying the contaminant.

* Patent applied for

RegenOx™

From Mass Reduction to Bioremediation:

RegenOx™ is an effective and rapid contaminant mass reduction technology. A single injection will remove significant amounts of target contaminants from the subsurface. Strategies employing multiple Regenox injections coupled with follow-on accelerated bioremediation can be used to treat highly contaminated sites to regulatory closure. In fact, RegenOx was designed specifically to allow for a seamless transition to low-cost accelerated bioremediation using any of Regenesis controlled release compounds.

Significant Longevity:

RegenOx has been shown to destroy contaminants for periods of up to one month.

Product Application Made Safe and Easy:

RegenOx produces minimal heat and as with all oxidants proper health and safety procedures must be followed. The necessary safety guidance accompanies all shipments of RegenOx and additional resources are available on request. Through the use of readily available, highly mobile, direct-push equipment and an array of pumps, RegenOx has been designed to be as easy to install as other Regenesis products like ORC® and HRC®.

Effective on a Wide Range of Contaminants:

RegenOx has been rigorously tested in both the laboratory and the field on petroleum hydrocarbons (aliphatics and aromatics), gasoline oxygenates (e.g., MTBE and TAME), polyaromatic hydrocarbons (e.g., naphthalene and phenanthrene) and chlorinated hydrocarbons (e.g., PCE, TCE, TCA).

Oxidant Effectiveness vs. Contaminant Type:

Table 1

Contaminant	RegenOx™	Fenton's Reagent	Permanganate	Persulfate	Activated Persulfate	Ozone
Petroleum Hydrocarbons	**A**	**A**	B	B	B	**A**
Benzene	**A**	**A**	D	B	B	**A**
MTBE	**A**	B	B	C	B	B
Phenols	**A**	**A**	B	C	B	**A**
Chlorinated Ethenes (PCE, TCE, DCE, VC)	**A**	**A**	**A**	B	**A**	**A**
Chlorinated Ethanes (TCA, DCA)	**A**	B	C	D	C	B
Polycyclic Aromatic Hydrocarbons (PAHs)	**A**	**A**	B	B	**A**	**A**
Polychlorinated Biphenyls (PCBs)	B	C	D	D	D	B
Explosives (RDX, HMX)	**A**	**A**	**A**	**A**	**A**	**A**

Based on laboratory kinetic data, thermodynamic calculations, and literature reports.

Oxidant Effectiveness Key:

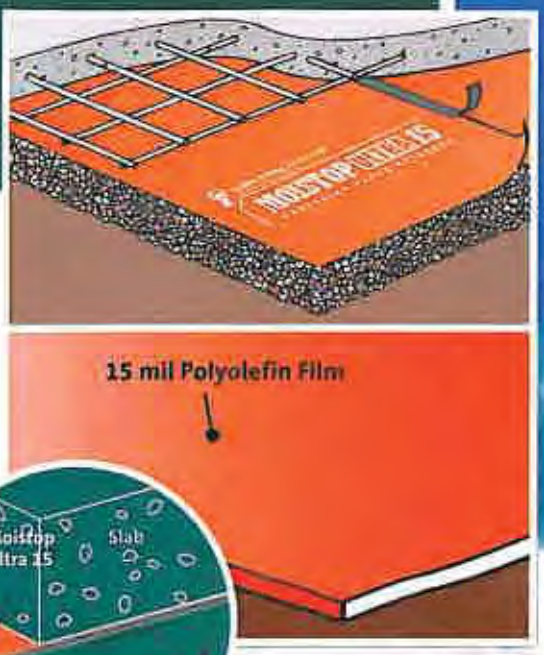
A = Short half life, low free energy (most energetically favored), most complete
B = Intermediate half life, low free energy, intermediate degree of completion
C = Intermediate half life, intermediate free energy, low degree of completion
D = Long half life, high free energy (least favored), very low degree of completion

