REMEDIAL ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERS

209 SHAFTER STREET
ISLANDIA, NEW YORK 11749
TEL: 631-232-2600
FAX: 631 232-9898

March 18, 2016

New York City Office of Environmental Remediation
City Voluntary Cleanup Program
c/o Shaminder Chawla
100 Gold Street, 2nd Floor
New York, NY 10038

Re: VCP # 16CVCP050R
E-Designation # 16EHAZ109R
2655 Richmond Avenue (Staten Island Mall)
Block 2400, Lot Lots 7, 20, 30, 70, 118, 140, 180, 190, 200, and 210
Remedial Action Work Plan (RAWP) Stipulation List

Dear Mr. Chawla:

Remedial Engineering, P.C. (Roux Associates, Inc.) hereby submits a Remedial Action Plan (RAWP) Stipulation List for the Site to the New York City Office of Environmental Remediation (OER) on behalf of GGP Staten Island Mall, LLC. This letter serves as an addendum to the RAWP to stipulate additional content, requirements, and procedures that will be followed during the site remediation. The contents of this list are added to the RAWP and will supersede the content in the RAWP where there is a conflict in purpose or intent. The additional requirements/procedures include the following Stipulation List below:

1. The criterion attached in **Appendix 1** will be utilized if additional petroleum containing tank or vessel is identified during the remedial action or subsequent redevelopment excavation activities. All petroleum spills will be reported to the NYSDEC hotline as required by applicable laws and regulations. This contingency plan is designed for heating oil tanks and other small or moderately sized storage vessels. If larger tanks, such as gasoline storage tanks are identified, OER will be notified before this criterion is utilized.

2. A pre-construction meeting is required prior to start of remedial excavation work at the site. A pre-construction meeting will be held at the site and will be attended by OER, the developer or developer representative, the consultant, excavation/general contractor, and if applicable, the soil broker.

3. A Historic Fill Transfer and Disposal Notification Form to each disposal facility and a pre-approval letter from all disposal facilities will be provided to OER prior to any soil/fill material removal from the site. The Historic Fill Transfer and

Disposal Notification Form template is attached in **Appendix 2**. Documentation specified in the RAWP - Appendix 3 - Section 1.6 "Materials Disposal Off-Site" will be provided to OER. If a different disposal facility for the soil/fill material is selected, OER will be notified immediately.

4. Signage for the project will include a sturdy placard mounted in a publically accessible right of way to building and other permits signage will consist of the NYC VCP Information Sheet (attached **Appendix 3**) announcing the remedial action. The Information sheet will be laminated and permanently affixed to the placard.

5. If the site contains hazardous waste that will be excavated and disposed of offsite, OER will work with the development team to seek an exemption for the property from the state Hazardous Waste Program Fee ($130/ton) and Special Assessment on Hazardous Waste (up to $27/ton). To qualify for an exemption, the site must be enrolled in the city Voluntary Cleanup Program; hazardous waste must result from remedial action set forth in a cleanup plan approved by OER; and OER must oversee the cleanup. It is the applicant's responsibility to notify the OER Project Manager, copying the supervising Project Manager and OER Deputy Director Shaminder Chawla, before hazardous waste is shipped from the site. Unless the Department of Environmental Conservation is notified before waste is shipped from the site, the project may not receive an exemption from the fee. This exemption does not cover, and the project remains responsible for, a Hazardous Waste Annual Report to be filed with DEC and Quarterly Returns for Special Assessments on Hazardous Waste to be filed with the state Department of Taxation and Finance. **Appendix 4** includes additional information about the exemption from the Hazardous Waste Program Fee and the Special Assessment on Hazardous Waste.

6. Removal actions for development purposes under this plan will be performed in conjunction with confirmation end-point soil sampling. Seven (7) confirmation samples will be collected from the base of the excavation for Lot 180 Western Parcel and three (3) confirmation samples will be collected from the base of excavation for Lot 180 Eastern Parcel at locations to be determined by OER. When Lots 20 and 30 are developed (i.e., new buildings), two (2) confirmation samples will be collected from the base of the excavation for Lot 20 and two (2) confirmation samples will be collected from the base of the excavation for Lot 30. To evaluate attainment of Track 2 Restricted Residential Use or Commercial Use SCOs, analytes will include those for which SCOs have been developed according to analytical methods described above. If Track 1 Unrestricted Use SCOs are pursued, samples will be analyzed for VOCs, SVOCs, pesticides, PCBs and metals

according to analytical methods described above. A map indicating end-point sampling locations is attached in **Appendix 5**.

7. OER requires parties seeking City Brownfield Incentive Grants to carry insurance. For a cleanup grant, both the excavator and the trucking firm(s) that handle removal of soil must carry or be covered under a commercial general liability (CGL) policy that provides $1 million per claim in coverage. OER recommends that excavators and truckers also carry contractors pollution liability (CPL) coverage, also providing $1 million per claim in coverage. The CGL policy, and the CPL policy if obtained, must name the City of New York, the NYC Economic Development Corporation, and Brownfield Redevelopment Solutions as additional insured. For an investigation grant, an environmental consultant must be a qualified vendor in the BIG program and carry $1 million of professional liability (PL) coverage. A fact sheet regarding insurance is attached as **Appendix 6**.

8. Daily reports will be provided during active excavation work. If no work is performed for extended time period, daily report frequency will be reduced to weekly basis. Daily report template is attached in **Appendix 7.**

9. Monthly reports will be provided by the owner/developer after excavation work is completed for the duration of the construction period. Monthly report template is attached in **Appendix 8**.

10. Trucking log sheets will be utilized as trucks are transported from sites, and completed logs should be attached to the Remedial Action Report (RAR) as an appendix. The goal of this log is to clearly document the destination of material leaving the site, the parties responsible for its transfer, and other pertinent details. The trucking log template is provided in **Appendix 9**.

11. Methane Mitigation System/ Active SSDS design and plans are included as **Appendix 10**.

12. A 15-mil vapor barrier will be installed beneath the structure's slab. The barrier chosen for this project is manufactured by Stego® Wrap Vapor Barrier 15-mil. **Appendix 11** provides manufactures specifications and PE/RA certified building plans with the extent of the vapor barrier installation details (penetrations, joints, etc.) with respect to the proposed foundation, footings, etc.

13. An engineered composite site cover will be placed over the entire footprint of the Site. The composite cover system will be comprised of a 5-inch thick concrete slab beneath all building areas. Outside of building areas, the composite cover system will be comprised of an asphalt layer with a 6-inch clean granular sub-base in

parking lot areas, 4-inch poured concrete on a 6-inch sub-base in sidewalk areas, and one feet of clean soil in all open space and landscaped areas. The composite site cover for Lot 180 Eastern and Western parcels is shown on Detail 1 of Plates 10.1 and 10.2 provided as **Appendix 10**.

14. Dewatering will be performed in full compliance with applicable laws, rules and regulations. Dewatering permit will be obtained from NYCDEP prior to construction activities.

15. Updated tables and plates showing all the investigation results are attached in **Appendix 12**.

16. Laboratory Deliverables is attached in **Appendix 13**.

Sincerely,

REMEDIAL ENGINEERING, P.C.

David T. Bligh, P.E.
Senior Engineer

Cc: William Wong, NYCOER
Frank Cherena, Roux Associates, Inc.
Kelly Webb, GGP Staten Island Mall, LLC

Appendix 1

Generic Procedures for Management of Underground Storage Tanks
Identified under the NYC VCP

Prior to Tank removal, the following procedures should be followed:

- Remove all fluid to its lowest draw-off point.
- Drain and flush piping into the tank.
- Vacuum out the "tank bottom" consisting of water product and sludge.
- Dig down to the top of the tank and expose the upper half.
- Remove the fill tube and disconnect the fill, gauge, product, vent lines and pumps. Cap and plug open ends of lines.
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location.
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank.
- Clean tank or remove to storage yard for cleaning.
- If the tank is to be moved, it must be transported by licensed waste transporter. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport.
- After cleaning, the tank must be made acceptable for disposal at a scrap yard, cleaning the tanks interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal, the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.).
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with a calibrated photoionization detector (PID).

<u>Impacted Soil Excavation Methods</u>

The excavation of the impacted soil will be performed following the removal of the existing tanks. Soil excavation will be performed in accordance with the procedures described under Section 5.5 of Draft DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with calibrated photoionization detector (PID).

Final excavation depth, length, and width will be determined in the field, and will depend on the horizontal and vertical extent of contaminated soils as indentified through physical examination (PID response, odor, staining, etc.). Collection of verification samples will be performed to evaluate the success of the removal action as specified in this document.

The following procedure will be used for the excavation of impacted soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan.

- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated.
- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile, or dispose of, separate from the impacted soil.
- If additional UST's are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued trenching around the perimeter to minimize its disturbance.
- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc.) an attempt will be made to remove it, to the extent not limited by the site boundaries or the bedrock surface. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separated dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present.
- Excavated soils which are temporarily stockpiled on-site will be covered with tarp material while disposal options are determined. Tarp will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property.

Once the site representative and regulatory personnel are satisfied with the removal effort, verification of confirmatory samples will be collected from the excavation in accordance with DER-10.

Appendix 2

Historic Fill Transfer and Disposal Notification Form

Historic Fill & Soil Disposal Notification Form
New York City Office of Environmental Remediation

Historic Fill & Soil Disposal Notification Form
New York City Office of Environmental Remediation

Date: March 14, 2016

To operators and representatives of disposal facilities and government regulators:

The New York City Office of Environmental Remediation (OER) operates several environmental remediation regulatory programs in New York City that manage light to moderately contaminated properties that are planned for redevelopment. These projects commonly involve the removal of historical fill and soil from properties for development and other purposes. As with any environmental regulatory program, lawful transport and disposal of historic fill and soil is mandatory. It is also our highest priority.

Disposal facilities, recycling facilities and clean fill facilities (collectively, "receiving facilities") for historic fill and soil may be located in New York or neighboring states. Our research has indicated that a wide range of facility types and a complex set of regulatory requirements and obligations for a receiving facility operation exist within each jurisdiction. Receiving facilities are required to comply with applicable laws and regulations and may operate under state and local authority via permits, licenses, registrations, agreements and other legal instruments that dictate requirements for the material they can receive. Operating requirements may include adherence to applicable chemical standards, guidance levels, criteria, policy or other bases to determine the suitability for receipt of historical fill or soil at a receiving facility. Such requirements may also specify sample frequency, location, sampling method, chemical analytes, or analytical methods. Receiving facility soil/fill sampling requirements often differ from standard remedial investigation protocol performed in the original environmental study of the property.

Given the variability of data requirements for receiving facilities, the wide range of receiving facility types, and the complexity of regulatory requirements and obligations, OER is seeking to assist government regulators and facility operators and their technical representatives to achieve compliance with regulatory requirements for disposal of historic fill and soil at receiving facilities for projects we administer. Further, we seek to ensure that all of the data and information that is developed in OER's regulatory programs (for instance, site environmental history and soil chemistry) is available to government regulators and to facility managers when making decisions on suitability for disposal to a receiving facility.

This document provides formal notification from OER of the availability of environmental information regarding the physical and chemical content of historical fill and soil that is proposed for transfer to a disposal, recycling or clean fill facility from a property located at:

2655 Richmond Avenue (Staten Island Mall), Staten Island, New York
OER Project # 16EHAZ109R/ VCP Project # 16CVCP050R

The above referenced property has undergone regulated environmental investigation and is the subject of remedial action work plan under the authority of OER. All environmental data and information generated during this regulatory process is available online in OER's Document Repository listed below. Be advised that many properties are also regulated under state environmental law, and additional data may be available from state agencies. OER reserves the right to share this information with applicable state regulators.

http://www.nyc.gov/html/oer/html/repository/RStaten_Island.shtml

Note: when logged on to above URL, select the borough for the site (listed in the address above) and scroll through the list and select the address for the site (listed above). All documents are available in PDF format.

According to New York State DER-10 Technical Guidance for Site Investigation and Remediation, historical fill is non-indigenous fill material deposited on a property to raise its topographic elevation. The origin of historical fill is unknown

but it is commonly known to contain ash from wood and coal combustion, slag, clinker, construction debris, dredge spoils, incinerator residue, and demolition debris. Historic fill is a regulated solid waste in the State of New York. Prior to making a determination regarding the suitability of historic fill and/or soil from this property for disposal at this receiving facility, **we strongly recommend that you review all of the data and information available for this property in our Document Repository** listed above. The repository includes:

- A Phase 1 history of use of the property;
- A Remedial Investigation Report for the property which includes:
    - Boring logs that describe physical observations of the historical fill material made by a trained environmental professional;
    - Chemical data for grab samples of historical fill collected during the remedial investigation;
- A Remedial Action Work Plan for the property.

If you have any questions, please contact Horace Zhang at (212) 788-8484 or Hzhang@dep.nyc.gov for more information.

Appendix 3

NYC VCP Signage

NYC Voluntary Cleanup Program

2655 Richmond Avenue
(Staten Island Mall)
Site #: 16CVCP050R

This property is enrolled in the New York City Voluntary Cleanup Program for environmental remediation. This is a voluntary program administered by the NYC Office of Environmental Remediation.

For more information,
log on to: www.nyc.gov/oer

Or scan with smart phone:

If you have questions or would like more information,
please contact:

Shaminder Chawla at (212) 442-3007
or email us at brownfields@cityhall.nyc.gov

Appendix 4

Hazardous Waste Exemptions Fact Sheet

NYC Office of Environmental Remediation

Exemptions from the state Hazardous Waste Program Fee & Special Assessment

If your site is enrolled in the city Voluntary Cleanup Program (VCP) and contains hazardous waste that will be excavated and disposed of offsite, OER can work with your development team to exempt your property from the $130/ton state Hazardous Waste Program Fee and the Special Assessment on Hazardous Waste.

Exemption from the Hazardous Waste Program Fee

To qualify for an exemption from the Hazardous Waste Program Fee:

1. A site must be enrolled in the city Voluntary Cleanup Program;
2. Hazardous waste must result from remedial action set forth in a cleanup plan approved by OER; and
3. OER must oversee the cleanup.

Process for obtaining a Hazardous Waste Program Fee exemption:

For each VCP site, OER will submit three certifications to the New York State Department of Environmental Conservation (DEC):

1. OER will prepare a Notice of Potential Generation of Hazardous Waste after a soil test shows a site contains hazardous waste. To prepare this Notice, you must provide your OER project manager with:

- the site's EPA generator ID number;
- the date of the soil test confirming hazardous waste;
- the quantity of hazardous waste, in tons, anticipated to be shipped; and
- the anticipated dates for the start and completion of remediation.

DEC must receive this form **before** hazardous waste is shipped from your site. Otherwise, your claim for an exemption may be denied.

For further information, please contact:

Amanda Duchesne
Program Manager
(212) 341-2077
ADuchesne@dep.nyc.gov

or

Michelle Sarro
Attorney
(212) 341-2015
MSarro@dep.nyc.gov

2. After hazardous waste has been removed from the site, you must notify your OER project manager that removal is complete. OER will then distribute a Certification of Hazardous Waste Generation to your project team which, when filled out, documents how the hazardous waste was managed. Once completed, it must be signed by the generator (or site owner) and the site's Qualified Environmental Professional and returned to your OER project manager with a copy to Amanda Duchesne aduchesne@dep.nyc.gov and Michelle Sarro msarro@dep.nyc.gov.

Upon receipt of the Certification of Hazardous Waste Generation, OER will issue a **$10/ton fee** for services to obtain the exemption from the state Hazardous Waste Program Fee.

3. OER will then issue a Certification of Remedial Action that Generated Hazardous Waste to DEC representing OER's approval of how a site managed its hazardous waste.

DEC will make its determination after receiving the last two certifications. OER will then notify the project of the exemption.

Exemption from the Special Assessment on Hazardous Waste

VCP sites are also eligible for an exemption from the Special Assessment on Hazardous Waste, which can cost projects up to $27/ton.

It is advised that you assert your interest in obtaining the Special Assessment exemption when you file a TP-550 Quarterly Return for Special Assessments on Hazardous Waste Generated in New York State form with the state Department of Taxation and Finance within 20 days of the end of the calendar quarter in which the waste was generated. In line item 3 on the form, indicate the number of tons of hazardous waste that were generated in New York State under an order of, or agreement or contract with, DEC. For access to the TP-550 form and further instructions see http://www.tax.ny.gov/bus/haz/hzrdwste.htm.

Ongoing Obligations

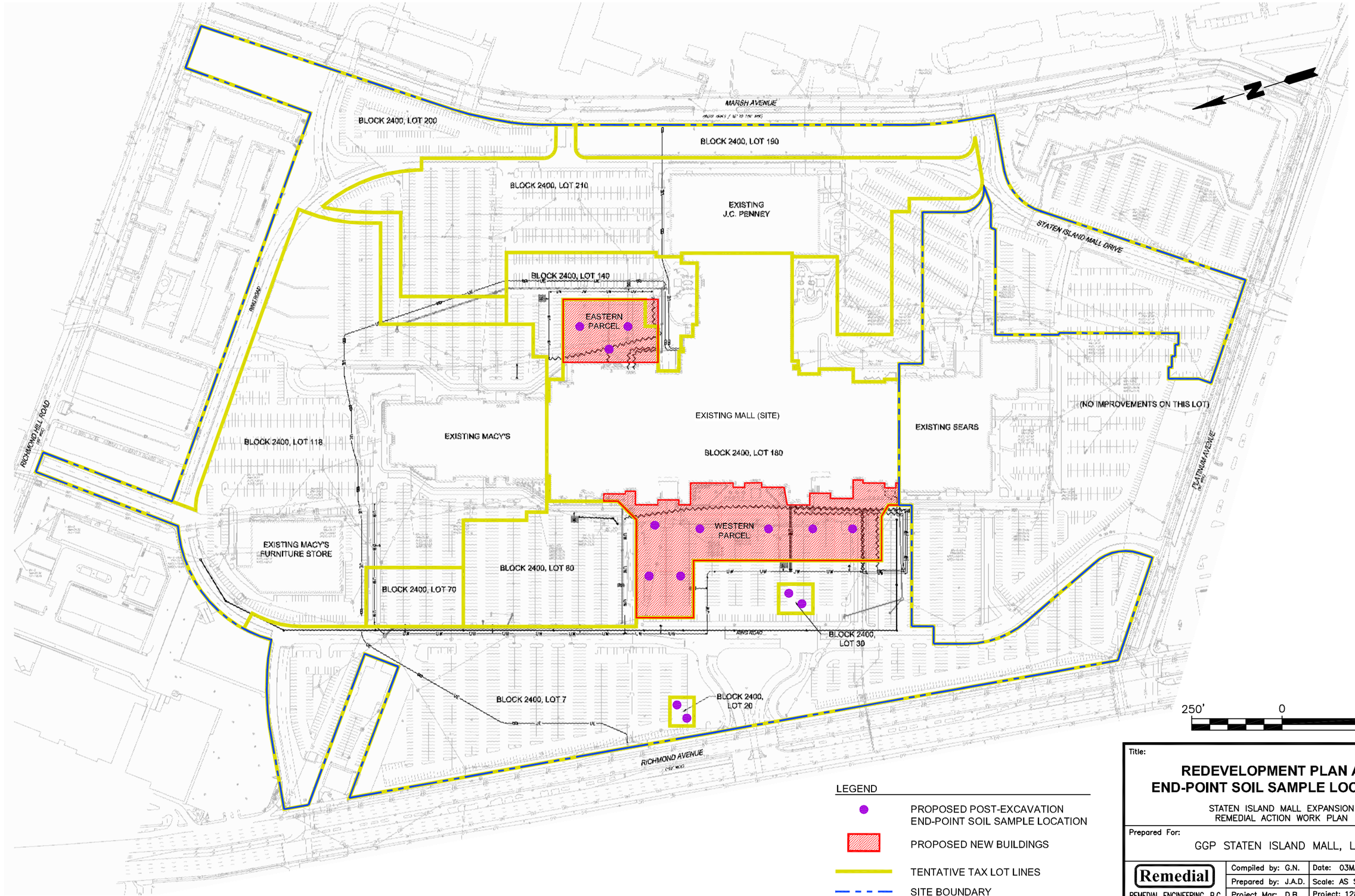
Regardless of the exemptions from the Hazardous Waste Program Fee and Special Assessment on Hazardous Waste, parties must:

- File a Hazardous Waste Annual Report with DEC by March 1 of each year if your site generated 15 tons or more of hazardous waste in the prior calendar year. For details, see http://www.dec.ny.gov/chemical/8770.html. To set forth the basis for an exemption from the Hazardous Waste Program Fee, put an X in the Exempt Remedial box in Box H of Section 1 of the Waste Generation and Management (GM) form and in the Comments Box (at the bottom of the form) include "New York City Voluntary Cleanup Program, VCP Site Number_____)"; and

- File a TP-550 Quarterly Return for Special Assessments on Hazardous Waste Generated in New York State form with the state Department of Taxation and Finance within 20 days of the end of the calendar quarter in which the waste was generated. For access to the TP-550 form and further instructions see http://www.tax.ny.gov/bus/haz/hzrdwste.htm.