REGENESIS
Advanced Technologies for Groundwater Resources
1011 Calle Sombra / San Clemente / California 92673-6244
Tel: 949/366-8000 / Fax: 949/366-8090 / www.regenesis.com

Appendix 9
Design Specifications for Vapor Barrier/Waterproofing Membrane and sub-slab depressurization system

MOISTOP ULTRA 15

UNDERSLAB VAPOR RETARDER



Exceptional Against Moisture Vapor Migration

When you pour a concrete slab on grade, you extend an invitation for any moisture underneath the slab to migrate through the concrete in the form of water vapor. If unchecked, this moisture intrusion trapped under the slab could undermine the integrity of not only the slab, but can also damage any finished floor covering applied over it.

Specifying a quality vapor retarder beneath concrete slabs on grade is inexpensive insurance against costly finished floor covering and coating failures. That's why the Fortifiber Building Systems Group® offers the most complete line of underslab products, incuding the most technologically advanced vapor retarder ever made – Moistop Ultra 15.

"Moistop Ultra 15 is specifically designed to deliver long-lasting protection."

Moistop Ultra 15 protects building interiors from damaging water vapor transmission through concrete slabs.

One Chance To Do It Right

With a water vapor permeance of .02 perms and a tensile strength and puncture resistance that outperforms even thicker membranes, Moistop Ultra 15 represents a new standard for concrete underlab products. Moistop Ultra 15 exceeds ASTM E-1745-97 Class "A", "B" and "C" requirements for underslab vapor retarders. Manufactured from ISO certified virgin resins through a unique process, Moistop Ultra 15 is extremely durable and puncture resistant.

Moistop Ultra 15 is economically engineered to deliver a superior level of performance at a comparatively low installed cost. The product not only stands up to the most rugged jobsite abuse, it is also resistant to degradation from burial — delivering life-long protection from unwanted moisture vapor migration through concrete slabs. The product is an integral component in the Fortifiber Building Systems Group's Moisture Control System for flooring, and engineered to address commercial applications.

Hassle-Free Installation

Supplied in 14 foot wide rolls, center-folded to 7 feet for ease of handling and installation, Moistop Ultra 15 rolls out quickly and smoothly over leveled and tamped soil or compacted fill. There is no need to hassle with awkward panels or flimsy films. Simply overlap the material 6 inches and tape the seams with Moistop® Tape.

Specifications & Warranty

The back of this sheet gives more details on Moistop Ultra 15, including specifications, availability and warranty information.

Moistop Ultra 15 is a product manufactured by the Fortifiber Building Systems Group. With more than a seventy year history of proven performance, technical expertise and practical know-how, the company has become a trusted partner to builders, architects and code officials.

- **Exceeds ASTM E-1745 Class "A", "B" and "C" Standards**
- **Exceptional Tear Strength**
- **Puncture Resistant**
- **Moistop® Tape**
  Moistop Tape was designed for use with Moistop Underslab Vapor Retarders. Its excellent adhesion assures tight joints. Available in 4 inch x 108 foot rolls.
- **The Boot®**
  The Boot's unique design makes quick work of sealing around pipes, conduit and other penetrations of any size.

MOISTOP ULTRA 15

Product Description: Moistop Ultra 15 is a superior vapor retarder designed for slabs on-grade to stop the migration of moisture vapor through the slab.

Composition: Moistop Ultra 15 is a 15 mil polyolefin film manufactured with a proprietary formulation of ISO certified virgin resins.

Size & Weight: Moistop Ultra 15 is supplied in 1,960 sq. ft. rolls (168" by 140'); weight is approximately 7.3 lbs./100 sq. ft. Thickness is 15 mils.