Appendix 5

End-Point Sampling Map



Title:

REDEVELOPMENT PLAN AND END-POINT SOIL SAMPLE LOCATIONS

STATEN ISLAND MALL EXPANSION
REMEDIAL ACTION WORK PLAN

Prepared For:

GGP STATEN ISLAND MALL, LLC

Remedial REMEDIAL ENGINEERING, P.C. ENVIRONMENTAL ENGINEERS	Compiled by: G.N.	Date: 03MAR16	FIGURE
	Prepared by: J.A.D.	Scale: AS SHOWN	3
	Project Mgr: D.B.	Project: 1287.0007Y000	
	File: 1287.0007Y128.03.DWG		

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Appendix 6
BIG Program Insurance Fact Sheet

NYC Office of Environmental Remediation

NYC BIG Brownfield Incentive Grant Program

FACT SHEET – BIG PROGRAM INSURANCE REQUIREMENTS

Investigation Grants – for a developer or site owner to be eligible for a BIG investigation grant, its environmental consultant(s) must be:

- a Qualified Vendor in the BIG Program; and
- maintain Professional Liability (PL) insurance of $1M per claim and annual aggregate.

Cleanup Grants – for a developer or site owner to be eligible for a BIG cleanup grant:

- Its general contractor or excavation/foundation contractor hired to perform remedial work must maintain Commercial General Liability (CGL) insurance of at least $1M per occurrence and $2M in the general aggregate. It is recommended that the general contractor or excavation/foundation contractor also maintain a Contractors Pollution Liability policy (CPL) of at least $1M per occurrence.

- Its subcontractors who are hired by the general contractor etc. to perform remedial work at a site, including soil brokers and truckers, must also maintain a CGL policy in the amount and with the terms set forth above. It is recommended that subcontractors also maintain a CPL policy in the amount and with the terms set forth above.

  The CGL policy, and the CPL policy if in force, must list the city, EDC and BRS as additional insureds, include completed operations coverage and be primary and non-contributory to any other insurance the additional insureds may have.

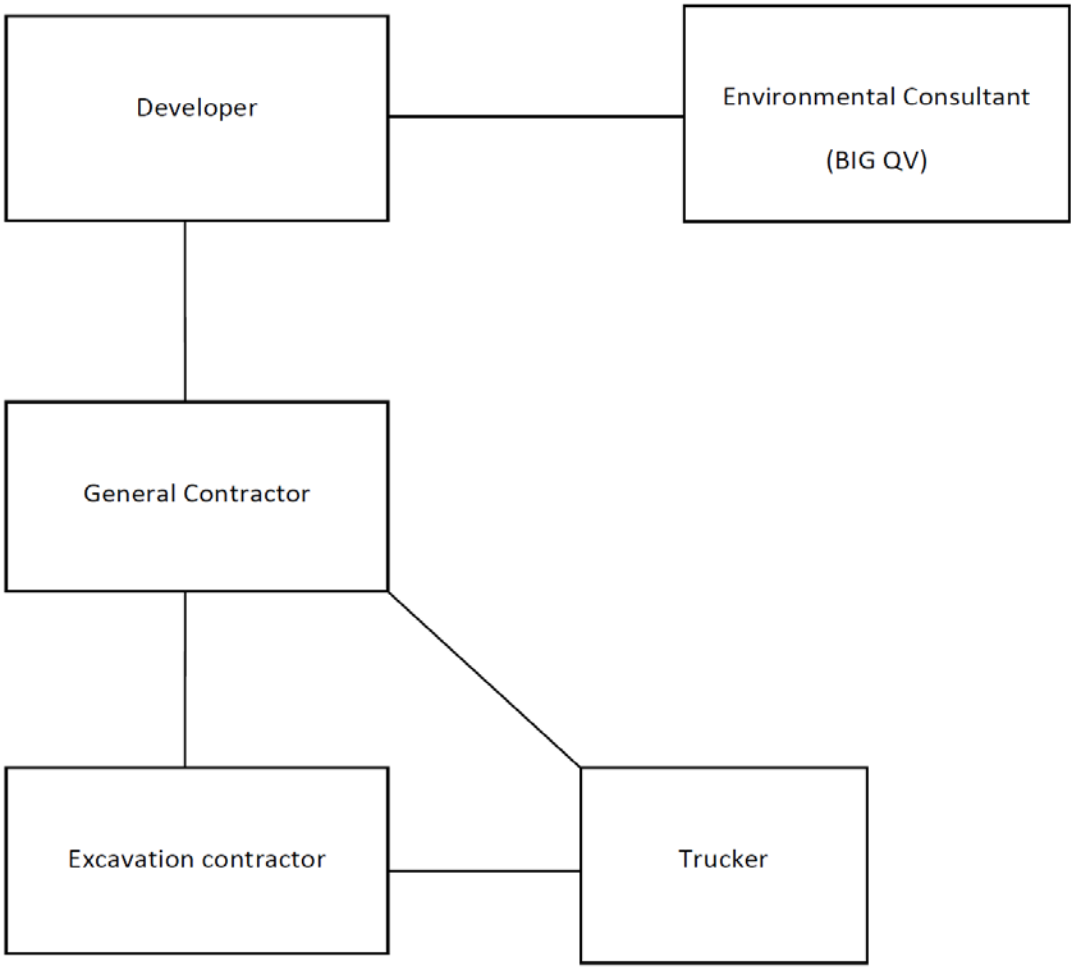
- Its environmental consultant(s) hired to oversee the cleanup must be:
  a. a BIG Qualifed Vendor; and
  b. maintain Professional Liability (PL) insurance of $1M per claim and annual aggregate.

If, in the alternative, the developer hires its environmental consultant to perform the cleanup, the environmental consultant must maintain CGL insurance in the amount and with the terms set forth above. It is recommended that the environmental consultant also maintain CPL coverage in the amount and with the terms set forth in the first two bulleted items listed above.

A schematic presenting the contractual relationships described above appears on page 2. Parties who must be named as Additional Insureds on Cleanup Grant insurance policies (CGL and CPL) are presented on page 3.

Example of Contractual Relationships for Cleanup Work

The Office of Environmental Remediation's Voluntary Cleanup Plan program requires applicants to identify the parties who are engaged in active remediation of their sites including: the General Contractor hired to remediate and/or the excavation contractor hired to excavate soil from the site and the trucking firm(s) that remove soil from the site for disposal at approved facilit(ies).



The chart above shows contractual relationships that typically exist for projects that are enrolled in the Voluntary Cleanup Program.

BIG Program Additional Insureds

The full names and addresses of the additional insureds required under the Required CGL Policy and recommended CPL Policy are as follows:

"City and its officials and employees"
New York City Mayor's Office of Environmental Remediation
253 Broadway, 14th Floor
New York, NY 10007

"NYC EDC and its officials and employees"
New York City Economic Development Corporation
110 William Street
New York, NY 10038

"BIG Grant Administrator and its officials and employees"
Brownfield Redevelopment Solutions, Inc.
739 Stokes Road, Units A & B
Medford, NJ 08055

Appendix 7

Daily Report Template

#ONENYC NYC Office of Environmental Remediation

Daily Status Report Template
Version 1.4

Generic Template for Daily Status Report

Instructions

The Daily Status Report submitted to OER should adhere to the following conventions:

- Remove this cover sheet prior to editing.
- Remove all the red text and replace with site-specific information.
- Submit the final version as a Word or PDF file.

Daily Status Reports

Daily status 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.

DAILY STATUS REPORT

Prepared By: Enter Your Name Here

WEATHER	Snow		Rain		Overcast		Partly Cloudy	X	Bright Sun	
TEMP.	< 32		32-50		50-70	X	70-85		>85	

VCP Project No.:	16CVCP000M	E-Number Project No.:	16EHAN000M	Date:	01/01/2016
Project Name:	Name or Address				

Consultant: Person(s) Name and Company Name	Safety Officer: Person(s) Name and Company Name
General Contractor: Person(s) Name and Company Name	Site Manager/ Supervisor: Person(s) Name and Company Name

Work Activities Performed (Since Last Report):
Provide details about the work activities performed.

Working In Grid #: A1, B1, C1

Samples Collected (Since Last Report):
No samples collected or provide details

Air Monitoring (Since Last Report):
No air monitoring performed or provide details
Prestart Conditions – PID = 0.0 ppm, Dust = 0.000
High Conditions – PID = 0.0 ppm, Dust = 0.000

Problems Encountered:
No problems encountered or provide details

Planned Activities for the Next Day/ Week:
Provide details about the work activities planned for the next day/ week.

Example:

Facility # Name/ Location Type of Waste Solid Or Liquid	Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		# # # # # # # ABC Facility New York, NY petroleum soils Solid	
(Trucks, Cu.Yds. Or Gallons)	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds.
Today									5	120
Total									25	600

NYC Clean Soil Bank		Receiving Facility: Name/ Address (Approved by OER)			
Tracking No.:	16CCSB000				
Today	Trucks 5	Cu. Yds. 25	Total	Trucks 120	Cu. Yds. 600

Site Grid Map

Insert the site grid map here

Photo Log

Photo 1 – provide a caption	Insert Photo Here – Photo of the entire site
Photo 2 – provide a caption	Insert Photo Here – Photo of the work activities performed
Photo 3 – provide a caption	Insert Photo Here – Photo of the work activities performed

Appendix 8

Weekly / Monthly Report Template

WEEKLY / MONTHLY STATUS REPORT

Prepared By: Enter Your Name Here

VCP Project No.:	16CVCP000M	E-Number Project No.:	16EHAN000M	Date:	01/01/2016

Project Name:	Name or Address

Project Updates (Since Last Report):
Provide details about the work activities performed.

Problems Encountered:
No problems encountered or provide details

Planned Activities for the Next three months:
Provide details about the future work activities.

Photo Log

Photo 1 – provide a caption	Insert Photo Here – Photo of the entire site
Photo 2 – provide a caption	Insert Photo Here – Photo of the work activities performed
Photo 3 – provide a caption	Insert Photo Here – Photo of the work activities performed

Appendix 9

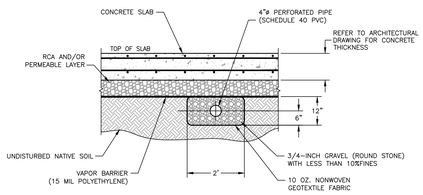
Soil Disposal and Trucking Log Sheet

Soil Disposal and Trucking Log Sheet

Shipment Date	Manifest Number	Transporter Name/Truck Name	License Plate	On-Site Location (approx. depth)	Off-Site Disposal Facility	Tonnage
8/25/2013	66357	ABC Trucking/201	NJ-AP458	WC-1(0-8')	Jones Landfill	32.90

Appendix 10

Active SSDS

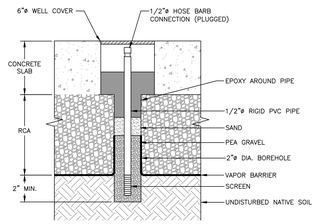


1 SUB–SLAB DEPRESSURIZATION SYSTEM PIPE DETAIL

NOT TO SCALE

NOTES

1. CONTRACTOR SHALL COORDINATE WITH PLUMBING, MECHANICAL, CIVIL AND ELECTRIC CONTRACTORS FOR ALL UTILITY CROSSINGS.
2. THE PERFORATED PIPE MAY BE ROUTED AROUND OR UNDERNEATH ANY UTILITY LINES (SEWER, WATER, GAS) GRADE BEAMS, FOOTING, AND PILING CAPS AS REQUIRED AND AS APPROVED BY THE ENGINEER.
3. THE SURFACES TO BE LINED WITH GEOTEXTILEBE FREE OF ALL ROCKS, STONES, SHARP OBJECTS OR CONSTRUCTION DEBRIS OF ANY KIND.
4. INSTALL GEOTEXTILE NONWOVEN FABRIC DIRECTLY ON FILL. MATERIAL OVERLAPS SHALL BE A MINIMUM OF 12".
5. ALL PENETRATIONS THROUGH THE SLAB ON GRADE SHALL BE SEALED USING THE VAPOR BARRIER MANUFACTURER MATERIALS AND INSTRUCTIONS.

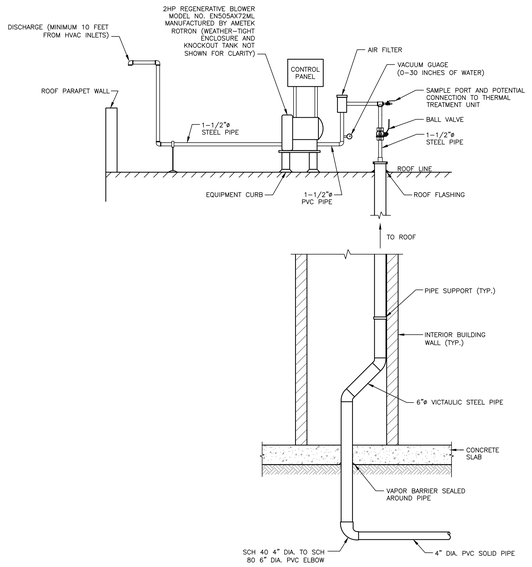


2 SOIL VAPOR MONITORING POINT DETAIL

SCALE: 1" = 4'

NOTE

DEPICTED LOCATIONS OF SOIL VAPOR MONITORING POINTS ARE APPROXIMATE AND SHALL BE COORDINATED AND CONFIRMED WITH GENERAL GROWTH PROPERTIES AND THE PRIOR CONSTRUCTION ENGINEER.

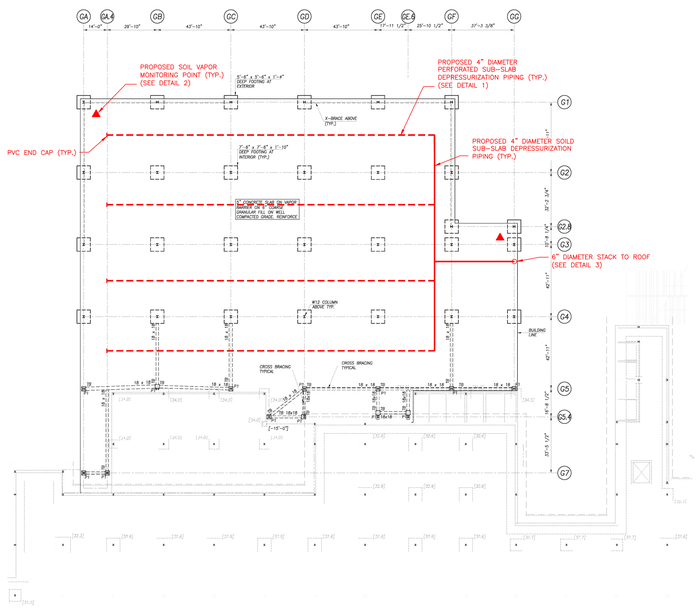


3 VERTICAL RISER TO BLOWER DETAIL

NOT TO SCALE

NOTES

1. PROVIDE ELECTRICAL/CONTROL CONDUIT BLOWER. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. THE BLOWER SHALL BE PROVIDED WITH A WEATHER–TIGHT ENCLOSURE WITH VENTILATION (DWYER D–100HS), KNOCKOUT TANK (WITH LEVEL ALARM), VCUUM RELIEF VALVE, GUAGES, AND INTERCONNECTING PIPING/FITTINGS, AND MANUAL DILUTION VALVE.
3. THE BLOWER SHALL BE INSTALLED ON EQUIPMENT CURB. (REFER TO ARCHITECTURAL DRAWING FOR CURB DETAIL)



PROPOSED SUB–SLAB DEPRESSURIZATION PIPING

SCALE: 1/32"=1'–0"

NOTES

1. BUILDING PLAN FROM S9 AND AFFILIATE OF PERKINS EASTMAN ARCHITECTS, PC DRAWING FO–106.00 DATED 06/27/2014.
2. A MINIMUM 15–MIL VAPOR BARRIER WITH TAPED SEAMS AND 6–INCH OVERLAP IS REQUIRED ABOVE SUB–SLAB DEPRESSURIZATION PIPING AND BELOW CONCRETE SUB–BASE.