Applicable Standards: American Society for Testing & Materials (ASTM):

- *ASTM D-882 – Tensile Properties of Thin Plastic Sheeting*
- *ASTM D-1004 – Standard Test Method for Initial Tear Resistance of Plastic Film and Sheeting*
- *ASTM D-1709 – Impact Resistance of Plastic Film by the Free-Falling Dart Method*
- *ASTM E-96 – Water Vapor Transmission of Materials*
- *ASTM E-154-99 – Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover*
- *ASTM E-1745 – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs*

Physical Properties: Moistop Ultra 15 is continually tested in accordance with ASTM procedures. The values shown in Table 1 are averages obtained in these tests. Moistop Ultra 15 meets all requirements for Class "A", "B" and "C" Underslab Vapor Retarders per ASTM E-1745.

Installation: Follow the installation procedures outlined in ASTM E-1643. After the base for the concrete has been leveled, compacted, and tamped, install the vapor retarder over the base and compacted fill, with the longest dimension parallel to the direction of the pour of the concrete. All joints should be lapped 6" (152 mm) and sealed with Moistop Tape. Seal penetrations with The Boot and Moistop Tape.

Limitations: Product should be covered as soon as possible. Inspect product to ensure it is free of any punctures or damage which may detract from the underslab vapor retarder integrity. Product should be as clean and dry as possible before sealing with Moistop Tape. Not recommended for below grade vertical waterproofing applications.

Availability: The Fortifiber Building Systems Group's products are distributed nationwide. For product information and pricing, please call a Fortifiber distributor near you. If you need assistance locating a participating distributor, please call our Customer Service Department at 1-800-773-4777.

Warranty: Fortifiber Corporation warrants that its products are in compliance with their published specifications and are free from defects in materials and workmanship for a period of two years from the date of purchase. This warranty does not apply to loss due to abuse. Material found to be defective will be replaced at no charge by Fortifiber, but in no event shall Fortifiber be liable for any other costs or damages, including any labor costs.

THIS EXPRESS WARRANTY IS GIVEN IN LIEU OF AND EXCLUDES ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Fortifiber's sole obligations under this warranty are as set forth herein. In no event shall Fortifiber be liable for any lost revenue or profits, direct, indirect, special, incidental or consequential damages of any kind.

SPECIFICATION SUMMARY: Provides vapor retarding system, including sealing joints and protrusions through vapor retarder, with accessories as required for complete installation.

VAPOR RETARDER (UNDERSLAB): Fortifiber/ Moistop Ultra 15 Underslab Vapor Retarder. 15 mil polyolefin film.

REFERENCE SPECIFICATION: ASTM E-1745-97 Class "A", "B" and "C".