NO.	DATE	REVISION
13	2015.12.09	ISSUE FOR CONSTRUCTION
12	2015.11.11	DEPARTMENT OF BUILDING SUBMISSION
11	2015.11.11	90% BID SET
10	2015.10.01	DEPARTMENT OF BUILDING SUBMISSION
9	2015.10.01	60% CONSTRUCTION DOCUMENTS
8	2015.07.23	30% CONSTRUCTION DOCUMENTS
7	2015.06.05	100% DESIGN DEVELOPMENT 3
6	2015.02.13	100% DESIGN DEVELOPMENT REDESIGN
5	2014.09.19	ISSUE FOR PERMIT
4	2014.06.26	100% DESIGN DEVELOPMENT
3	2014.05.15	50% DESIGN DEVELOPMENT
2	2014.01.06	100% SCHEMATIC DESIGN
1	2013.12.13	80% SCHEMATIC DESIGN

KEY PLAN

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ENVIRONMENTAL ENGINEER
REMEDIAL ENGINEERING, P.C.
209 Shafter Street
Islandia, New York, 11749
Tel: 631-232-2600

CIVIL / SITE
LANGAN
River Drive Center 1, 619 River Drive
Elmwood Park, NJ 07407
Tel: 201.794.6900

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New York, New York 10003

EXTERIOR ENVELOPE WATERPROOFING
VIDARS, INC
360 Park Avenue South, 15th Fl.
New York, New York 10010
Tel: 212.689.5389

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Fax: 212-687-6487

VERTICAL TRANSPORTATION
VAN DEUSEN & ASSOCIATES
5 Regent Street, Suite 524
Livingston, NJ 07039
Tel: 973-994-9220
Fax: 973-994-2539

PROJECT TITLE:

STATEN ISLAND MALL ENLARGEMENT

2655 RICHMOND AVENUE
STATEN ISLAND, NY

PROJECT NO.: 51690.00.9

DOB NO.: 520137833

DRAWING TITLE:

SUB-SLAB DEPRESSURIZATION SYSTEM DESIGN AND VAPOR BARRIER DIAGRAMS

SCALE: PAGE: OF 190

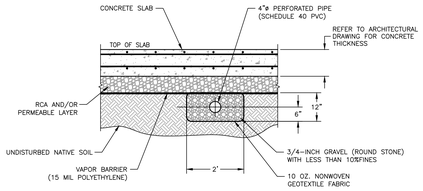
10.1

DOB BSCAN STICKER

SEAL

ISSUED FOR CONSTRUCTION

FILE NO. V:\CAD\PROJECTS\12870\000771,133\1287.0007713.S3.dwg

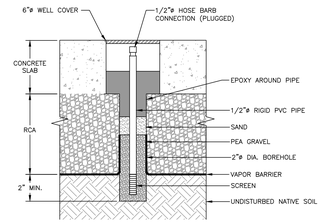


1 SUB-SLAB DEPRESSURIZATION SYSTEM PIPE DETAIL

NOT TO SCALE

NOTES

1. CONTRACTOR SHALL COORDINATE WITH PLUMBING, MECHANICAL, CIVIL AND ELECTRIC CONTRACTORS FOR ALL UTILITY CROSSINGS.
2. THE PERFORATED PIPE MAY BE ROUTED AROUND OR UNDERNEATH ANY UTILITY LINES (SEWER, WATER, GAS) GRADE BEAMS, FOOTING, AND PILING CAPS AS REQUIRED AND AS APPROVED BY THE ENGINEER.
3. THE SURFACES TO BE LINED WITH GEOTEXTILEBE FREE OF ALL ROCKS, STONES, SHARP OBJECTS OR CONSTRUCTION DEBRIS OF ANY KIND.
4. INSTALL GEOTEXTILE NONWOVEN FABRIC DIRECTLY ON FILL. MATERIAL OVERLAPS SHALL BE A MINIMUM OF 12".
5. ALL PENETRATIONS THROUGH THE SLAB ON GRADE SHALL BE SEALED USING THE VAPOR BARRIER MANUFACTURER MATERIALS AND INSTRUCTIONS.



2 SOIL VAPOR MONITORING POINT DETAIL

SCALE: 1" = 4'

NOTE

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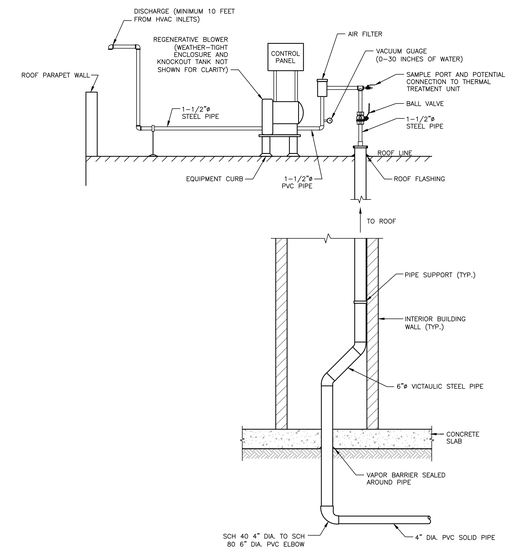

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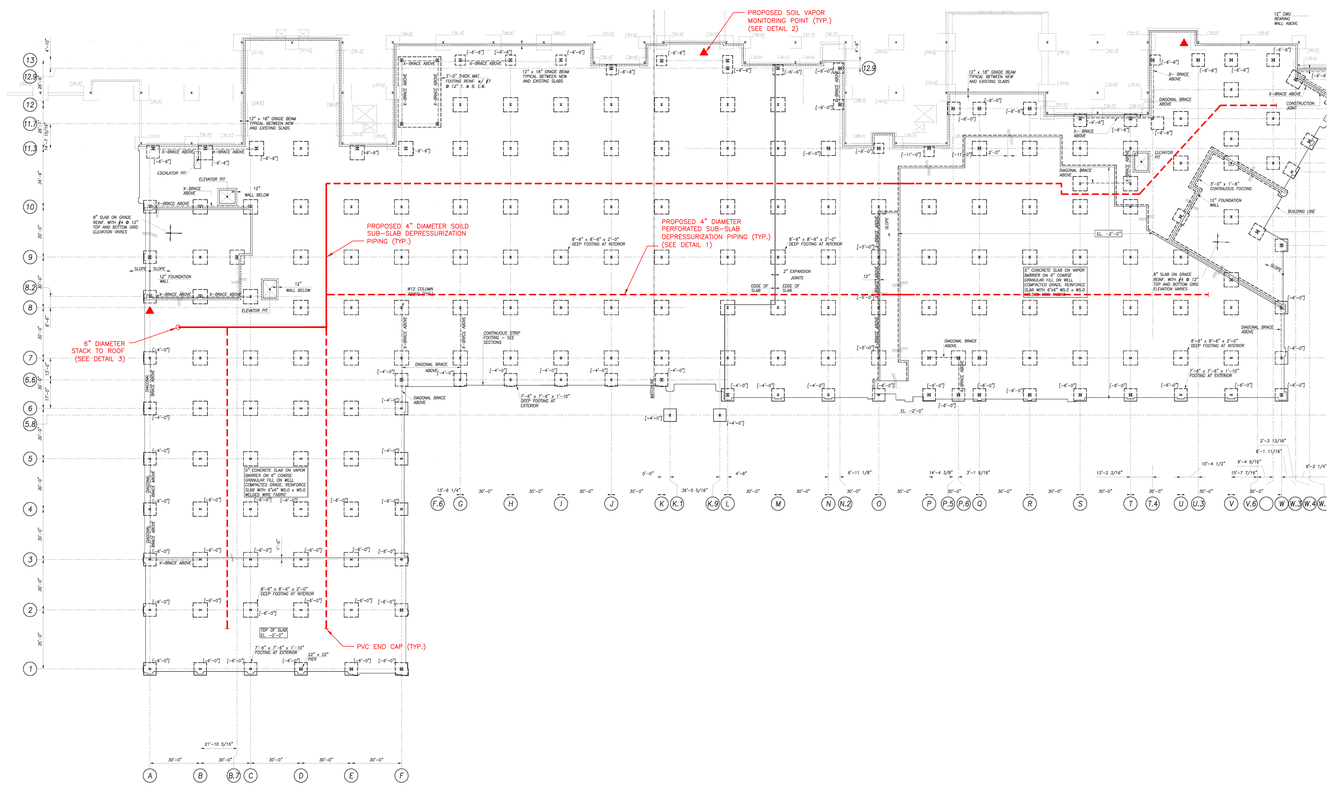

PROPOSED SUB-SLAB DEPRESSURIZATION PIPING

SCALE: 1/32"=1'-0"

NOTES

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2. A MINIMUM 15-MIL VAPOR BARRIER WITH TAPED SEAMS AND 6-INCH OVERLAP IS REQUIRED ABOVE SUB-SLAB DEPRESSURIZATION PIPING AND BELOW CONCRETE SUB-BASE.

NO.	DATE	REVISION
14	2015.01.22	ADDENDUM #1 - MALL EXPANSION
13	2015.12.09	ISSUE FOR CONSTRUCTION
12	2015.11.11	DEPARTMENT OF BUILDING SUBMISSION
11	2015.11.11	90% BID SET
10	2015.10.01	DEPARTMENT OF BUILDING SUBMISSION
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2655 RICHMOND AVENUE
STATEN ISLAND, NY

PROJECT NO.: 51690.00.9

DOB NO.: 520137833

DRAWING TITLE:

SUB-SLAB DEPRESSURIZATION SYSTEM DESIGN AND VAPOR BARRIER DIAGRAMS

SCALE: PAGE: OF 190

10.2

DOB BSCAN STICKER

SEAL

ISSUED FOR CONSTRUCTION

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Appendix 11

Vapor Barrier

Stego® Wrap Vapor Barrier

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Wrap Vapor Barrier

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Wrap Vapor Barrier is used as a below-slab vapor barrier.
COMPOSITION: Stego Wrap Vapor Barrier is a multi-layer plastic extrusion manufactured with only high grade prime, virgin, polyolefin resins.
ENVIRONMENTAL FACTORS:
Stego Wrap Vapor Barrier can be used in systems for the control of soil gases (radon, methane), soil poisons (oil by-products) and sulfates.

5. Installation
UNDER SLAB: Unroll Stego Wrap Vapor Barrier over an aggregate, sand or tamped earth base. Overlap all seams a minimum of six inches and tape using Stego Tape or Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Wrap Vapor Barrier is available nationally via building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. NO WARRANTY, EXPRESS, IMPLIED OR STATUTORY, IS GIVEN AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE WITH RESPECT TO THE PRODUCTS REFERRED TO. Please see www.stegoindustries.com/legal.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website.

10. Filing Systems
- Stego Industries' website
- Buildsite

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO WRAP VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0086 perms *0.0036 WVTR
Puncture Resistance	ASTM D1709 – Test Methods for Impact Resistance of Plastic Film by Free-Falling Dart Method	2266 grams
Tensile Strength	ASTM D882 – Test Method for Tensile Properties of Thin Plastic Sheeting	70.6 lbf/in.
Permeance After Conditioning (ASTM E1745 Sections 7.1.2 - 7.1.5)	ASTM E154 Section 8, F1249 – Permeance after wetting, drying, and soaking ASTM E154 Section 11, F1249 – Permeance after heat conditioning ASTM E154 Section 12, F1249 – Permeance after low temperature conditioning ASTM E154 Section 13, F1249 – Permeance after soil organism exposure	0.0098 perms 0.0091 perms 0.0097 perms 0.0095 perms
Methane Transmission Rate	ASTM D1434 – Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	**192.8 GTR mL(STP)/m^2*day
Radon Diffusion Coefficient	K124/02/95	8.8 x 10^{-12}m^2/second
Thickness		15 mils
Roll Dimensions		14 ft. wide x 140 ft. long or 1,960 ft^2
Roll Weight		140 lbs.

Note: perm unit = grains/(ft^2 *hr* in.Hg) * WVTR = Water Vapor Transmission Rate ** GTR = Gas Transmission Rate

Stego, the stegosaurus design logo(s), Crete Claw, StegoTack, StegoCrawl, Beast, and the stomp design logo(s) are all deemed to be registered and/or protectable trademarks or service marks of Stego Industries, LLC. © 2015 Stego Industries, LLC. Please see www.stegoindustries.com/legal. 12/2015

Appendix 12

Updated Tables and Plates

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7	MW-8
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/2/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2
1,1,1-Trichloroethane	680	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,1,2,2-Tetrachloroethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,1,2-Trichloroethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,1-Dichloroethane	270	240000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,1-Dichloroethene	330	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2,3-Trichlorobenzene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2,4-Trichlorobenzene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2-Dibromoethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2-Dichlorobenzene	1100	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2-Dichloroethane	20	30000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,2-Dichloropropane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,3-Dichlorobenzene	2400	280000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,4-Dichlorobenzene	1800	130000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
1,4-Dioxane	100	130000		22 U	25 U	19 U	22 U	20 U	18 U	25 U
2-Butanone (MEK)	120	500000		5.6 U	6.4 U	4.6 U	5.6 U	5.0 U	4.5 U	6.2 U
2-Hexanone	--	--		5.6 U	6.4 U	4.6 U	5.6 U	5.0 U	4.5 U	6.2 U
4-Methyl-2-pentanone (MIBK)	--	--		5.6 U	6.4 U	4.6 U	5.6 U	5.0 U	4.5 U	6.2 U
Acetone	50	500000		5.6 U	6.4 U	12 T	5.6 UT	5.0 U	4.5 U	6.2 U
Benzene	60	44000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Bromochloromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Bromodichloromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Bromoform	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Bromomethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Carbon disulfide	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Carbon tetrachloride	760	22000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Chlorobenzene	1100	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Chloroethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Chloroform	370	350000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Chloromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
cis-1,2-Dichloroethene	250	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
cis-1,3-Dichloropropene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Cyclohexane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7	MW-8
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			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2
Dibromochloromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Dibromochloropropane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Dichlorodifluoromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 UT	0.91 U	1.2 U
Ethylbenzene	1000	390000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Freon 113	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Isopropylbenzene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
m+p-Xylene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Methyl acetate	--	--		5.6 U	6.4 U	4.6 U	5.6 U	5.0 U	4.5 U	6.2 U
Methylcyclohexane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Methylene chloride	50	500000		1.1 U	1.3 U	0.93 U	0.91 J	1.0 U	0.91 U	1.2 U
MTBE	930	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
o-Xylene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Styrene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Tetrachloroethene	1300	150000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Toluene	700	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
trans-1,2-Dichloroethene	190	500000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
trans-1,3-Dichloropropene	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Trichloroethene	470	200000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Trichlorofluoromethane	--	--		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U
Vinyl chloride	20	13000		1.1 U	1.3 U	0.93 U	1.1 U	1.0 U	0.91 U	1.2 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-9	MW-9	MW-10	MW-11B	MW-11A
			Sample Date:	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/15/2015	10/6/2015
			Sample Depth (ft bls):	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2	0 - 2
1,1,1-Trichloroethane	680	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,1,2,2-Tetrachloroethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,1,2-Trichloroethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,1-Dichloroethane	270	240000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,1-Dichloroethene	330	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2,3-Trichlorobenzene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2,4-Trichlorobenzene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2-Dibromoethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2-Dichlorobenzene	1100	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2-Dichloroethane	20	30000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,2-Dichloropropane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,3-Dichlorobenzene	2400	280000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,4-Dichlorobenzene	1800	130000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
1,4-Dioxane	100	130000		19 U	22 U	18 U	19 U	19 U	23 U
2-Butanone (MEK)	120	500000		4.7 U	5.5 U	4.5 U	4.8 U	4.7 U	5.7 U
2-Hexanone	--	--		4.7 U	5.5 U	4.5 U	4.8 U	4.7 U	5.7 U
4-Methyl-2-pentanone (MIBK)	--	--		4.7 U	5.5 U	4.5 U	4.8 U	4.7 U	5.7 U
Acetone	50	500000		4.7 U	5.5 U	4.5 U	4.8 U	4.7 U	5.7 UT
Benzene	60	44000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Bromochloromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Bromodichloromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Bromoform	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Bromomethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Carbon disulfide	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Carbon tetrachloride	760	22000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Chlorobenzene	1100	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Chloroethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Chloroform	370	350000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Chloromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
cis-1,2-Dichloroethene	250	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
cis-1,3-Dichloropropene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Cyclohexane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-9	MW-9	MW-10	MW-11B	MW-11A
			Sample Date:	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/15/2015	10/6/2015
			Sample Depth (ft bls):	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2	0 - 2
Dibromochloromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Dibromochloropropane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Dichlorodifluoromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 UT	0.94 UT	1.1 U
Ethylbenzene	1000	390000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Freon 113	--	--		0.93 UT	1.1 UT	0.90 UT	0.97 U	0.94 U	1.1 U
Isopropylbenzene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
m+p-Xylene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Methyl acetate	--	--		4.7 U	5.5 U	4.5 U	4.8 U	4.7 U	5.7 U
Methylcyclohexane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Methylene chloride	50	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
MTBE	930	500000		0.93 UT	1.1 U	0.90 UT	0.97 U	0.94 U	1.1 U
o-Xylene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Styrene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Tetrachloroethene	1300	150000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Toluene	700	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
trans-1,2-Dichloroethene	190	500000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
trans-1,3-Dichloropropene	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Trichloroethene	470	200000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Trichlorofluoromethane	--	--		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U
Vinyl chloride	20	13000		0.93 U	1.1 U	0.90 U	0.97 U	0.94 U	1.1 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-12	MW-12	MW-12	SB-2	SB-2 DUP
			Sample Date:	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013	10/23/2013
			Sample Depth (ft bls):	8 - 10	0 - 2	4 - 6	12 - 13	0-2	0-2
1,1,1-Trichloroethane	680	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,1,2,2-Tetrachloroethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,1,2-Trichloroethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,1-Dichloroethane	270	240000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,1-Dichloroethene	330	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,2,3-Trichlorobenzene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,2,4-Trichlorobenzene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,2-Dibromoethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,2-Dichlorobenzene	1100	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,2-Dichloroethane	20	30000		0.97 U	0.98 U	1.0 U	1.3 U	1 U	1.1 U
1,2-Dichloropropane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,3-Dichlorobenzene	2400	280000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,4-Dichlorobenzene	1800	130000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
1,4-Dioxane	100	130000		19 U	20 U	20 U	26 U	100 U	110 U
2-Butanone (MEK)	120	500000		4.8 U	4.9 U	5.6	15	2.1 U	2.2 U
2-Hexanone	--	--		4.8 U	4.9 U	5.1 U	6.4 U	2.1 U	2.2 U
4-Methyl-2-pentanone (MIBK)	--	--		4.8 U	4.9 U	5.1 U	6.4 U	2.1 U	2.2 U
Acetone	50	500000		4.8 U	26 T	42 T	**88 T**	10 U	11 U
Benzene	60	44000		0.97 U	0.98 U	1.0 U	0.55 J	1 U	1.1 U
Bromochloromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Bromodichloromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Bromoform	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Bromomethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Carbon disulfide	--	--		0.97 U	0.77 J	0.54 J	1.3	2.1 U	2.2 U
Carbon tetrachloride	760	22000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Chlorobenzene	1100	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Chloroethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Chloroform	370	350000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Chloromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
cis-1,2-Dichloroethene	250	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
cis-1,3-Dichloropropene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Cyclohexane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-12	MW-12	MW-12	SB-2	SB-2 DUP
			Sample Date:	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013	10/23/2013
			Sample Depth (ft bls):	8 - 10	0 - 2	4 - 6	12 - 13	0-2	0-2
Dibromochloromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Dibromochloropropane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Dichlorodifluoromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Ethylbenzene	1000	390000		0.97 U	0.98 U	1.0 U	1.3 U	1 U	1.1 U
Freon 113	--	--		0.97 UT	0.98 UT	1.0 UT	1.3 U	2.1 U	2.2 U
Isopropylbenzene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	1 U	1.1 U
m+p-Xylene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	1 U	1.1 U
Methyl acetate	--	--		4.8 U	4.9 U	5.1 U	6.4 U	2.1 U	2.2 U
Methylcyclohexane	--	--		0.97 U	0.98 UT	1.0 UT	1.3 U	2.1 U	2.2 U
Methylene chloride	50	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
MTBE	930	500000		0.97 UT	0.98 U	1.0 U	0.55 J	1 U	1.1 U
o-Xylene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	1 U	1.1 U
Styrene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Tetrachloroethene	1300	150000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Toluene	700	500000		0.97 U	0.98 U	1.0 U	0.45 J	1 U	1.1 U
trans-1,2-Dichloroethene	190	500000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
trans-1,3-Dichloropropene	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Trichloroethene	470	200000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Trichlorofluoromethane	--	--		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U
Vinyl chloride	20	13000		0.97 U	0.98 U	1.0 U	1.3 U	2.1 U	2.2 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5
			Sample Date:	10/28/2013	10/22/2013	10/23/2013	10/21/2013	10/28/2013	10/22/2013
			Sample Depth (ft bls):	13-15	0-2	6-7	0-2	10-12	0-2
1,1,1-Trichloroethane	680	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,1,2,2-Tetrachloroethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,1,2-Trichloroethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,1-Dichloroethane	270	240000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,1-Dichloroethene	330	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,2,3-Trichlorobenzene	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,2,4-Trichlorobenzene	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,2-Dibromoethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,2-Dichlorobenzene	1100	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,2-Dichloroethane	20	30000		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
1,2-Dichloropropane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,3-Dichlorobenzene	2400	280000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,4-Dichlorobenzene	1800	130000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
1,4-Dioxane	100	130000		130 U	120 U	100 U	130 U	93 U	130 U
2-Butanone (MEK)	120	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
2-Hexanone	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
4-Methyl-2-pentanone (MIBK)	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Acetone	50	500000		13 U	12 U	10 U	13 U	9.3 U	13 U
Benzene	60	44000		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
Bromochloromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Bromodichloromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Bromoform	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Bromomethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Carbon disulfide	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Carbon tetrachloride	760	22000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Chlorobenzene	1100	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Chloroethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Chloroform	370	350000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Chloromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
cis-1,2-Dichloroethene	250	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
cis-1,3-Dichloropropene	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Cyclohexane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-2 10/28/2013 13-15	SB-3 10/22/2013 0-2	SB-3 10/23/2013 6-7	SB-4 10/21/2013 0-2	SB-4 10/28/2013 10-12	SB-5 10/22/2013 0-2
Dibromochloromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Dibromochloropropane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Dichlorodifluoromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Ethylbenzene	1000	390000		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
Freon 113	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Isopropylbenzene	--	--		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
m+p-Xylene	--	--		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
Methyl acetate	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Methylcyclohexane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Methylene chloride	50	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
MTBE	930	500000		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
o-Xylene	--	--		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
Styrene	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Tetrachloroethene	1300	150000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Toluene	700	500000		1.3 U	1.2 U	1 U	1.3 U	0.93 U	1.3 U
trans-1,2-Dichloroethene	190	500000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
trans-1,3-Dichloropropene	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Trichloroethene	470	200000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Trichlorofluoromethane	--	--		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U
Vinyl chloride	20	13000		2.6 U	2.4 U	2.1 U	2.7 U	1.9 U	2.6 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-6	SB-6	SB-7	SB-7	SB-8
			Sample Date:	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/21/2013
			Sample Depth (ft bls):	14-15	0-2	14-15	0-2	12-13	0-2
1,1,1-Trichloroethane	680	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,1,2,2-Tetrachloroethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,1,2-Trichloroethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,1-Dichloroethane	270	240000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,1-Dichloroethene	330	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,2,3-Trichlorobenzene	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,2,4-Trichlorobenzene	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,2-Dibromoethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,2-Dichlorobenzene	1100	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,2-Dichloroethane	20	30000		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
1,2-Dichloropropane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,3-Dichlorobenzene	2400	280000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,4-Dichlorobenzene	1800	130000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
1,4-Dioxane	100	130000		130 U	110 U	140 U	120 U	110 U	130 U
2-Butanone (MEK)	120	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
2-Hexanone	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
4-Methyl-2-pentanone (MIBK)	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Acetone	50	500000		13 U	11 U	14 U	12 U	11 U	13 U
Benzene	60	44000		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
Bromochloromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Bromodichloromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Bromoform	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Bromomethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Carbon disulfide	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Carbon tetrachloride	760	22000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Chlorobenzene	1100	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Chloroethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Chloroform	370	350000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Chloromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
cis-1,2-Dichloroethene	250	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
cis-1,3-Dichloropropene	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Cyclohexane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-6	SB-6	SB-7	SB-7	SB-8
			Sample Date:	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/21/2013
			Sample Depth (ft bls):	14-15	0-2	14-15	0-2	12-13	0-2
Dibromochloromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Dibromochloropropane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Dichlorodifluoromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Ethylbenzene	1000	390000		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
Freon 113	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Isopropylbenzene	--	--		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
m+p-Xylene	--	--		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
Methyl acetate	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Methylcyclohexane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Methylene chloride	50	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
MTBE	930	500000		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
o-Xylene	--	--		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
Styrene	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Tetrachloroethene	1300	150000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Toluene	700	500000		1.3 U	1.1 U	1.4 U	1.2 U	1.1 U	1.3 U
trans-1,2-Dichloroethene	190	500000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
trans-1,3-Dichloropropene	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Trichloroethene	470	200000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Trichlorofluoromethane	--	--		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U
Vinyl chloride	20	13000		2.6 U	2.1 U	2.7 U	2.4 U	2.1 U	2.6 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-8 10/25/2013 10-12	SB-9 10/24/2013 0-2	SB-9 10/28/2013 13-15	SB-10 10/28/2013 0-2	SB-10 10/28/2013 8-10	SB-13 10/14/2015 0 - 2
1,1,1-Trichloroethane	680	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,1,2,2-Tetrachloroethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,1,2-Trichloroethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,1-Dichloroethane	270	240000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,1-Dichloroethene	330	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,2,3-Trichlorobenzene	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,2,4-Trichlorobenzene	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,2-Dibromoethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,2-Dichlorobenzene	1100	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,2-Dichloroethane	20	30000		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
1,2-Dichloropropane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,3-Dichlorobenzene	2400	280000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,4-Dichlorobenzene	1800	130000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
1,4-Dioxane	100	130000		130 U	130 U	110 U	120 U	110 U	20 U
2-Butanone (MEK)	120	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	5.0 U
2-Hexanone	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	5.0 U
4-Methyl-2-pentanone (MIBK)	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	5.0 U
Acetone	50	500000		13 U	13 U	11 U	12 U	11 U	5.0 U
Benzene	60	44000		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
Bromochloromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Bromodichloromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Bromoform	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Bromomethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Carbon disulfide	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Carbon tetrachloride	760	22000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Chlorobenzene	1100	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Chloroethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Chloroform	370	350000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Chloromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
cis-1,2-Dichloroethene	250	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
cis-1,3-Dichloropropene	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Cyclohexane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-8 10/25/2013 10-12	SB-9 10/24/2013 0-2	SB-9 10/28/2013 13-15	SB-10 10/28/2013 0-2	SB-10 10/28/2013 8-10	SB-13 10/14/2015 0 - 2
Dibromochloromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Dibromochloropropane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Dichlorodifluoromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Ethylbenzene	1000	390000		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
Freon 113	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 UT
Isopropylbenzene	--	--		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
m+p-Xylene	--	--		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
Methyl acetate	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	5.0 U
Methylcyclohexane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Methylene chloride	50	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
MTBE	930	500000		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
o-Xylene	--	--		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
Styrene	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Tetrachloroethene	1300	150000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Toluene	700	500000		1.3 U	1.3 U	1.1 U	1.2 U	1.1 U	1.0 U
trans-1,2-Dichloroethene	190	500000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
trans-1,3-Dichloropropene	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Trichloroethene	470	200000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Trichlorofluoromethane	--	--		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U
Vinyl chloride	20	13000		2.6 U	2.5 U	2.3 U	2.3 U	2.1 U	1.0 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-14	SB-14	SB-15	SB-15	SB-16	SB-17	SB-17
			Sample Date:	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015	10/1/2015	10/2/2015
			Sample Depth (ft bls):	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2	0 - 2	8 - 10
1,1,1-Trichloroethane	680	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,1,2,2-Tetrachloroethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,1,2-Trichloroethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,1-Dichloroethane	270	240000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,1-Dichloroethene	330	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2,3-Trichlorobenzene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2,4-Trichlorobenzene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2-Dibromoethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2-Dichlorobenzene	1100	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2-Dichloroethane	20	30000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,2-Dichloropropane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,3-Dichlorobenzene	2400	280000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,4-Dichlorobenzene	1800	130000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
1,4-Dioxane	100	130000		22 U	21 U	23 U	19 U	23 U	25 U	26 U
2-Butanone (MEK)	120	500000		5.6 U	5.3 U	5.7 U	4.9 U	5.7 U	6.2 U	6.4 U
2-Hexanone	--	--		5.6 U	5.3 U	5.7 U	4.9 U	5.7 U	6.2 U	6.4 U
4-Methyl-2-pentanone (MIBK)	--	--		5.6 U	5.3 U	5.7 U	4.9 U	5.7 U	6.2 U	6.4 U
Acetone	50	500000		5.6 UT	5.3 UT	5.7 U	4.9 U	5.7 U	6.2 U	6.4 U
Benzene	60	44000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Bromochloromethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Bromodichloromethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Bromoform	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Bromomethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Carbon disulfide	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Carbon tetrachloride	760	22000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Chlorobenzene	1100	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Chloroethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Chloroform	370	350000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Chloromethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
cis-1,2-Dichloroethene	250	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
cis-1,3-Dichloropropene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Cyclohexane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-14	SB-14	SB-15	SB-15	SB-16	SB-17	SB-17
			Sample Date:	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015	10/1/2015	10/2/2015
			Sample Depth (ft bls):	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2	0 - 2	8 - 10
Dibromochloromethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Dibromochloropropane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Dichlorodifluoromethane	--	--		1.1 U	1.1 U	1.1 UT	0.97 U	1.1 U	1.2 U	1.3 U
Ethylbenzene	1000	390000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Freon 113	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 UT	1.2 U	1.3 U
Isopropylbenzene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
m+p-Xylene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Methyl acetate	--	--		5.6 U	5.3 U	5.7 U	4.9 U	5.7 U	6.2 U	6.4 U
Methylcyclohexane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Methylene chloride	50	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
MTBE	930	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
o-Xylene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Styrene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Tetrachloroethene	1300	150000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Toluene	700	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
trans-1,2-Dichloroethene	190	500000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
trans-1,3-Dichloropropene	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Trichloroethene	470	200000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Trichlorofluoromethane	--	--		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U
Vinyl chloride	20	13000		1.1 U	1.1 U	1.1 U	0.97 U	1.1 U	1.2 U	1.3 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-18 DUP	SB-18	SB-18	SB-19	SB-19	SB-20	SB-20
			Sample Date:	10/5/2015	10/5/2015	10/7/2015	10/1/2015	9/30/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	8 - 10	8 - 10	0 - 2	8 - 10	0 - 2
1,1,1-Trichloroethane	680	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,1,2,2-Tetrachloroethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,1,2-Trichloroethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,1-Dichloroethane	270	240000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,1-Dichloroethene	330	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2,3-Trichlorobenzene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2,4-Trichlorobenzene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2-Dibromoethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2-Dichlorobenzene	1100	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2-Dichloroethane	20	30000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,2-Dichloropropane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,3-Dichlorobenzene	2400	280000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,4-Dichlorobenzene	1800	130000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
1,4-Dioxane	100	130000		20 U	23 U	23 U	19 U	24 U	19 U	23 U
2-Butanone (MEK)	120	500000		5.0 U	5.7 U	5.8 U	4.8 U	5.9 U	4.6 U	5.9 U
2-Hexanone	--	--		5.0 U	5.7 U	5.8 U	4.8 U	5.9 U	4.6 U	5.9 U
4-Methyl-2-pentanone (MIBK)	--	--		5.0 U	5.7 U	5.8 U	4.8 U	5.9 U	4.6 U	5.9 U
Acetone	50	500000		5.0 UT	5.7 UT	5.8 U	4.8 U	5.9 U	4.6 U	5.9 U
Benzene	60	44000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Bromochloromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Bromodichloromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Bromoform	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Bromomethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 UT	0.93 U	1.2 U
Carbon disulfide	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 UT	0.93 U	1.2 U
Carbon tetrachloride	760	22000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Chlorobenzene	1100	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Chloroethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Chloroform	370	350000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Chloromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
cis-1,2-Dichloroethene	250	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
cis-1,3-Dichloropropene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Cyclohexane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-18 DUP 10/5/2015 0 - 2	SB-18 10/5/2015 0 - 2	SB-18 10/7/2015 8 - 10	SB-19 10/1/2015 8 - 10	SB-19 9/30/2015 0 - 2	SB-20 10/1/2015 8 - 10	SB-20 10/1/2015 0 - 2
Dibromochloromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Dibromochloropropane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Dichlorodifluoromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Ethylbenzene	1000	390000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Freon 113	--	--		0.99 UT	1.1 UT	1.2 UT	0.95 U	1.2 U	0.93 U	1.2 U
Isopropylbenzene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
m+p-Xylene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Methyl acetate	--	--		5.0 U	5.7 U	5.8 U	4.8 U	5.9 U	4.6 U	5.9 U
Methylcyclohexane	--	--		0.99 UT	1.1 UT	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Methylene chloride	50	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
MTBE	930	500000		0.99 U	1.1 U	1.2 UT	0.95 U	1.2 U	0.93 U	1.2 U
o-Xylene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Styrene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Tetrachloroethene	1300	150000		0.99 U	1.1 U	1.2 U	1.6	1.2 U	0.93 U	1.2 U
Toluene	700	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
trans-1,2-Dichloroethene	190	500000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
trans-1,3-Dichloropropene	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Trichloroethene	470	200000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Trichlorofluoromethane	--	--		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U
Vinyl chloride	20	13000		0.99 U	1.1 U	1.2 U	0.95 U	1.2 U	0.93 U	1.2 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-21	SB-21	SB-22	SB-22	SB-23	SB-23	SB-24
			Sample Date:	10/2/2015	10/7/2015	9/29/2015	9/29/2015	10/5/2015	10/5/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2
1,1,1-Trichloroethane	680	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,1,2,2-Tetrachloroethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,1,2-Trichloroethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,1-Dichloroethane	270	240000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,1-Dichloroethene	330	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2,3-Trichlorobenzene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2,4-Trichlorobenzene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2-Dibromoethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2-Dichlorobenzene	1100	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2-Dichloroethane	20	30000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,2-Dichloropropane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,3-Dichlorobenzene	2400	280000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,4-Dichlorobenzene	1800	130000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
1,4-Dioxane	100	130000		23 U	20 U	20 U	26 U	21 U	20 U	22 U
2-Butanone (MEK)	120	500000		5.7 U	5.0 U	4.9 U	6.4 U	5.3 U	4.9 U	5.6 U
2-Hexanone	--	--		5.7 U	5.0 U	4.9 U	6.4 U	5.3 U	4.9 U	5.6 U
4-Methyl-2-pentanone (MIBK)	--	--		5.7 U	5.0 U	4.9 U	6.4 U	5.3 U	4.9 U	5.6 U
Acetone	50	500000		5.7 U	5.0 UT	4.9 U	6.4 U	26 T	32 T	5.6 U
Benzene	60	44000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Bromochloromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Bromodichloromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Bromoform	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Bromomethane	--	--		1.1 U	1.0 U	0.99 U	1.3 UT	1.1 U	0.98 U	1.1 U
Carbon disulfide	--	--		1.1 U	1.0 U	0.99 U	1.3 UT	1.1 U	0.70 J	1.1 U
Carbon tetrachloride	760	22000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Chlorobenzene	1100	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.14 J	1.1 U
Chloroethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Chloroform	370	350000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Chloromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
cis-1,2-Dichloroethene	250	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
cis-1,3-Dichloropropene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Cyclohexane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-21	SB-21	SB-22	SB-22	SB-23	SB-23	SB-24
			Sample Date:	10/2/2015	10/7/2015	9/29/2015	9/29/2015	10/5/2015	10/5/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2
Dibromochloromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Dibromochloropropane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Dichlorodifluoromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 UT
Ethylbenzene	1000	390000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Freon 113	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 UT	0.98 UT	1.1 U
Isopropylbenzene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
m+p-Xylene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Methyl acetate	--	--		5.7 U	5.0 U	4.9 U	6.4 U	5.3 U	4.9 U	5.6 U
Methylcyclohexane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 UT	0.98 UT	1.1 U
Methylene chloride	50	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
MTBE	930	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
o-Xylene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Styrene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Tetrachloroethene	1300	150000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Toluene	700	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
trans-1,2-Dichloroethene	190	500000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
trans-1,3-Dichloropropene	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Trichloroethene	470	200000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Trichlorofluoromethane	--	--		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U
Vinyl chloride	20	13000		1.1 U	1.0 U	0.99 U	1.3 U	1.1 U	0.98 U	1.1 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28
			Sample Date:	9/29/2015	9/29/2015	10/5/2015	10/6/2015	10/5/2015	10/5/2015	9/30/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2	4 - 6	4 - 6
1,1,1-Trichloroethane	680	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichloroethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethane	270	240000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethene	330	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2,3-Trichlorobenzene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2,4-Trichlorobenzene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dibromoethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dichlorobenzene	1100	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	0.21 J
1,2-Dichloroethane	20	30000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,2-Dichloropropane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,3-Dichlorobenzene	2400	280000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
1,4-Dichlorobenzene	1800	130000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	0.16 J
1,4-Dioxane	100	130000		22 U	22 U	20 U	22 U	22 U	22 U	21 U
2-Butanone (MEK)	120	500000		2.9 J	5.5 U	5.0 U	5.5 U	16	9.2	3.2 J
2-Hexanone	--	--		5.4 U	5.5 U	5.0 U	5.5 U	5.5 U	5.5 U	5.3 U
4-Methyl-2-pentanone (MIBK)	--	--		5.4 U	5.5 U	5.0 U	5.5 U	5.5 U	5.5 U	5.3 U
Acetone	50	500000		5.4 U	5.5 U	5.0 UT	5.5 UT	**86 T**	**86 T**	11
Benzene	60	44000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromochloromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromodichloromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromoform	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromomethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 UT
Carbon disulfide	--	--		1.1 U	1.1 U	1.0 U	1.1 U	0.49 J	1.1 U	1.1 UT
Carbon tetrachloride	760	22000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Chlorobenzene	1100	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	0.62 J
Chloroethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloroform	370	350000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
cis-1,2-Dichloroethene	250	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
cis-1,3-Dichloropropene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Cyclohexane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28
			Sample Date:	9/29/2015	9/29/2015	10/5/2015	10/6/2015	10/5/2015	10/5/2015	9/30/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2	4 - 6	4 - 6
Dibromochloromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloropropane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Dichlorodifluoromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Ethylbenzene	1000	390000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Freon 113	--	--		1.1 U	1.1 U	1.0 UT	1.1 U	1.1 UT	1.1 UT	1.1 U
Isopropylbenzene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
m+p-Xylene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl acetate	--	--		5.4 U	5.5 U	5.0 U	5.5 U	5.5 U	5.5 U	5.3 U
Methylcyclohexane	--	--		1.1 U	1.1 U	1.0 UT	1.1 U	1.1 UT	1.1 UT	1.1 U
Methylene chloride	50	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
MTBE	930	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
o-Xylene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Styrene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Tetrachloroethene	1300	150000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Toluene	700	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
trans-1,2-Dichloroethene	190	500000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
trans-1,3-Dichloropropene	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Trichloroethene	470	200000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Trichlorofluoromethane	--	--		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U
Vinyl chloride	20	13000		1.1 U	1.1 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-28	SB-29	SB-29	SB-30	SB-30	SB-31	SB-31
			Sample Date:	9/30/2015	10/7/2015	10/7/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	4 - 6	0 - 2	4 - 6	6 - 8	0 - 2
1,1,1-Trichloroethane	680	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,1,2,2-Tetrachloroethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,1,2-Trichloroethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,1-Dichloroethane	270	240000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,1-Dichloroethene	330	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2,3-Trichlorobenzene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2,4-Trichlorobenzene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2-Dibromoethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2-Dichlorobenzene	1100	500000		0.17 J	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2-Dichloroethane	20	30000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,2-Dichloropropane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,3-Dichlorobenzene	2400	280000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,4-Dichlorobenzene	1800	130000		0.23 J	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
1,4-Dioxane	100	130000		21 U	19 U	18 U	21 U	24 U	20 U	22 U
2-Butanone (MEK)	120	500000		4.4 J	3.8 J	2.5 J	5.4 U	6.1 U	5.0 U	5.6 U
2-Hexanone	--	--		5.2 U	4.8 U	4.5 U	5.4 U	6.1 U	5.0 U	5.6 U
4-Methyl-2-pentanone (MIBK)	--	--		5.2 U	4.8 U	4.5 U	5.4 U	6.1 U	5.0 U	5.6 U
Acetone	50	500000		16	24 T	15 T	5.4 U	6.1 U	5.0 U	5.6 UT
Benzene	60	44000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Bromochloromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Bromodichloromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Bromoform	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Bromomethane	--	--		1.0 UT	0.95 U	0.90 U	1.1 UT	1.2 UT	1.0 U	1.1 U
Carbon disulfide	--	--		1.0 UT	0.95 U	0.90 U	1.1 UT	1.2 UT	1.0 U	1.1 U
Carbon tetrachloride	760	22000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Chlorobenzene	1100	500000		0.25 J	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Chloroethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Chloroform	370	350000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Chloromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
cis-1,2-Dichloroethene	250	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
cis-1,3-Dichloropropene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Cyclohexane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-28	SB-29	SB-29	SB-30	SB-30	SB-31	SB-31
			Sample Date:	9/30/2015	10/7/2015	10/7/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	4 - 6	0 - 2	4 - 6	6 - 8	0 - 2
Dibromochloromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Dibromochloropropane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Dichlorodifluoromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Ethylbenzene	1000	390000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Freon 113	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 UT	1.1 U
Isopropylbenzene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
m+p-Xylene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Methyl acetate	--	--		5.2 U	4.8 U	4.5 U	5.4 U	6.1 U	5.0 U	5.6 U
Methylcyclohexane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Methylene chloride	50	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.4	1.0 U	1.1 U
MTBE	930	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 UT	1.1 U
o-Xylene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Styrene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Tetrachloroethene	1300	150000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	0.67 J
Toluene	700	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
trans-1,2-Dichloroethene	190	500000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
trans-1,3-Dichloropropene	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Trichloroethene	470	200000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Trichlorofluoromethane	--	--		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U
Vinyl chloride	20	13000		1.0 U	0.95 U	0.90 U	1.1 U	1.2 U	1.0 U	1.1 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 DUP 10/1/2015 0 - 2	SB-32 10/1/2015 0 - 2	SB-32 10/1/2015 6 - 8
1,1,1-Trichloroethane	680	500000		1.2 U	1.2 U	1.0 U
1,1,2,2-Tetrachloroethane	--	--		1.2 U	1.2 U	1.0 U
1,1,2-Trichloroethane	--	--		1.2 U	1.2 U	1.0 U
1,1-Dichloroethane	270	240000		1.2 U	1.2 U	1.0 U
1,1-Dichloroethene	330	500000		1.2 U	1.2 U	1.0 U
1,2,3-Trichlorobenzene	--	--		1.2 U	1.2 U	1.0 U
1,2,4-Trichlorobenzene	--	--		1.2 U	1.2 U	1.0 U
1,2-Dibromoethane	--	--		1.2 U	1.2 U	1.0 U
1,2-Dichlorobenzene	1100	500000		1.2 U	1.2 U	1.0 U
1,2-Dichloroethane	20	30000		1.2 U	1.2 U	1.0 U
1,2-Dichloropropane	--	--		1.2 U	1.2 U	1.0 U
1,3-Dichlorobenzene	2400	280000		1.2 U	1.2 U	1.0 U
1,4-Dichlorobenzene	1800	130000		1.2 U	1.2 U	1.0 U
1,4-Dioxane	100	130000		23 U	23 U	20 U
2-Butanone (MEK)	120	500000		5.9 U	5.9 U	5.0 U
2-Hexanone	--	--		5.9 U	5.9 U	5.0 U
4-Methyl-2-pentanone (MIBK)	--	--		5.9 U	5.9 U	5.0 U
Acetone	50	500000		5.9 U	5.9 U	5.0 U
Benzene	60	44000		1.2 U	1.2 U	1.0 U
Bromochloromethane	--	--		1.2 U	1.2 U	1.0 U
Bromodichloromethane	--	--		1.2 U	1.2 U	1.0 U
Bromoform	--	--		1.2 U	1.2 U	1.0 U
Bromomethane	--	--		1.2 U	1.2 U	1.0 U
Carbon disulfide	--	--		1.2 U	1.2 U	1.0 U
Carbon tetrachloride	760	22000		1.2 U	1.2 U	1.0 U
Chlorobenzene	1100	500000		1.2 U	1.2 U	1.0 U
Chloroethane	--	--		1.2 U	1.2 U	1.0 U
Chloroform	370	350000		1.2 U	1.2 U	1.0 U
Chloromethane	--	--		1.2 U	1.2 U	1.0 U
cis-1,2-Dichloroethene	250	500000		1.2 U	1.2 U	1.0 U
cis-1,3-Dichloropropene	--	--		1.2 U	1.2 U	1.0 U
Cyclohexane	--	--		1.2 U	1.2 U	1.0 U