Table 1- Physical Properties

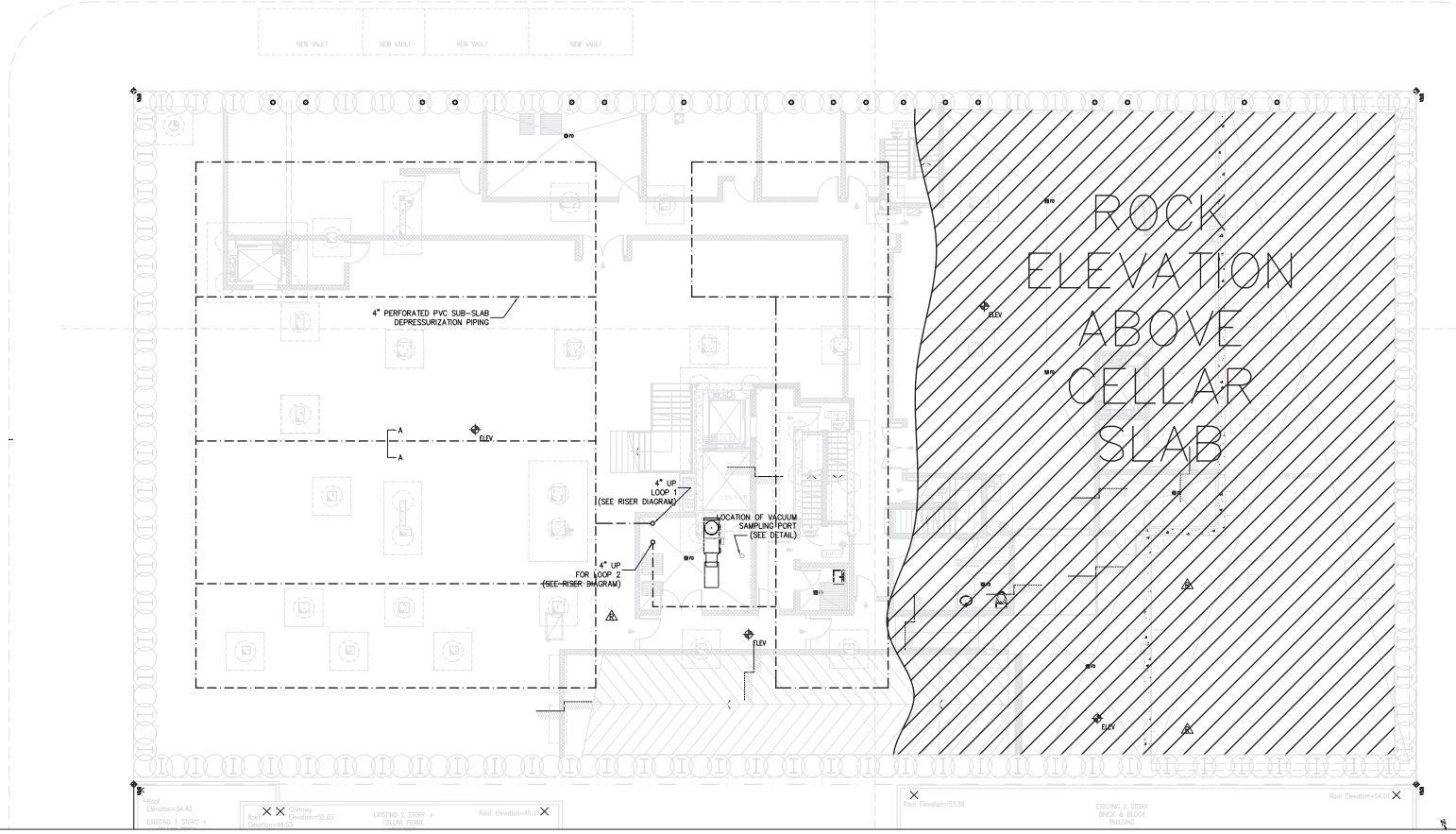
Material Characteristic	ASTM Test Method	E-1745 Class "A" Requirements	Moistop Ultra 15 Results
Moisture Vapor Permeance	E-154, Section 7 (E-96, Method A)	.30 Perms	.02 Perms
	E-154, Section 7 (E-96, Method B)	.30 Perms	.02 Perms
Tensile Strength	E-154, Section 9 (Method D-882)	45 lbf/in (min)	70 lbf/in (min)- MD 70 lbf/in (min)- CD
Puncture Resistance	D-1709, Method B	2200 Grams (Min.)	3000 Grams

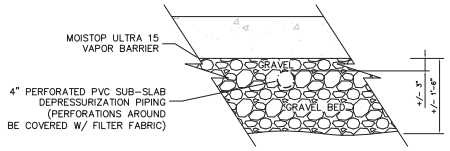
*Moistop Ultra 15 meets all requirements for Class "A", "B" and "C" Underslab Vapor Retarders per ASTM E-1745

Fortifiber Building Systems Group®
Protecting Your World from the Elements®

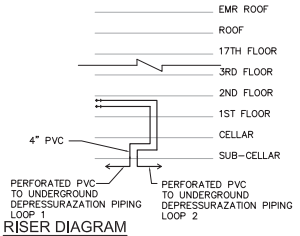
Call 1-800-773-4777 or 1-775-333-6400 for sales and technical assistance. On the Internet visit www.fortifiber.com.