Table 1. Summary of Volatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 DUP 10/1/2015 0 - 2	SB-32 10/1/2015 0 - 2	SB-32 10/1/2015 6 - 8
Dibromochloromethane	--	--		1.2 U	1.2 U	1.0 U
Dibromochloropropane	--	--		1.2 U	1.2 U	1.0 U
Dichlorodifluoromethane	--	--		1.2 U	1.2 U	1.0 U
Ethylbenzene	1000	390000		1.2 U	1.2 U	1.0 U
Freon 113	--	--		1.2 U	1.2 U	1.0 U
Isopropylbenzene	--	--		1.2 U	1.2 U	1.0 U
m+p-Xylene	--	--		1.2 U	1.2 U	1.0 U
Methyl acetate	--	--		5.9 U	5.9 U	5.0 U
Methylcyclohexane	--	--		1.2 U	1.2 U	1.0 U
Methylene chloride	50	500000		1.2 U	1.2 U	1.0 U
MTBE	930	500000		1.2 U	1.2 U	1.0 U
o-Xylene	--	--		1.2 U	1.2 U	1.0 U
Styrene	--	--		1.2 U	1.2 U	1.0 U
Tetrachloroethene	1300	150000		1.2 U	1.2 U	1.0 U
Toluene	700	500000		1.2 U	1.2 U	1.0 U
trans-1,2-Dichloroethene	190	500000		1.2 U	1.2 U	1.0 U
trans-1,3-Dichloropropene	--	--		1.2 U	1.2 U	1.0 U
Trichloroethene	470	200000		1.2 U	1.2 U	1.0 U
Trichlorofluoromethane	--	--		1.2 U	1.2 U	1.0 U
Vinyl chloride	20	13000		1.2 U	1.2 U	1.0 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8
1,1'-Biphenyl	--	--		750 U	370 U	380 U	360 U	390 U	360 U
1,2,4,5-Tetrachlorobenzene	--	--		750 U	370 U	380 U	360 U	390 U	360 UT
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2,4,5-Trichlorophenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2,4,6-Trichlorophenol	--	--		300 U	150 U	150 U	150 U	160 U	150 U
2,4-Dichlorophenol	--	--		300 U	150 U	150 U	150 U	160 U	150 U
2,4-Dimethylphenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2,4-Dinitrophenol	--	--		600 U	300 U	300 U	290 U	310 U	290 U
2,4-Dinitrotoluene	--	--		150 U	75 U	76 U	74 U	79 U	74 U
2,6-Dinitrotoluene	--	--		150 U	75 U	76 U	74 U	79 U	74 U
2-Chloronaphthalene	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2-Chlorophenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2-Methylnaphthalene	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2-Methylphenol	330	500000		750 U	370 U	380 U	360 U	390 U	360 U
2-Nitroaniline	--	--		750 U	370 U	380 U	360 U	390 U	360 U
2-Nitrophenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
3,3'-Dichlorobenzidine	--	--		300 U	150 U	150 U	150 U	160 U	150 U
3-Nitroaniline	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4,6-Dinitro-2-methylphenol	--	--		600 U	300 U	300 U	290 U	310 U	290 U
4-Bromophenyl phenyl ether	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4-Chloro-3-methylphenol	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4-Chloroaniline	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4-Chlorophenyl phenyl ether	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4-Methylphenol	330	500000		750 U	370 U	380 U	360 U	390 U	360 U
4-Nitroaniline	--	--		750 U	370 U	380 U	360 U	390 U	360 U
4-Nitrophenol	--	--		1500 U	750 U	760 U	740 U	790 U	740 U
Acenaphthene	20000	500000		750 U	370 U	380 U	360 U	390 U	360 U
Acenaphthylene	100000	500000		750 U	370 U	380 U	360 U	390 U	360 U
Acetophenone	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Anthracene	100000	500000		750 U	370 U	380 U	360 U	390 U	360 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8
Atrazine	--	--		300 U	150 U	150 U	150 U	160 U	150 U
Benzaldehyde	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Benzo[a]anthracene	1000	5600		75 U	37 U	38 U	36 U	160	36 U
Benzo[a]pyrene	1000	1000		75 U	37 U	38 U	36 U	170	36 U
Benzo[b]fluoranthene	1000	5600		75 U	37 U	38 U	36 U	250	36 U
Benzo[g,h,i]perylene	100000	500000		750 U	370 U	380 U	360 U	100 J	360 U
Benzo[k]fluoranthene	800	56000		75 U	37 U	38 U	36 U	84	36 U
Bis(2-chloroethoxy)methane	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Bis(2-chloroethyl) ether	--	--		75 U	37 U	38 U	36 U	39 U	36 U
bis(2-Chloroisopropyl)ether	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Bis(2-ethylhexyl) phthalate	--	--		750 UT	370 UT	380 U	260 J	390 U	51 J
Butylbenzyl phthalate	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Caprolactam	--	--		750 U	370 U	380 UT	360 UT	390 U	360 U
Carbazole	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Chrysene	1000	56000		750 U	370 U	380 U	360 U	180 J	360 U
Dibenzo[a,h]anthracene	330	560		75 U	37 U	38 U	36 U	39 U	36 U
Dibenzofuran	7000	350000		750 U	370 U	380 U	360 U	390 U	360 U
Diethyl phthalate	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Dimethyl phthalate	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Di-n-butyl phthalate	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Di-n-octyl phthalate	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Fluoranthene	100000	500000		750 U	370 U	380 U	360 U	260 J	360 U
Fluorene	30000	500000		750 U	370 U	380 U	360 U	390 U	360 U
Hexachlorobenzene	330	6000		75 U	37 U	38 U	36 U	39 U	36 U
Hexachlorobutadiene	--	--		150 U	75 U	76 U	74 U	79 U	74 U
Hexachlorocyclopentadiene	--	--		750 U	370 U	380 U	360 U	390 U	360 U
Hexachloroethane	--	--		75 U	37 U	38 U	36 U	39 U	36 U
Indeno[1,2,3-cd]pyrene	500	5600		75 U	37 U	38 U	36 U	110	36 U
Isophorone	--	--		300 U	150 U	150 U	150 U	160 U	150 U
Naphthalene	12000	500000		750 U	370 U	380 U	360 U	390 U	360 U
Nitrobenzene	--	--		75 U	37 U	38 U	36 U	39 U	36 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8
n-Nitrosodi-n-propylamine	--	--		75 U	37 U	38 U	36 U	39 U	36 U
n-Nitrosodiphenylamine	--	--		750 U	370 U	380 U	360 U	390 U	360 UT
Pentachlorophenol	800	6700		600 U	300 U	300 U	290 U	310 U	290 U
Phenanthrene	100000	500000		750 U	370 U	380 U	360 U	80 J	360 U
Phenol	330	500000		750 U	370 U	380 U	360 U	390 U	360 U
Pyrene	100000	500000		750 U	370 U	380 U	360 U	280 J	360 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-8	MW-9	MW-9	MW-10	MW-11A
			Sample Date:	10/2/2015	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/6/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2
1,1'-Biphenyl	--	--		370 U	380 U	380 U	370 U	370 U	380 U
1,2,4,5-Tetrachlorobenzene	--	--		370 U	380 U	380 U	370 UT	370 U	380 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2,4,5-Trichlorophenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2,4,6-Trichlorophenol	--	--		150 U	150 U	150 U	150 U	150 U	150 U
2,4-Dichlorophenol	--	--		150 U	150 U	150 U	150 U	150 U	150 U
2,4-Dimethylphenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2,4-Dinitrophenol	--	--		300 U	310 U	310 U	300 U	300 U	310 U
2,4-Dinitrotoluene	--	--		76 U	78 U	77 U	74 U	76 U	78 U
2,6-Dinitrotoluene	--	--		76 U	78 U	77 U	74 U	76 U	78 U
2-Chloronaphthalene	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2-Chlorophenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2-Methylnaphthalene	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2-Methylphenol	330	500000		370 U	380 U	380 U	370 U	370 U	380 U
2-Nitroaniline	--	--		370 U	380 U	380 U	370 U	370 U	380 U
2-Nitrophenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
3,3'-Dichlorobenzidine	--	--		150 U	150 U	150 U	150 U	150 U	150 U
3-Nitroaniline	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4,6-Dinitro-2-methylphenol	--	--		300 U	310 U	310 U	300 U	300 U	310 U
4-Bromophenyl phenyl ether	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4-Chloro-3-methylphenol	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4-Chloroaniline	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4-Chlorophenyl phenyl ether	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4-Methylphenol	330	500000		370 U	380 U	380 U	370 U	370 U	380 U
4-Nitroaniline	--	--		370 U	380 U	380 U	370 U	370 U	380 U
4-Nitrophenol	--	--		760 U	780 U	770 U	740 U	760 U	780 U
Acenaphthene	20000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Acenaphthylene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Acetophenone	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Anthracene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-8	MW-9	MW-9	MW-10	MW-11A
			Sample Date:	10/2/2015	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/6/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2
Atrazine	--	--		150 U	150 U	150 U	150 U	150 U	150 U
Benzaldehyde	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Benzo[a]anthracene	1000	5600		37 U	38 U	38 U	37 U	37 U	38 U
Benzo[a]pyrene	1000	1000		37 U	38 U	38 U	37 U	37 U	38 U
Benzo[b]fluoranthene	1000	5600		37 U	38 U	38 U	37 U	37 U	38 U
Benzo[g,h,i]perylene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Benzo[k]fluoranthene	800	56000		37 U	38 U	38 U	37 U	37 U	38 U
Bis(2-chloroethoxy)methane	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Bis(2-chloroethyl) ether	--	--		37 U	38 U	38 U	37 U	37 U	38 U
bis(2-Chloroisopropyl)ether	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Bis(2-ethylhexyl) phthalate	--	--		370 U	380 U	110 J	370 U	370 U	380 U
Butylbenzyl phthalate	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Caprolactam	--	--		370 U	380 U	380 U	370 U	370 U	380 UT
Carbazole	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Chrysene	1000	56000		370 U	380 U	380 U	370 U	370 U	380 U
Dibenzo[a,h]anthracene	330	560		37 U	38 U	38 U	37 U	37 U	38 U
Dibenzofuran	7000	350000		370 U	380 U	380 U	370 U	370 U	380 U
Diethyl phthalate	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Dimethyl phthalate	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Di-n-butyl phthalate	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Di-n-octyl phthalate	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Fluoranthene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Fluorene	30000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Hexachlorobenzene	330	6000		37 U	38 U	38 U	37 U	37 U	38 U
Hexachlorobutadiene	--	--		76 U	78 U	77 U	74 U	76 U	78 U
Hexachlorocyclopentadiene	--	--		370 U	380 U	380 U	370 U	370 U	380 U
Hexachloroethane	--	--		37 U	38 U	38 U	37 U	37 U	38 U
Indeno[1,2,3-cd]pyrene	500	5600		37 U	38 U	38 U	37 U	37 U	38 U
Isophorone	--	--		150 U	150 U	150 U	150 U	150 U	150 U
Naphthalene	12000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Nitrobenzene	--	--		37 U	38 U	38 U	37 U	37 U	38 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-8	MW-9	MW-9	MW-10	MW-11A
			Sample Date:	10/2/2015	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/6/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2
n-Nitrosodi-n-propylamine	--	--		37 U	38 U	38 U	37 U	37 U	38 U
n-Nitrosodiphenylamine	--	--		370 U	380 U	380 UT	370 UT	370 UT	380 U
Pentachlorophenol	800	6700		300 U	310 U	310 U	300 U	300 U	310 U
Phenanthrene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U
Phenol	330	500000		370 U	380 U	380 U	370 U	370 U	380 U
Pyrene	100000	500000		370 U	380 U	380 U	370 U	370 U	380 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-11B	MW-12	MW-12	MW-12	SB-2
			Sample Date:	10/15/2015	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	12 - 13	0-2
1,1'-Biphenyl	--	--		390 U	360 U	360 U	360 U	380 U	36 U
1,2,4,5-Tetrachlorobenzene	--	--		390 U	360 UT	360 U	360 U	380 U	36 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	36 U
2,3,4,6-Tetrachlorophenol	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2,4,5-Trichlorophenol	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2,4,6-Trichlorophenol	--	--		160 U	150 U	140 U	140 U	150 U	36 U
2,4-Dichlorophenol	--	--		160 U	150 U	140 U	140 U	150 U	9.1 U
2,4-Dimethylphenol	--	--		390 U	360 U	360 U	360 U	380 U	9.1 U
2,4-Dinitrophenol	--	--		320 U	290 U	290 U	290 U	310 U	180 U
2,4-Dinitrotoluene	--	--		80 U	74 U	73 U	73 U	77 U	36 U
2,6-Dinitrotoluene	--	--		80 U	74 U	73 U	73 U	77 U	36 U
2-Chloronaphthalene	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2-Chlorophenol	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2-Methylnaphthalene	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2-Methylphenol	330	500000		390 U	360 U	360 U	360 U	380 U	9.1 U
2-Nitroaniline	--	--		390 U	360 U	360 U	360 U	380 U	36 U
2-Nitrophenol	--	--		390 U	360 U	360 U	360 U	380 U	36 U
3,3'-Dichlorobenzidine	--	--		160 U	150 U	140 U	140 U	150 U	36 U
3-Nitroaniline	--	--		390 U	360 U	360 U	360 U	380 U	36 U
4,6-Dinitro-2-methylphenol	--	--		320 U	290 U	290 U	290 U	310 U	180 U
4-Bromophenyl phenyl ether	--	--		390 U	360 U	360 U	360 U	380 U	36 U
4-Chloro-3-methylphenol	--	--		390 U	360 U	360 U	360 U	380 U	36 U
4-Chloroaniline	--	--		390 U	360 U	360 U	360 U	380 U	17 U
4-Chlorophenyl phenyl ether	--	--		390 U	360 U	360 U	360 U	380 U	36 U
4-Methylphenol	330	500000		390 U	360 U	360 U	360 U	240 J	9.1 U
4-Nitroaniline	--	--		390 U	360 U	360 U	360 U	380 U	36 U
4-Nitrophenol	--	--		800 U	740 U	730 UT	730 UT	770 U	36 U
Acenaphthene	20000	500000		390 U	360 U	360 U	360 U	380 U	36 U
Acenaphthylene	100000	500000		390 U	360 U	360 U	360 U	380 U	36 U
Acetophenone	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Anthracene	100000	500000		390 U	360 U	360 U	360 U	380 U	36 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-11B	MW-12	MW-12	MW-12	SB-2
			Sample Date:	10/15/2015	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	12 - 13	0-2
Atrazine	--	--		160 U	150 U	140 U	140 U	150 U	36 U
Benzaldehyde	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Benzo[a]anthracene	1000	5600		39 U	36 U	79	36 U	38 U	36 U
Benzo[a]pyrene	1000	1000		39 U	36 U	65	36 U	38 U	36 U
Benzo[b]fluoranthene	1000	5600		39 U	36 U	88	36 U	38 U	36 U
Benzo[g,h,i]perylene	100000	500000		390 U	360 U	38 J	360 U	380 U	36 U
Benzo[k]fluoranthene	800	56000		39 U	36 U	37	36 U	38 U	36 U
Bis(2-chloroethoxy)methane	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Bis(2-chloroethyl) ether	--	--		39 U	36 U	36 U	36 U	38 U	9.1 U
bis(2-Chloroisopropyl)ether	--	--		390 U	360 U	360 U	360 U	380 U	NA
Bis(2-ethylhexyl) phthalate	--	--		390 U	99 J	360 U	360 U	380 U	36 U
Butylbenzyl phthalate	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Caprolactam	--	--		390 U	360 U	360 U	360 U	380 UT	36 U
Carbazole	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Chrysene	1000	56000		390 U	360 U	78 J	360 U	380 U	36 U
Dibenzo[a,h]anthracene	330	560		39 U	36 U	36 U	36 U	38 U	36 U
Dibenzofuran	7000	350000		390 U	360 U	360 U	360 U	380 U	9.1 U
Diethyl phthalate	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Dimethyl phthalate	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Di-n-butyl phthalate	--	--		390 U	360 U	360 U	360 U	380 U	27
Di-n-octyl phthalate	--	--		390 U	360 U	360 U	81 J	380 U	36 U
Fluoranthene	100000	500000		390 U	360 U	160 J	360 U	380 U	36 U
Fluorene	30000	500000		390 U	360 U	360 U	360 U	380 U	36 U
Hexachlorobenzene	330	6000		39 U	36 U	36 U	36 U	38 U	36 U
Hexachlorobutadiene	--	--		80 U	74 U	73 U	73 U	77 U	36 U
Hexachlorocyclopentadiene	--	--		390 U	360 U	360 U	360 U	380 U	36 U
Hexachloroethane	--	--		39 U	36 U	36 U	36 U	38 U	36 U
Indeno[1,2,3-cd]pyrene	500	5600		39 U	36 U	39	36 U	38 U	36 U
Isophorone	--	--		160 U	150 U	140 U	140 U	150 U	36 U
Naphthalene	12000	500000		390 U	360 U	360 U	360 U	380 U	9.1 U
Nitrobenzene	--	--		39 U	36 U	36 U	36 U	38 U	36 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-11B	MW-12	MW-12	MW-12	SB-2
			Sample Date:	10/15/2015	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	12 - 13	0-2
n-Nitrosodi-n-propylamine	--	--		39 U	36 U	36 U	36 U	38 U	9.1 U
n-Nitrosodiphenylamine	--	--		390 U	360 UT	360 U	360 U	380 U	36 U
Pentachlorophenol	800	6700		320 U	290 U	290 U	290 U	310 U	180 U
Phenanthrene	100000	500000		390 U	360 U	150 J	360 U	380 U	36 U
Phenol	330	500000		390 U	360 U	360 U	360 U	380 U	36 U
Pyrene	100000	500000		390 U	360 U	160 J	360 U	380 U	36 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-2 DUP	SB-2	SB-3	SB-3	SB-4	SB-4
			Sample Date:	10/23/2013	10/28/2013	10/22/2013	10/23/2013	10/21/2013	10/28/2013
			Sample Depth (ft bls):	0-2	13-15	0-2	6-7	0-2	10-12
1,1'-Biphenyl	--	--		36 U	37 U	37 U	37 U	37 U	230 U
1,2,4,5-Tetrachlorobenzene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,2'-oxybis (1-chloropropane)	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,3,4,6-Tetrachlorophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,4,5-Trichlorophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,4,6-Trichlorophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,4-Dichlorophenol	--	--		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
2,4-Dimethylphenol	--	--		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
2,4-Dinitrophenol	--	--		180 U	180 U	190 U	190 U	180 U	1100 U
2,4-Dinitrotoluene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2,6-Dinitrotoluene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2-Chloronaphthalene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2-Chlorophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2-Methylnaphthalene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2-Methylphenol	330	500000		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
2-Nitroaniline	--	--		36 U	37 U	37 U	37 U	37 U	230 U
2-Nitrophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
3,3'-Dichlorobenzidine	--	--		36 U	37 U	37 U	37 U	37 U	230 U
3-Nitroaniline	--	--		36 U	37 U	37 U	37 U	37 U	230 U
4,6-Dinitro-2-methylphenol	--	--		180 U	180 U	190 U	190 U	180 U	1100 U
4-Bromophenyl phenyl ether	--	--		36 U	37 U	37 U	37 U	37 U	230 U
4-Chloro-3-methylphenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
4-Chloroaniline	--	--		17 U	17 U	18 U	18 U	17 U	110 U
4-Chlorophenyl phenyl ether	--	--		36 U	37 U	37 U	37 U	37 U	230 U
4-Methylphenol	330	500000		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
4-Nitroaniline	--	--		36 U	37 U	37 U	37 U	37 U	230 U
4-Nitrophenol	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Acenaphthene	20000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Acenaphthylene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Acetophenone	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Anthracene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-2 DUP	SB-2	SB-3	SB-3	SB-4	SB-4
			Sample Date:	10/23/2013	10/28/2013	10/22/2013	10/23/2013	10/21/2013	10/28/2013
			Sample Depth (ft bls):	0-2	13-15	0-2	6-7	0-2	10-12
Atrazine	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Benzaldehyde	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Benzo[a]anthracene	1000	5600		36 U	37 U	37 U	37 U	37 U	230 U
Benzo[a]pyrene	1000	1000		36 U	37 U	37 U	37 U	37 U	230 U
Benzo[b]fluoranthene	1000	5600		36 U	37 U	37 U	37 U	37 U	230 U
Benzo[g,h,i]perylene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Benzo[k]fluoranthene	800	56000		36 U	37 U	37 U	37 U	37 U	230 U
Bis(2-chloroethoxy)methane	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Bis(2-chloroethyl) ether	--	--		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
bis(2-Chloroisopropyl)ether	--	--		NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Butylbenzyl phthalate	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Caprolactam	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Carbazole	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Chrysene	1000	56000		36 U	37 U	37 U	37 U	37 U	230 U
Dibenzo[a,h]anthracene	330	560		36 U	37 U	37 U	37 U	37 U	230 U
Dibenzofuran	7000	350000		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
Diethyl phthalate	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Dimethyl phthalate	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Di-n-butyl phthalate	--	--		18 U	18 U	19 U	19 U	18 U	110 U
Di-n-octyl phthalate	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Fluoranthene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Fluorene	30000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Hexachlorobenzene	330	6000		36 U	37 U	37 U	37 U	37 U	230 U
Hexachlorobutadiene	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Hexachlorocyclopentadiene	--	--		36 U	180 U	190 U	190 U	180 U	230 U
Hexachloroethane	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Indeno[1,2,3-cd]pyrene	500	5600		36 U	37 U	37 U	37 U	37 U	230 U
Isophorone	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Naphthalene	12000	500000		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
Nitrobenzene	--	--		36 U	37 U	37 U	37 U	37 U	230 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-2 DUP	SB-2	SB-3	SB-3	SB-4	SB-4
			Sample Date:	10/23/2013	10/28/2013	10/22/2013	10/23/2013	10/21/2013	10/28/2013
			Sample Depth (ft bls):	0-2	13-15	0-2	6-7	0-2	10-12
n-Nitrosodi-n-propylamine	--	--		9.1 U	9.2 U	9.4 U	9.3 U	9.2 U	57 U
n-Nitrosodiphenylamine	--	--		36 U	37 U	37 U	37 U	37 U	230 U
Pentachlorophenol	800	6700		180 U	180 U	190 U	190 U	180 U	1100 U
Phenanthrene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U
Phenol	330	500000		36 U	37 U	37 U	37 U	37 U	230 U
Pyrene	100000	500000		36 U	37 U	37 U	37 U	37 U	230 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-5	SB-6	SB-6	SB-7	SB-7
			Sample Date:	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013
			Sample Depth (ft bls):	0-2	14-15	0-2	14-15	0-2	12-13
1,1'-Biphenyl	--	--		37 U	36 U	38 U	37 U	38 U	39 U
1,2,4,5-Tetrachlorobenzene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,2'-oxybis (1-chloropropane)	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,3,4,6-Tetrachlorophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,4,5-Trichlorophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,4,6-Trichlorophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,4-Dichlorophenol	--	--		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
2,4-Dimethylphenol	--	--		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
2,4-Dinitrophenol	--	--		190 U	180 U	190 U	190 U	190 U	190 U
2,4-Dinitrotoluene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2,6-Dinitrotoluene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2-Chloronaphthalene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2-Chlorophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2-Methylnaphthalene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2-Methylphenol	330	500000		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
2-Nitroaniline	--	--		37 U	36 U	38 U	37 U	38 U	39 U
2-Nitrophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
3,3'-Dichlorobenzidine	--	--		37 U	36 U	38 U	37 U	38 U	39 U
3-Nitroaniline	--	--		37 U	36 U	38 U	37 U	38 U	39 U
4,6-Dinitro-2-methylphenol	--	--		190 U	180 U	190 U	190 U	190 U	190 U
4-Bromophenyl phenyl ether	--	--		37 U	36 U	38 U	37 U	38 U	39 U
4-Chloro-3-methylphenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
4-Chloroaniline	--	--		18 U	17 U	18 U	18 U	18 U	18 U
4-Chlorophenyl phenyl ether	--	--		37 U	36 U	38 U	37 U	38 U	39 U
4-Methylphenol	330	500000		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
4-Nitroaniline	--	--		37 U	36 U	38 U	37 U	38 U	39 U
4-Nitrophenol	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Acenaphthene	20000	500000		37 U	36 U	38 U	37 U	38 U	39 U
Acenaphthylene	100000	500000		37 U	36 U	38 U	37 U	38 U	39 U
Acetophenone	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Anthracene	100000	500000		37 U	36 U	38 U	37 U	38 U	39 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-5	SB-6	SB-6	SB-7	SB-7
			Sample Date:	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013
			Sample Depth (ft bls):	0-2	14-15	0-2	14-15	0-2	12-13
Atrazine	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Benzaldehyde	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Benzo[a]anthracene	1000	5600		37 U	36 U	38 U	37 U	38 U	39 U
Benzo[a]pyrene	1000	1000		37 U	36 U	38 U	37 U	38 U	39 U
Benzo[b]fluoranthene	1000	5600		37 U	36 U	38 U	37 U	38 U	39 U
Benzo[g,h,i]perylene	100000	500000		37 U	36 U	38 U	37 U	38 U	39 U
Benzo[k]fluoranthene	800	56000		37 U	36 U	38 U	37 U	38 U	39 U
Bis(2-chloroethoxy)methane	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Bis(2-chloroethyl) ether	--	--		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
bis(2-Chloroisopropyl)ether	--	--		NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Butylbenzyl phthalate	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Caprolactam	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Carbazole	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Chrysene	1000	56000		37 U	36 U	38 U	37 U	38 U	39 U
Dibenzo[a,h]anthracene	330	560		37 U	36 U	38 U	37 U	38 U	39 U
Dibenzofuran	7000	350000		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
Diethyl phthalate	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Dimethyl phthalate	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Di-n-butyl phthalate	--	--		19 U	18 U	19 U	19 U	19 U	19 U
Di-n-octyl phthalate	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Fluoranthene	100000	500000		37 U	36 U	38 U	37 U	47	39 U
Fluorene	30000	500000		37 U	36 U	38 U	37 U	38 U	39 U
Hexachlorobenzene	330	6000		37 U	36 U	38 U	37 U	38 U	39 U
Hexachlorobutadiene	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Hexachlorocyclopentadiene	--	--		190 U	180 U	190 U	190 U	190 U	190 U
Hexachloroethane	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Indeno[1,2,3-cd]pyrene	500	5600		37 U	36 U	38 U	37 U	38 U	39 U
Isophorone	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Naphthalene	12000	500000		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
Nitrobenzene	--	--		37 U	36 U	38 U	37 U	38 U	39 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-5	SB-6	SB-6	SB-7	SB-7
			Sample Date:	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013
			Sample Depth (ft bls):	0-2	14-15	0-2	14-15	0-2	12-13
n-Nitrosodi-n-propylamine	--	--		9.3 U	9.1 U	9.5 U	9.4 U	9.6 U	9.7 U
n-Nitrosodiphenylamine	--	--		37 U	36 U	38 U	37 U	38 U	39 U
Pentachlorophenol	800	6700		190 U	180 U	190 U	190 U	190 U	190 U
Phenanthrene	100000	500000		37 U	36 U	38 U	37 U	49	39 U
Phenol	330	500000		37 U	36 U	38 U	37 U	38 U	39 U
Pyrene	100000	500000		37 U	36 U	38 U	37 U	53	39 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-8	SB-8	SB-9	SB-9	SB-10	SB-10
			Sample Date:	10/21/2013	10/25/2013	10/24/2013	10/28/2013	10/28/2013	10/28/2013
			Sample Depth (ft bls):	0-2	10-12	0-2	13-15	0-2	8-10
1,1'-Biphenyl	--	--		39 U	35 U	37 U	37 U	38 U	110 U
1,2,4,5-Tetrachlorobenzene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,2'-oxybis (1-chloropropane)	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,3,4,6-Tetrachlorophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,4,5-Trichlorophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,4,6-Trichlorophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,4-Dichlorophenol	--	--		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
2,4-Dimethylphenol	--	--		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
2,4-Dinitrophenol	--	--		190 U	180 U	190 U	180 U	190 U	540 U
2,4-Dinitrotoluene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2,6-Dinitrotoluene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2-Chloronaphthalene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2-Chlorophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2-Methylnaphthalene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2-Methylphenol	330	500000		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
2-Nitroaniline	--	--		39 U	35 U	37 U	37 U	38 U	110 U
2-Nitrophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
3,3'-Dichlorobenzidine	--	--		39 U	35 U	37 U	37 U	38 U	110 U
3-Nitroaniline	--	--		39 U	35 U	37 U	37 U	38 U	110 U
4,6-Dinitro-2-methylphenol	--	--		190 U	180 U	190 U	180 U	190 U	540 U
4-Bromophenyl phenyl ether	--	--		39 U	35 U	37 U	37 U	38 U	110 U
4-Chloro-3-methylphenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
4-Chloroaniline	--	--		18 U	17 U	18 U	17 U	18 U	52 U
4-Chlorophenyl phenyl ether	--	--		39 U	35 U	37 U	37 U	38 U	110 U
4-Methylphenol	330	500000		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
4-Nitroaniline	--	--		39 U	35 U	37 U	37 U	38 U	110 U
4-Nitrophenol	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Acenaphthene	20000	500000		39 U	35 U	37 U	37 U	38 U	110 U
Acenaphthylene	100000	500000		39 U	35 U	37 U	37 U	38 U	110 U
Acetophenone	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Anthracene	100000	500000		39 U	35 U	37 U	37 U	38 U	140

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-8	SB-8	SB-9	SB-9	SB-10	SB-10
			Sample Date:	10/21/2013	10/25/2013	10/24/2013	10/28/2013	10/28/2013	10/28/2013
			Sample Depth (ft bls):	0-2	10-12	0-2	13-15	0-2	8-10
Atrazine	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Benzaldehyde	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Benzo[a]anthracene	1000	5600		39 U	35 U	37 U	37 U	38 U	310
Benzo[a]pyrene	1000	1000		39 U	35 U	37 U	37 U	38 U	200
Benzo[b]fluoranthene	1000	5600		39 U	35 U	37 U	37 U	38 U	260
Benzo[g,h,i]perylene	100000	500000		39 U	35 U	37 U	37 U	38 U	130
Benzo[k]fluoranthene	800	56000		39 U	35 U	37 U	37 U	38 U	110 U
Bis(2-chloroethoxy)methane	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Bis(2-chloroethyl) ether	--	--		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
bis(2-Chloroisopropyl)ether	--	--		NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl) phthalate	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Butylbenzyl phthalate	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Caprolactam	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Carbazole	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Chrysene	1000	56000		39 U	35 U	37 U	37 U	38 U	240
Dibenzo[a,h]anthracene	330	560		39 U	35 U	37 U	37 U	38 U	110 U
Dibenzofuran	7000	350000		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
Diethyl phthalate	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Dimethyl phthalate	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Di-n-butyl phthalate	--	--		19 U	18 U	19 U	18 U	19 U	55 U
Di-n-octyl phthalate	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Fluoranthene	100000	500000		39 U	35 U	37 U	37 U	38 U	580
Fluorene	30000	500000		39 U	35 U	37 U	37 U	38 U	110 U
Hexachlorobenzene	330	6000		39 U	35 U	37 U	37 U	38 U	110 U
Hexachlorobutadiene	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Hexachlorocyclopentadiene	--	--		39 U	35 U	37 U	180 U	190 U	540 U
Hexachloroethane	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Indeno[1,2,3-cd]pyrene	500	5600		39 U	35 U	37 U	37 U	38 U	120
Isophorone	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Naphthalene	12000	500000		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
Nitrobenzene	--	--		39 U	35 U	37 U	37 U	38 U	110 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-8	SB-8	SB-9	SB-9	SB-10	SB-10
			Sample Date:	10/21/2013	10/25/2013	10/24/2013	10/28/2013	10/28/2013	10/28/2013
			Sample Depth (ft bls):	0-2	10-12	0-2	13-15	0-2	8-10
n-Nitrosodi-n-propylamine	--	--		9.7 U	8.9 U	9.4 U	9.2 U	9.6 U	27 U
n-Nitrosodiphenylamine	--	--		39 U	35 U	37 U	37 U	38 U	110 U
Pentachlorophenol	800	6700		190 U	180 U	190 U	180 U	190 U	540 U
Phenanthrene	100000	500000		39 U	35 U	37 U	37 U	38 U	620
Phenol	330	500000		39 U	35 U	37 U	37 U	38 U	110 U
Pyrene	100000	500000		39 U	35 U	37 U	37 U	42	630