REV.	DESCRIPTION	DATE
2	LOOP ADDED	1/26/12
1	REVISION	1/13/12

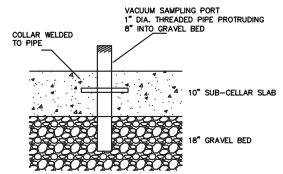




SECTION A-A



RISER DIAGRAM



VACUUM SAMPLING PORT

MEGA CONTRACTING INC.
22-60 46TH STREET
ASTORIA NY 11105

PROJECT:

MIXED USE DEVELOPMENT
23-10 41ST AVENUE
QUEENS, NY

DRAWING:

SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

SCALE: 1/8" = 1'-0"

DATE: 24 MAR. 2011

DWG #: P-001.00

Appendix 10
Construction Health and Safety Plan

HEALTH AND SAFETY PLAN
REMEDIAL AND CONSTRUCTION PHASES

41-01 and 41-09 23rd Street
41-02 and 41-10 24th Street
Long Island City, New York 11101

CEQR No. 00DCP055Q
Block 413, Lots 20, 22, 27
NYSDEC Spill Nos. 04-12186

May 27, 2008

ACT File #: 4019-LINY

Prepared for:

Mr. Angelo Gerasimou
AM Holding of New York Corporation
57-25 East Hampton Boulevard
Bayside, New York 11364

TABLE OF CONTENTS **Page No.**

FIGURES

APPENDICES

1.0 INTRODUCTION

The purpose of this Health and Safety Plan (HASP) is to outline site specific health and safety procedures to be followed in the performance of the remedial action planned at 41-01 and 41-09 23rd Street and 41-02 to 41-10 24th Street, Long Island City, New York ("the Site").

ACT's Site Supervisor will have oversight responsibility over the project to ensure that this HASP is properly implemented and that ACT and its subcontractors adhere to all OSHA regulations and other established industry health and safety practices.

All subcontractors will designate on-site individuals responsible for health and safety issues and air monitoring relating to the subcontractor's scope of work. The subcontractor will communicate to the Site Supervisor the name of this individual and what specific actions are to be taken by the subcontractor during that work day that will be required to comply with the HASP.

2.0 SITE CONTROL

The Site Supervisor will establish a command post within the Site located up-wind from on-going work areas. If there are other contractors performing duties on the Site, the Site Supervisor will coordinate the scope of work outlined in the Work Plan with the work of all other contractors, on-site so as not to jeopardize the health and safety of any personnel on-site.

A fence exists around the perimeter of the work area. This satisfies requirements of the New York City Department of Buildings. All work will be performed within the site fence, or building. Flagmen and traffic control will be provided as required at all times. Only vehicles delivering equipment or being loaded will be permitted within the confines of the fence. At no time, and under no circumstances, shall any vehicle be parked inside the site fence.

The Site will be left hazard-free at the end of each work day. In addition, all fence gates will be operable and locked in a closed position, all site fencing will be properly maintained and site lighting will be operational. The property owner will provide site security during off-work hours.

A personnel/equipment decontamination area will be established within the Site to ensure no contaminated material is tracked off-site on footwear and/or vehicle tires, etc. Gross decontamination will be accomplished by swing loose soil off of equipment with a broom. More vigorous cleaning will be accomplished using an Alconox solution, followed by clean water rinses. The need for aggressive decontamination will be decided by the Site supervisor and the NYSDEC on-Site representative.

3.0 SITE PERSONNEL

All on-site personnel shall have training in accordance with the regulations codified at 29 CFR 1910.20. Proof that the qualifications of the all on-site personnel comply with these regulations will be maintained by the Site Supervisor prior to their being allowed to be included in the on-Site workforce. All on-site personnel shall familiarize themselves with the contents of the HASP and scope of the Immediate Response Work Plan for the Site and attend a daily site specific health and safety briefing prior to the commencement of work activities.

4.0 EVALUATION AND CONTROL OF ON-SITE CONTAMINATED MATERIALS

Substances known to be hazardous to human health have been detected in environmental media beneath the Site. A discussion of those chemicals suspected of being present is provided below. The standards listed in the table represent Immediate Danger to Life and Health (IDLH), Time-Weighted Average (TWA) and Short-Term Exposure Limit (STEL).

Compound	IDLH[1] mg/m^3	TWA[1] mg/m^3	STEL[1] mg/m^3
Benzene	1625	1.63	8.13
Toluene	1900	375	560
Ethyl benzene	3530	435	545
Xylenes	3970	435	655
1,2,4-Trimethylbenzene	N.L.	125	N.L.
1,3,5-Trimethylbenzene	N.L.	125	N.L.
Benzo(a)anthracene	N.L.	0.2[2]	N.L.
Benzo(a)pyrene	N.L.	0.2[2]	N.L.
Benzo(b)fluoranthene	700[2]	0.1[2]	N.L.
Chrysene	N.L.	0.2[2]	N.L.

[1] *All values taken from NIOSH International Chemical Safety Cards (Http://www.cdc.gov/niosh/ipcsneng/nengname.html)*

[2] *From ATSDR, 12/90; OSHA limit for all Polyaromatic Hydrocarbons*

N.L.. None Listed

The primary routes of exposure for these chemicals are inhalation, ingestion and absorption through the skin and mucous membranes. The health risks associated with the exposure to these substances will be minimized through a combination of monitoring and protective equipment. Dust monitoring will be performed, as outlined in the Community Air Monitoring Program (Appendix A).

Continuous air monitoring will be performed in the work area to assess the inhalation hazard associated with any petroleum related chemicals suspected of being present on the site. A Photovac Photoionization Detector will be used for monitoring air quality. The instrument will be calibrated with a standard of 10 ppm isobutylene.

4.1 Protective Equipment

Based on an evaluation of the potential hazards, Level D personal protective equipment (PPE) will be required to perform the majority of the tasks involved in this project. For the purpose of this project, Level D PPE will consist of normal work clothing, OSHA approved steel toed work boots and safety glasses, hard hats and work gloves. All personnel who may come into direct contact with toxic levels of organic vapors, defined as PID readings exceeding 5.0 ppm over background conditions, or who may work in an area of high dust concentration, defined as particulate levels exceeding 150 ug/m^3, will be required to upgrade to Level C PPE. Level C PPE will require the addition of chemical resistant gloves, Tyvek or equivalent suits and air-purifying respirators fitted with the appropriate organic vapor cartridges. Reserve quantities of items constituting prescribed Level C PPE will be maintained on-site for use as required.

4.2 On-Site Air Monitoring

The Site Supervisor will designate an individual responsible for real-time air monitoring of the work area(s) on-site for the presence of organic vapors. Air monitoring will be required during the performance of all intrusive activities as defined by the Site Supervisor. A properly calibrated Photo-ionization Detector (PID) or equivalent as approved by the Site Supervisor and capable of detecting organic vapors at a minimum of 0.1 parts per million (ppm) will be used to accomplish this task. The individual designated to perform air monitoring will maintain, on-Site, a daily written Air Monitoring Log to record the status of organic vapors on-Site. The log will be made available for review by the Site Supervisor and the NYSDEC Project Manager and will include the following:

A. Wind direction at the Site will be recorded at the beginning of the work day and updated if conditions change.

B. Background air monitor readings of organic vapors will be taken at the Site and recorded in the log at times and locations to correspond with Paragraphs C and D below.

C. At a minimum, air monitor readings will be taken within the work area(s) at fifteen (15) minute intervals and recorded in the log.