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
			Sample Date:	10/14/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2
1,1'-Biphenyl	--	--		390 U	720 U	360 U	350 U	360 U	390 U
1,2,4,5-Tetrachlorobenzene	--	--		390 U	720 U	360 U	350 U	360 UT	390 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2,4,5-Trichlorophenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2,4,6-Trichlorophenol	--	--		160 U	290 U	150 U	140 U	150 U	160 U
2,4-Dichlorophenol	--	--		160 U	290 U	150 U	140 U	150 U	160 U
2,4-Dimethylphenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2,4-Dinitrophenol	--	--		310 U	580 U	290 U	280 U	290 U	320 U
2,4-Dinitrotoluene	--	--		79 U	150 U	74 U	71 U	73 U	80 U
2,6-Dinitrotoluene	--	--		79 U	150 U	74 U	71 U	73 U	80 U
2-Chloronaphthalene	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2-Chlorophenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2-Methylnaphthalene	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2-Methylphenol	330	500000		390 U	720 U	360 U	350 U	360 U	390 U
2-Nitroaniline	--	--		390 U	720 U	360 U	350 U	360 U	390 U
2-Nitrophenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
3,3'-Dichlorobenzidine	--	--		160 U	290 U	150 U	140 U	150 U	160 U
3-Nitroaniline	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4,6-Dinitro-2-methylphenol	--	--		310 U	580 U	290 U	280 U	290 U	320 U
4-Bromophenyl phenyl ether	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4-Chloro-3-methylphenol	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4-Chloroaniline	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4-Chlorophenyl phenyl ether	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4-Methylphenol	330	500000		390 U	720 U	360 U	350 U	360 U	390 U
4-Nitroaniline	--	--		390 U	720 U	360 U	350 U	360 U	390 U
4-Nitrophenol	--	--		790 U	1500 U	740 U	710 U	730 U	800 U
Acenaphthene	20000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Acenaphthylene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Acetophenone	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Anthracene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
			Sample Date:	10/14/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2
Atrazine	--	--		160 U	290 U	150 U	140 U	150 U	160 U
Benzaldehyde	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Benzo[a]anthracene	1000	5600		39 U	72 U	36 U	35 U	36 U	39 U
Benzo[a]pyrene	1000	1000		39 U	72 U	36 U	35 U	36 U	39 U
Benzo[b]fluoranthene	1000	5600		39 U	72 U	36 U	35 U	36 U	39 U
Benzo[g,h,i]perylene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Benzo[k]fluoranthene	800	56000		39 U	72 U	36 U	35 U	36 U	39 U
Bis(2-chloroethoxy)methane	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Bis(2-chloroethyl) ether	--	--		39 U	72 U	36 U	35 U	36 U	39 U
bis(2-Chloroisopropyl)ether	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Bis(2-ethylhexyl) phthalate	--	--		49 J	63 J	1100	26 J	52 J	17 J
Butylbenzyl phthalate	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Caprolactam	--	--		390 U	720 UT	360 UT	350 U	360 U	390 U
Carbazole	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Chrysene	1000	56000		390 U	720 U	360 U	350 U	360 U	390 U
Dibenzo[a,h]anthracene	330	560		39 U	72 U	36 U	35 U	36 U	39 U
Dibenzofuran	7000	350000		390 U	720 U	360 U	350 U	360 U	390 U
Diethyl phthalate	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Dimethyl phthalate	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Di-n-butyl phthalate	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Di-n-octyl phthalate	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Fluoranthene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Fluorene	30000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Hexachlorobenzene	330	6000		39 U	72 U	36 U	35 U	36 U	39 U
Hexachlorobutadiene	--	--		79 U	150 U	74 U	71 U	73 U	80 U
Hexachlorocyclopentadiene	--	--		390 U	720 U	360 U	350 U	360 U	390 U
Hexachloroethane	--	--		39 U	72 U	36 U	35 U	36 U	39 U
Indeno[1,2,3-cd]pyrene	500	5600		39 U	72 U	36 U	35 U	36 U	39 U
Isophorone	--	--		160 U	290 U	150 U	140 U	150 U	160 U
Naphthalene	12000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Nitrobenzene	--	--		39 U	72 U	36 U	35 U	36 U	39 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
			Sample Date:	10/14/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2
n-Nitrosodi-n-propylamine	--	--		39 U	72 U	36 U	35 U	36 U	39 U
n-Nitrosodiphenylamine	--	--		390 UT	720 U	360 U	350 U	360 UT	390 U
Pentachlorophenol	800	6700		310 U	580 U	290 U	280 U	290 U	320 U
Phenanthrene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U
Phenol	330	500000		390 U	720 U	360 U	350 U	360 U	390 U
Pyrene	100000	500000		390 U	720 U	360 U	350 U	360 U	390 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-17	SB-17	SB-18 DUP	SB-18	SB-18	SB-19
			Sample Date:	10/1/2015	10/2/2015	10/5/2015	10/5/2015	10/7/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	8 - 10
1,1'-Biphenyl	--	--		380 U	420 U	380 U	380 U	390 U	380 U
1,2,4,5-Tetrachlorobenzene	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2,4,5-Trichlorophenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2,4,6-Trichlorophenol	--	--		150 U	170 U	150 U	150 U	160 U	150 U
2,4-Dichlorophenol	--	--		150 U	170 U	150 U	150 U	160 U	150 U
2,4-Dimethylphenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2,4-Dinitrophenol	--	--		300 U	340 U	310 U	310 U	320 U	310 U
2,4-Dinitrotoluene	--	--		77 U	85 U	77 U	77 U	79 U	77 U
2,6-Dinitrotoluene	--	--		77 U	85 U	77 U	77 U	79 U	77 U
2-Chloronaphthalene	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2-Chlorophenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2-Methylnaphthalene	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2-Methylphenol	330	500000		380 U	420 U	380 U	380 U	390 U	380 U
2-Nitroaniline	--	--		380 U	420 U	380 U	380 U	390 U	380 U
2-Nitrophenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
3,3'-Dichlorobenzidine	--	--		150 U	170 U	150 U	150 U	160 U	150 U
3-Nitroaniline	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4,6-Dinitro-2-methylphenol	--	--		300 U	340 U	310 U	310 U	320 U	310 U
4-Bromophenyl phenyl ether	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4-Chloro-3-methylphenol	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4-Chloroaniline	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4-Chlorophenyl phenyl ether	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4-Methylphenol	330	500000		380 U	420 U	380 U	380 U	390 U	380 U
4-Nitroaniline	--	--		380 U	420 U	380 U	380 U	390 U	380 U
4-Nitrophenol	--	--		770 U	850 U	770 UT	770 UT	790 U	770 U
Acenaphthene	20000	500000		11 J	420 U	380 U	380 U	390 U	380 U
Acenaphthylene	100000	500000		42 J	420 U	380 U	380 U	390 U	380 U
Acetophenone	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Anthracene	100000	500000		62 J	420 U	380 U	380 U	390 U	380 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-17	SB-17	SB-18 DUP	SB-18	SB-18	SB-19
			Sample Date:	10/1/2015	10/2/2015	10/5/2015	10/5/2015	10/7/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	8 - 10
Atrazine	--	--		150 U	170 U	150 U	150 U	160 U	150 U
Benzaldehyde	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Benzo[a]anthracene	1000	5600		240	42 U	38 U	38 U	39 U	38 U
Benzo[a]pyrene	1000	1000		230	42 U	38 U	38 U	39 U	38 U
Benzo[b]fluoranthene	1000	5600		290	42 U	38 U	38 U	39 U	38 U
Benzo[g,h,i]perylene	100000	500000		99 J	420 U	380 U	380 U	390 U	380 U
Benzo[k]fluoranthene	800	56000		140	42 U	38 U	38 U	39 U	38 U
Bis(2-chloroethoxy)methane	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Bis(2-chloroethyl) ether	--	--		38 U	42 U	38 U	38 U	39 U	38 U
bis(2-Chloroisopropyl)ether	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Bis(2-ethylhexyl) phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Butylbenzyl phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Caprolactam	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Carbazole	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Chrysene	1000	56000		260 J	420 U	380 U	380 U	390 U	380 U
Dibenzo[a,h]anthracene	330	560		32 J	42 U	38 U	38 U	39 U	38 U
Dibenzofuran	7000	350000		380 U	420 U	380 U	380 U	390 U	380 U
Diethyl phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Dimethyl phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Di-n-butyl phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Di-n-octyl phthalate	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Fluoranthene	100000	500000		480	420 U	380 U	380 U	390 U	380 U
Fluorene	30000	500000		380 U	420 U	380 U	380 U	390 U	380 U
Hexachlorobenzene	330	6000		38 U	42 U	38 U	38 U	39 U	38 U
Hexachlorobutadiene	--	--		77 U	85 U	77 U	77 U	79 U	77 U
Hexachlorocyclopentadiene	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Hexachloroethane	--	--		38 U	42 U	38 U	38 U	39 U	38 U
Indeno[1,2,3-cd]pyrene	500	5600		120	42 U	38 U	38 U	39 U	38 U
Isophorone	--	--		150 U	170 U	150 U	150 U	160 U	150 U
Naphthalene	12000	500000		380 U	420 U	380 U	380 U	390 U	380 U
Nitrobenzene	--	--		38 U	42 U	38 U	38 U	39 U	38 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-17	SB-17	SB-18 DUP	SB-18	SB-18	SB-19
			Sample Date:	10/1/2015	10/2/2015	10/5/2015	10/5/2015	10/7/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	8 - 10
n-Nitrosodi-n-propylamine	--	--		38 U	42 U	38 U	38 U	39 U	38 U
n-Nitrosodiphenylamine	--	--		380 U	420 U	380 U	380 U	390 U	380 U
Pentachlorophenol	800	6700		300 U	340 U	310 U	310 U	320 U	310 U
Phenanthrene	100000	500000		220 J	420 U	380 U	380 U	390 U	380 U
Phenol	330	500000		380 U	420 U	380 U	380 U	390 U	380 U
Pyrene	100000	500000		440	420 U	380 U	380 U	390 U	380 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22
			Sample Date:	9/30/2015	10/1/2015	10/1/2015	10/2/2015	10/7/2015	9/29/2015	9/29/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6
1,1'-Biphenyl	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
1,2,4,5-Tetrachlorobenzene	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2,4,5-Trichlorophenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2,4,6-Trichlorophenol	--	--		150 U	150 U	160 U	160 U	160 U	150 U	150 U
2,4-Dichlorophenol	--	--		150 U	150 U	160 U	160 U	160 U	150 U	150 U
2,4-Dimethylphenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2,4-Dinitrophenol	--	--		300 U	290 U	310 U	310 U	320 U	290 U	300 U
2,4-Dinitrotoluene	--	--		76 U	73 U	78 U	79 U	80 U	74 U	75 U
2,6-Dinitrotoluene	--	--		76 U	73 U	78 U	79 U	80 U	74 U	75 U
2-Chloronaphthalene	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2-Chlorophenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2-Methylnaphthalene	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2-Methylphenol	330	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2-Nitroaniline	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
2-Nitrophenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
3,3'-Dichlorobenzidine	--	--		150 U	150 U	160 U	160 U	160 U	150 U	150 U
3-Nitroaniline	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4,6-Dinitro-2-methylphenol	--	--		300 U	290 U	310 U	310 U	320 U	290 U	300 U
4-Bromophenyl phenyl ether	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Chloro-3-methylphenol	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Chloroaniline	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Chlorophenyl phenyl ether	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Methylphenol	330	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Nitroaniline	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
4-Nitrophenol	--	--		760 U	730 U	780 U	790 U	800 U	740 U	750 U
Acenaphthene	20000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Acenaphthylene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Acetophenone	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Anthracene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22
			Sample Date:	9/30/2015	10/1/2015	10/1/2015	10/2/2015	10/7/2015	9/29/2015	9/29/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6
Atrazine	--	--		150 U	150 U	160 U	160 U	160 U	150 U	150 U
Benzaldehyde	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Benzo[a]anthracene	1000	5600		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Benzo[a]pyrene	1000	1000		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Benzo[b]fluoranthene	1000	5600		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Benzo[g,h,i]perylene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Benzo[k]fluoranthene	800	56000		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Bis(2-chloroethoxy)methane	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Bis(2-chloroethyl) ether	--	--		38 U	36 U	39 U	39 U	39 U	36 U	37 U
bis(2-Chloroisopropyl)ether	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Bis(2-ethylhexyl) phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 UT	370 U
Butylbenzyl phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Caprolactam	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Carbazole	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Chrysene	1000	56000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Dibenzo[a,h]anthracene	330	560		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Dibenzofuran	7000	350000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Diethyl phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Dimethyl phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Di-n-butyl phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Di-n-octyl phthalate	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Fluoranthene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Fluorene	30000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Hexachlorobenzene	330	6000		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Hexachlorobutadiene	--	--		76 U	73 U	78 U	79 U	80 U	74 U	75 U
Hexachlorocyclopentadiene	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Hexachloroethane	--	--		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Indeno[1,2,3-cd]pyrene	500	5600		38 U	36 U	39 U	39 U	39 U	36 U	37 U
Isophorone	--	--		150 U	150 U	160 U	160 U	160 U	150 U	150 U
Naphthalene	12000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Nitrobenzene	--	--		38 U	36 U	39 U	39 U	39 U	36 U	37 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22
			Sample Date:	9/30/2015	10/1/2015	10/1/2015	10/2/2015	10/7/2015	9/29/2015	9/29/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6
n-Nitrosodi-n-propylamine	--	--		38 U	36 U	39 U	39 U	39 U	36 U	37 U
n-Nitrosodiphenylamine	--	--		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Pentachlorophenol	800	6700		300 U	290 U	310 U	310 U	320 U	290 U	300 U
Phenanthrene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Phenol	330	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U
Pyrene	100000	500000		380 U	360 U	390 U	390 U	390 U	360 U	370 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-23	SB-23	SB-24	SB-25	SB-25	SB-26
			Sample Date:	10/5/2015	10/5/2015	10/14/2015	9/29/2015	9/29/2015	10/5/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	0 - 2	4 - 6	0 - 2
1,1'-Biphenyl	--	--		360 U	360 U	390 U	390 U	380 U	360 U
1,2,4,5-Tetrachlorobenzene	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2,4,5-Trichlorophenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2,4,6-Trichlorophenol	--	--		150 U	140 U	160 U	160 U	150 U	150 U
2,4-Dichlorophenol	--	--		150 U	140 U	160 U	160 U	150 U	150 U
2,4-Dimethylphenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2,4-Dinitrophenol	--	--		290 U	290 U	320 U	310 U	310 U	290 U
2,4-Dinitrotoluene	--	--		74 U	73 U	80 U	79 U	78 U	73 U
2,6-Dinitrotoluene	--	--		74 U	73 U	80 U	79 U	78 U	73 U
2-Chloronaphthalene	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2-Chlorophenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2-Methylnaphthalene	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2-Methylphenol	330	500000		360 U	360 U	390 U	390 U	380 U	360 U
2-Nitroaniline	--	--		360 U	360 U	390 U	390 U	380 U	360 U
2-Nitrophenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
3,3'-Dichlorobenzidine	--	--		150 U	140 U	160 U	160 U	150 U	150 U
3-Nitroaniline	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4,6-Dinitro-2-methylphenol	--	--		290 U	290 U	320 U	310 U	310 U	290 U
4-Bromophenyl phenyl ether	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4-Chloro-3-methylphenol	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4-Chloroaniline	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4-Chlorophenyl phenyl ether	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4-Methylphenol	330	500000		360 U	360 U	390 U	390 U	380 U	360 U
4-Nitroaniline	--	--		360 U	360 U	390 U	390 U	380 U	360 U
4-Nitrophenol	--	--		740 UT	730 UT	800 U	790 U	780 U	730 UT
Acenaphthene	20000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Acenaphthylene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Acetophenone	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Anthracene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-23	SB-23	SB-24	SB-25	SB-25	SB-26
			Sample Date:	10/5/2015	10/5/2015	10/14/2015	9/29/2015	9/29/2015	10/5/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	0 - 2	4 - 6	0 - 2
Atrazine	--	--		150 U	140 U	160 U	160 U	150 U	150 U
Benzaldehyde	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Benzo[a]anthracene	1000	5600		36 U	36 U	39 U	39 U	38 U	36 U
Benzo[a]pyrene	1000	1000		36 U	36 U	39 U	39 U	38 U	36 U
Benzo[b]fluoranthene	1000	5600		36 U	36 U	39 U	39 U	38 U	36 U
Benzo[g,h,i]perylene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Benzo[k]fluoranthene	800	56000		36 U	36 U	39 U	39 U	38 U	36 U
Bis(2-chloroethoxy)methane	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Bis(2-chloroethyl) ether	--	--		36 U	36 U	39 U	39 U	38 U	36 U
bis(2-Chloroisopropyl)ether	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Bis(2-ethylhexyl) phthalate	--	--		360 U	360 U	390 U	390 UT	380 UT	360 U
Butylbenzyl phthalate	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Caprolactam	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Carbazole	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Chrysene	1000	56000		360 U	360 U	390 U	390 U	380 U	360 U
Dibenzo[a,h]anthracene	330	560		36 U	36 U	39 U	39 U	38 U	36 U
Dibenzofuran	7000	350000		360 U	360 U	390 U	390 U	380 U	360 U
Diethyl phthalate	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Dimethyl phthalate	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Di-n-butyl phthalate	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Di-n-octyl phthalate	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Fluoranthene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Fluorene	30000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Hexachlorobenzene	330	6000		36 U	36 U	39 U	39 U	38 U	36 U
Hexachlorobutadiene	--	--		74 U	73 U	80 U	79 U	78 U	73 U
Hexachlorocyclopentadiene	--	--		360 U	360 U	390 U	390 U	380 U	360 U
Hexachloroethane	--	--		36 U	36 U	39 U	39 U	38 U	36 U
Indeno[1,2,3-cd]pyrene	500	5600		36 U	36 U	39 U	39 U	38 U	36 U
Isophorone	--	--		150 U	140 U	160 U	160 U	150 U	150 U
Naphthalene	12000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Nitrobenzene	--	--		36 U	36 U	39 U	39 U	38 U	36 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-23	SB-23	SB-24	SB-25	SB-25	SB-26
			Sample Date:	10/5/2015	10/5/2015	10/14/2015	9/29/2015	9/29/2015	10/5/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	0 - 2	4 - 6	0 - 2
n-Nitrosodi-n-propylamine	--	--		36 U	36 U	39 U	39 U	38 U	36 U
n-Nitrosodiphenylamine	--	--		360 U	360 U	390 UT	390 U	380 U	360 U
Pentachlorophenol	800	6700		290 U	290 U	320 U	310 U	310 U	290 U
Phenanthrene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U
Phenol	330	500000		360 U	360 U	390 U	390 U	380 U	360 U
Pyrene	100000	500000		360 U	360 U	390 U	390 U	380 U	360 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29
			Sample Date:	10/6/2015	10/5/2015	10/5/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	4 - 6	4 - 6	0 - 2	0 - 2	4 - 6
1,1'-Biphenyl	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
1,2,4,5-Tetrachlorobenzene	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2,4,5-Trichlorophenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2,4,6-Trichlorophenol	--	--		150 U	150 U	150 U	160 U	150 U	150 U	150 U
2,4-Dichlorophenol	--	--		150 U	150 U	150 U	160 U	150 U	150 U	150 U
2,4-Dimethylphenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2,4-Dinitrophenol	--	--		300 U	300 U	290 U	310 U	300 U	300 U	300 U
2,4-Dinitrotoluene	--	--		75 U	76 U	74 U	79 U	75 U	76 U	76 U
2,6-Dinitrotoluene	--	--		75 U	76 U	74 U	79 U	75 U	76 U	76 U
2-Chloronaphthalene	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2-Chlorophenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2-Methylnaphthalene	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2-Methylphenol	330	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2-Nitroaniline	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
2-Nitrophenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
3,3'-Dichlorobenzidine	--	--		150 U	150 U	150 U	160 U	150 U	150 U	150 U
3-Nitroaniline	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4,6-Dinitro-2-methylphenol	--	--		300 U	300 U	290 U	310 U	300 U	300 U	300 U
4-Bromophenyl phenyl ether	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Chloro-3-methylphenol	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Chloroaniline	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Chlorophenyl phenyl ether	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Methylphenol	330	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Nitroaniline	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
4-Nitrophenol	--	--		750 U	760 UT	740 UT	790 U	750 U	760 U	760 U
Acenaphthene	20000	500000		370 U	9.1 J	370 U	390 U	370 U	380 U	370 U
Acenaphthylene	100000	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Acetophenone	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Anthracene	100000	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29
			Sample Date:	10/6/2015	10/5/2015	10/5/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	4 - 6	4 - 6	0 - 2	0 - 2	4 - 6
Atrazine	--	--		150 U	150 U	150 U	160 U	150 U	150 U	150 U
Benzaldehyde	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Benzo[a]anthracene	1000	5600		37 U	160	37 U	39 U	37 U	38 U	37 U
Benzo[a]pyrene	1000	1000		37 U	170	37 U	39 U	37 U	25 J	37 U
Benzo[b]fluoranthene	1000	5600		37 U	240	37 U	24 J	37 U	34 J	37 U
Benzo[g,h,i]perylene	100000	500000		370 U	100 J	370 U	390 U	370 U	380 U	370 U
Benzo[k]fluoranthene	800	56000		37 U	97	37 U	39 U	37 U	38 U	37 U
Bis(2-chloroethoxy)methane	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Bis(2-chloroethyl) ether	--	--		37 U	37 U	37 U	39 U	37 U	38 U	37 U
bis(2-Chloroisopropyl)ether	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Bis(2-ethylhexyl) phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Butylbenzyl phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Caprolactam	--	--		370 UT	370 U	370 U	390 U	39 J	380 U	370 U
Carbazole	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Chrysene	1000	56000		370 U	190 J	370 U	14 J	370 U	380 U	370 U
Dibenzo[a,h]anthracene	330	560		37 U	37 U	37 U	39 U	37 U	38 U	37 U
Dibenzofuran	7000	350000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Diethyl phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Dimethyl phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Di-n-butyl phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Di-n-octyl phthalate	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Fluoranthene	100000	500000		370 U	310 J	370 U	22 J	13 J	38 J	370 U
Fluorene	30000	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Hexachlorobenzene	330	6000		37 U	37 U	37 U	39 U	37 U	38 U	37 U
Hexachlorobutadiene	--	--		75 U	76 U	74 U	79 U	75 U	76 U	76 U
Hexachlorocyclopentadiene	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Hexachloroethane	--	--		37 U	37 U	37 U	39 U	37 U	38 U	37 U
Indeno[1,2,3-cd]pyrene	500	5600		37 U	110	37 U	39 U	37 U	38 U	37 U
Isophorone	--	--		150 U	150 U	150 U	160 U	150 U	150 U	150 U
Naphthalene	12000	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Nitrobenzene	--	--		37 U	37 U	37 U	39 U	37 U	38 U	37 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29
			Sample Date:	10/6/2015	10/5/2015	10/5/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	4 - 6	4 - 6	0 - 2	0 - 2	4 - 6
n-Nitrosodi-n-propylamine	--	--		37 U	37 U	37 U	39 U	37 U	38 U	37 U
n-Nitrosodiphenylamine	--	--		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Pentachlorophenol	800	6700		300 U	300 U	290 U	310 U	300 U	300 U	300 U
Phenanthrene	100000	500000		370 U	120 J	370 U	15 J	370 U	380 U	370 U
Phenol	330	500000		370 U	370 U	370 U	390 U	370 U	380 U	370 U
Pyrene	100000	500000		370 U	300 J	370 U	22 J	370 U	37 J	370 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-30	SB-30	SB-31	SB-31	SB-32 DUP	SB-32
			Sample Date:	9/30/2015	9/30/2015	10/7/2015	10/7/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	6 - 8	0 - 2	0 - 2	0 - 2
1,1'-Biphenyl	--	--		390 U	370 U	360 U	360 U	360 U	360 U
1,2,4,5-Tetrachlorobenzene	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2,2'-oxybis (1-chloropropane)	--	--		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2,4,5-Trichlorophenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2,4,6-Trichlorophenol	--	--		160 U	150 U	140 U	150 U	150 U	150 U
2,4-Dichlorophenol	--	--		160 U	150 U	140 U	150 U	150 U	150 U
2,4-Dimethylphenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2,4-Dinitrophenol	--	--		310 U	300 U	290 U	290 U	290 U	290 U
2,4-Dinitrotoluene	--	--		79 U	75 U	73 U	73 U	74 U	74 U
2,6-Dinitrotoluene	--	--		79 U	75 U	73 U	73 U	74 U	74 U
2-Chloronaphthalene	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2-Chlorophenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2-Methylnaphthalene	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2-Methylphenol	330	500000		390 U	370 U	360 U	360 U	360 U	360 U
2-Nitroaniline	--	--		390 U	370 U	360 U	360 U	360 U	360 U
2-Nitrophenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
3,3'-Dichlorobenzidine	--	--		160 U	150 U	140 U	150 U	150 U	150 U
3-Nitroaniline	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4,6-Dinitro-2-methylphenol	--	--		310 U	300 U	290 U	290 U	290 U	290 U
4-Bromophenyl phenyl ether	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4-Chloro-3-methylphenol	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4-Chloroaniline	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4-Chlorophenyl phenyl ether	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4-Methylphenol	330	500000		390 U	370 U	360 U	360 U	360 U	360 U
4-Nitroaniline	--	--		390 U	370 U	360 U	360 U	360 U	360 U
4-Nitrophenol	--	--		790 U	750 U	730 U	730 U	740 U	740 U
Acenaphthene	20000	500000		9.6 J	370 U	360 U	360 U	360 U	360 U
Acenaphthylene	100000	500000		390 U	370 U	360 U	360 U	360 U	360 U
Acetophenone	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Anthracene	100000	500000		390 U	370 U	360 U	360 U	360 U	360 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-30	SB-30	SB-31	SB-31	SB-32 DUP	SB-32
			Sample Date:	9/30/2015	9/30/2015	10/7/2015	10/7/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	6 - 8	0 - 2	0 - 2	0 - 2
Atrazine	--	--		160 U	150 U	140 U	150 U	150 U	150 U
Benzaldehyde	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Benzo[a]anthracene	1000	5600		140	37 U	36 U	36 U	32 J	36 U
Benzo[a]pyrene	1000	1000		150	18 J	36 U	36 U	26 J	17 J
Benzo[b]fluoranthene	1000	5600		180	20 J	36 U	36 U	35 J	25 J
Benzo[g,h,i]perylene	100000	500000		130 J	370 U	360 U	360 U	360 U	360 U
Benzo[k]fluoranthene	800	56000		39 U	37 U	36 U	36 U	16 J	36 U
Bis(2-chloroethoxy)methane	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Bis(2-chloroethyl) ether	--	--		39 U	37 U	36 U	36 U	36 U	36 U
bis(2-Chloroisopropyl)ether	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Bis(2-ethylhexyl) phthalate	--	--		65 J	370 U	360 U	360 U	31 J	360 U
Butylbenzyl phthalate	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Caprolactam	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Carbazole	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Chrysene	1000	56000		180 J	17 J	360 U	360 U	27 J	19 J
Dibenzo[a,h]anthracene	330	560		39 U	37 U	36 U	36 U	36 U	36 U
Dibenzofuran	7000	350000		390 U	370 U	360 U	360 U	360 U	360 U
Diethyl phthalate	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Dimethyl phthalate	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Di-n-butyl phthalate	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Di-n-octyl phthalate	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Fluoranthene	100000	500000		290 J	31 J	360 U	360 U	42 J	26 J
Fluorene	30000	500000		8.9 J	370 U	360 U	360 U	360 U	360 U
Hexachlorobenzene	330	6000		39 U	37 U	36 U	36 U	36 U	36 U
Hexachlorobutadiene	--	--		79 U	75 U	73 U	73 U	74 U	74 U
Hexachlorocyclopentadiene	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Hexachloroethane	--	--		39 U	37 U	36 U	36 U	36 U	36 U
Indeno[1,2,3-cd]pyrene	500	5600		140	37 U	36 U	36 U	36 U	36 U
Isophorone	--	--		160 U	150 U	140 U	150 U	150 U	150 U
Naphthalene	12000	500000		390 U	370 U	360 U	360 U	360 U	360 U
Nitrobenzene	--	--		39 U	37 U	36 U	36 U	36 U	36 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-30	SB-30	SB-31	SB-31	SB-32 DUP	SB-32
			Sample Date:	9/30/2015	9/30/2015	10/7/2015	10/7/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	6 - 8	0 - 2	0 - 2	0 - 2
n-Nitrosodi-n-propylamine	--	--		39 U	37 U	36 U	36 U	36 U	36 U
n-Nitrosodiphenylamine	--	--		390 U	370 U	360 U	360 U	360 U	360 U
Pentachlorophenol	800	6700		310 U	300 U	290 U	290 U	290 U	290 U
Phenanthrene	100000	500000		100 J	17 J	360 U	360 U	19 J	360 U
Phenol	330	500000		390 U	370 U	360 U	360 U	360 U	360 U
Pyrene	100000	500000		230 J	25 J	360 U	360 U	42 J	31 J