D. At a minimum, air monitor readings will be taken at the downwind property boundary(s) of the Site at one-hour intervals and recorded in the log.

If at any time a reading of 10 ppm or greater above site background is detected or a significant odor is present, air monitoring personnel will immediately notify the Site Supervisor. If the reading is continuous over a specified period that would impact the health and safety of those individuals involved, an upgrade from Level D to Level C PPE may be required and/or control measures as specified in Section 4.3 may be employed. Continuous air monitoring will then be initiated with PPE requirements possibly downgraded based on a reduction of the detected levels of organic vapors.

Air quality in the vicinity of the work area will be continuously monitored for organic vapors and dust in accordance with the community air monitoring plan (Appendix A).

4.3 Control of off-Site Migration of Contaminants

4.3.1 Odor and Vapor Control

ACT and all subcontractors will be required to minimize and/or control odors indicative of organic vapors that may be generated by the work done on-site. Of particular concern is the migration of organic vapors off-site. Prior to the commencement of work on-site, all subcontractors will present, and have approved by the Site Supervisor, a contingency plan to control the off-site migration of these odors/vapors. The plan may include the use of a commercially available inert absorbent material that will eliminate and/or reduce the odor or vapor release at its source. If off-site migration of the generated odor/vapors is probable, the Site Supervisor can halt all work on-site until the subcontractor takes corrective action.

4.3.2 Dust Control

ACT and all subcontractors will control any dust generated on-site that may be produced during work activities. Of concern is that the presence of excessive dust could impact the health and safety of the personnel on-site. In addition, dust control measures will be employed to ensure that there is no off-site migration of the dust into the community. A stream of water applied through a fine spray nozzle will be used as a method of dust control. The NYC hydrant used for a water source will be fitted with a RPZ control device to prevent inadvertent contamination of the public water supply.

5.0 SITE SAFETY PROCEDURES

5.1 Operation/Vicinity of Heavy Equipment

In addition to possible exposure to contaminated materials, injury due the presence of heavy equipment operating and moving about the Site is a danger to the health and safety of on-site personnel. Any specific health and safety issues relating to the equipment to be used on-site that work day will be covered in the daily health and safety briefing. When operating and/or working around heavy equipment, the Site Supervisor will ensure that site personnel conform to this HASP to include the wearing of proper clothing such as hard hats and safety glasses.

5.2 Communications Procedures

The relatively small size of the work area makes normal verbal communication the primary mode of communication for the project. In the event that verbal communication is impossible, the following hand signals will be used.

A. Gripping a partners wrist = “Leave area immediately”

B. Hands on top of head = “ I need assistance”

C. Thumbs up = “OK; I’m alright; I understand”

D. Thumbs down = “No; Negative”

5.3 Emergency Medical Care and Procedures

If a personnel accident occurs on-site requiring emergency care, immediate care will be administered appropriate to the injury in accordance with established Red Cross procedures and practices. In the event of serious injury to on-site personnel, the Emergency Medical Service of the City of New York (NYCEMS) will be summoned to remove the injured individual to the nearest medical facility for treatment as follows.

Fire Department	Dial 911
Mount Sinai Hospital of Queens	Dial 718-267-4280
Police Department	Dial 911
Poison Control Center	Dial (516) 542-2323

The nearest medical facility is the Mount Sinai Hospital of Queens (718-267-4280) which is located at the intersection of 30th Avenue and Crescent Street approximately 1.64 miles driving distance from the Site, as indicated in Figure 3. Transport will be by on-site vehicle or by calling NYCEMS personnel. The directions to this hospital are as follows:

- Go Northeast on 23rd Street toward 41st Avenue
- Turn Left onto 40th Avenue
- Turn Right onto 21st Street
- Turn Right onto 30th Avenue.
- End at 25-10 30th Avenue. Hospital is on west side of 30th Avenue.

A copy of these directions and a map of the area will be maintained at the command post for reference. First aid equipment for the treatment of minor injuries will also be available on-site at the command post.

The emergency signal for evacuation of personnel from the Site will be three (3) long blasts of a vehicle horn with the off-site rallying point designated as the north west corner of the intersection of 44th Road and 21st Street. If in the event of a fire, explosion or other life threatening incident on-site, the emergency signal above will be sounded and all personnel will evacuate the Site. The appropriate New York City emergency personnel (fire, police, etc.) will be immediately notified.

COMMUNITY AIR MONITORING PLAN

41-01 and 41-09 23rd Street
41-02 to 41-10 24th Street
Long Island City, New York 11101

CEQR No. 00DCP055Q
Block 413, Lots 20, 22, 27
NYSDEC Spill Nos. 04-12186

May 27, 2008

ACT File #: 4019-LINY

Prepared for:

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Bayside, New York 11364

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FIGURES

1.0 INTRODUCTION

This Community Air Monitoring Plan addresses community concerns of possible off-site airborne migration of suspected contaminants that may be generated during the performance of on-site field activities. The scope of work for the Community Air Monitoring Plan is based on guidelines contained in the NYSDEC Region 2 document titled "Community Air Monitoring Plan". Actions to be taken addressing suspected chemical hazards to on-site workers performing the above field activities have been established in the On-Site Health and Safety Plan

2.0 SITE DESCRIPTION

A Site Diagram is provided in Figure 2. The subject Site is located in a commercial and residential area in Long Island City, New York. The entire site is approximately 18,500 square feet in area and is rectangular in shape. Lots 22 and 27 are currently vacant while Lot 20 contains a two-story mixed use building. Prevailing winds are from the west.

3.0 SUSPECTED ON-SITE CONTAMINANTS

Previous investigations have revealed concentrations of volatile and semi-volatile organic compounds in the soil and ground water beneath Lot 22 consistent with its past usage as a retail gasoline service station and auto repair shop.

4.0 SCOPE OF WORK

The Scope of Work contained within the Remedial Action Plan submitted to the NYSDEC on May 5, 2008 consists of intrusive and non-intrusive activities in excavating and removing impacted soil from the site. Impacted soil will be removed from the western portion of Lot 22.

5.0 NON-INTRUSIVE ACTIVITIES

Real-time air monitoring, for volatile compounds and particulate levels at the perimeter of the work area will be accomplished as follows.

- Volatile organic compounds will be monitored at the downwind perimeter of the work area daily at 2 hour intervals. If total organic vapor levels exceed 5 ppm above background, work activities will be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings will be recorded and available for State (DEC & DOH) personnel to review.

- Particulates will be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 150 ug/m^3 greater than the upwind particulate level, then dust suppression techniques will be employed. All readings will be recorded and available for State (DEC & DOH) personnel to review.

5.1 Vapor Emission Response Plan

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.
- more frequent intervals of monitoring, as directed by the Safety Officer, are conducted.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

5.2 Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities will be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts relating to the above the source are unsuccessful and if the following levels persist for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect if organic vapor levels have approached 5 ppm above background. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background.

5.3 Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

A. All emergency Response Contacts as listed in section 5.3 of this Health and Safety Plan will be notified.

B. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.

C. Frequent air monitoring will be conducted at 30 minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

6.0 GROUND INTRUSIVE ACTIVITIES

Real-time air monitoring, for volatile compounds and particulate levels at the perimeter of the work area will be accomplished as follows:

- Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities will be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings will be recorded and available for State (DEC & DOH) personnel to review.

- Particulates should be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 150 ug/m^3 greater than the upwind particulate level, then dust suppression techniques will be employed. All readings will be recorded and available for State (DEC & DOH) personnel to review.

6.1 Vapor Emission Response Plan

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

6.2 Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities will be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts related to the above the emission source are unsuccessful and if the following levels persist for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect if organic vapor levels are approached 5 ppm above background. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background.

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