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 10/1/2015 6 - 8
1,1'-Biphenyl	--	--		370 U
1,2,4,5-Tetrachlorobenzene	--	--		370 U
2,2'-oxybis (1-chloropropane)	--	--		NA
2,3,4,6-Tetrachlorophenol	--	--		370 U
2,4,5-Trichlorophenol	--	--		370 U
2,4,6-Trichlorophenol	--	--		150 U
2,4-Dichlorophenol	--	--		150 U
2,4-Dimethylphenol	--	--		370 U
2,4-Dinitrophenol	--	--		300 U
2,4-Dinitrotoluene	--	--		76 U
2,6-Dinitrotoluene	--	--		76 U
2-Chloronaphthalene	--	--		370 U
2-Chlorophenol	--	--		370 U
2-Methylnaphthalene	--	--		370 U
2-Methylphenol	330	500000		370 U
2-Nitroaniline	--	--		370 U
2-Nitrophenol	--	--		370 U
3,3'-Dichlorobenzidine	--	--		150 U
3-Nitroaniline	--	--		370 U
4,6-Dinitro-2-methylphenol	--	--		300 U
4-Bromophenyl phenyl ether	--	--		370 U
4-Chloro-3-methylphenol	--	--		370 U
4-Chloroaniline	--	--		370 U
4-Chlorophenyl phenyl ether	--	--		370 U
4-Methylphenol	330	500000		370 U
4-Nitroaniline	--	--		370 U
4-Nitrophenol	--	--		760 U
Acenaphthene	20000	500000		370 U
Acenaphthylene	100000	500000		370 U
Acetophenone	--	--		370 U
Anthracene	100000	500000		370 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 10/1/2015 6 - 8
Atrazine	--	--		150 U
Benzaldehyde	--	--		370 U
Benzo[a]anthracene	1000	5600		37 U
Benzo[a]pyrene	1000	1000		37 U
Benzo[b]fluoranthene	1000	5600		37 U
Benzo[g,h,i]perylene	100000	500000		370 U
Benzo[k]fluoranthene	800	56000		37 U
Bis(2-chloroethoxy)methane	--	--		370 U
Bis(2-chloroethyl) ether	--	--		37 U
bis(2-Chloroisopropyl)ether	--	--		370 U
Bis(2-ethylhexyl) phthalate	--	--		370 U
Butylbenzyl phthalate	--	--		370 U
Caprolactam	--	--		370 U
Carbazole	--	--		370 U
Chrysene	1000	56000		370 U
Dibenzo[a,h]anthracene	330	560		37 U
Dibenzofuran	7000	350000		370 U
Diethyl phthalate	--	--		370 U
Dimethyl phthalate	--	--		370 U
Di-n-butyl phthalate	--	--		370 U
Di-n-octyl phthalate	--	--		370 U
Fluoranthene	100000	500000		370 U
Fluorene	30000	500000		370 U
Hexachlorobenzene	330	6000		37 U
Hexachlorobutadiene	--	--		76 U
Hexachlorocyclopentadiene	--	--		370 U
Hexachloroethane	--	--		37 U
Indeno[1,2,3-cd]pyrene	500	5600		37 U
Isophorone	--	--		150 U
Naphthalene	12000	500000		370 U
Nitrobenzene	--	--		37 U

Table 2. Summary of Semivolatile Organic Compounds in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 10/1/2015 6 - 8
n-Nitrosodi-n-propylamine	--	--		37 U
n-Nitrosodiphenylamine	--	--		370 U
Pentachlorophenol	800	6700		300 U
Phenanthrene	100000	500000		370 U
Phenol	330	500000		370 U
Pyrene	100000	500000		370 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SC
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7	MW-8	MW-8
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/2/2015	10/7/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2	8 - 10
Aluminum	--	--		8500	7460	8390	8550	8440	5590	11200	8480
Antimony	--	--		3.8 U	4.0 U	4.1 U	4.4 U	3.3 U	3.4 U	3.5 U	4.6 U
Arsenic	13	16		3.8	3.2	5.4	5.7	5.1	1.7 J	4.9	5
Barium	350	400		36.8 J	42.1	67.9	70.8	61.9	62.2	121	86.7
Beryllium	7.2	590		0.39	0.57	0.56	0.55	0.57	0.46	0.94	0.57
Cadmium	2.5	9.3		0.77 U	0.81 U	0.82 U	0.89 U	0.66 U	0.69 U	0.70 U	0.91 U
Calcium	--	--		1040	584 J	2040	1860	1150	1210	3060	16800
Chromium	30	1500		20.3	15.1	19.5	25.8	15.6	13.6	24.6	20.1
Cobalt	--	--		7.1 J	6.1 J	8.8 J	9.6 J	6.3 J	7.6 J	10.8	9.2 J
Copper	50	270		26	33.2	28.3	28.1	44.7	14.1	34.6	32.3
Cyanide	27	27		0.12 U	0.11 U	0.11 U	0.11 U	0.11 BJ	0.022 J	0.12 U	0.022 J
Iron	--	--		20400	17300	21900	21100	14900	11900	25600	21500
Lead	63	1000		7.8	7.6	12	19.5	60.4	5.4	13.6	10.2
Magnesium	--	--		3580	2160	4000	3940	2380	5190	6290	5530
Manganese	1600	10000		247	317	415	434	231	653	722	518
Mercury	0.18	2.8		0.019 U	0.019 U	0.02	0.023	**0.27**	0.017 U	0.017 U	0.019 U
Nickel	30	310		12.6	15.1	19.9	25.9	16.5	21.3	26	21.7
Potassium	--	--		1220	721 J	1430	1330	723 J	1340	2370	2030
Selenium	3.9	1500		1.9 J	1.9 J	2.2 J	2.1 J	3.3 U	3.4 U	3.5 U	4.6 U
Silver	2	1500		1.9 U	2.0 U	2.1 U	2.2 U	1.6 U	1.7 U	1.8 U	2.3 U
Sodium	--	--		150 J	120 J	457 J	361 J	1160	909	1740	257 J
Thallium	--	--		3.8 U	4.0 U	4.1 U	4.4 U	3.3 U	3.4 U	3.5 U	4.6 U
Vanadium	--	--		29.3	21.9	24.9	26.4	22.3	11.4	29.9	24
Zinc	109	10000		28.2	28.4	48.2	50.6	74	40.2	62.7	55

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D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
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-- No SCO available
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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-9	MW-9	MW-10	MW-11A	MW-11B	MW-11B	MW-12	MW-12
			Sample Date:	10/14/2015	10/19/2015	10/14/2015	10/6/2015	10/15/2015	10/19/2015	10/5/2015	10/5/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6
Aluminum	--	--		7490	3520	4610	10200	11700	5620	7900	7110
Antimony	--	--		4.2 U	4.0 U	3.8 U	4.2 U	3.5 U	2.7 J	3.9 U	4.0 U
Arsenic	13	16		5	5.2	3.3	5.6	5.9	**16.2**	3.8	3.5
Barium	350	400		70.1	65.6	40.1	106	111	138	57.2	38.3 J
Beryllium	7.2	590		0.67	0.40 U	0.55	0.69	1.2	0.41	0.49	0.36 J
Cadmium	2.5	9.3		0.84 U	0.79 U	0.76 U	0.84 U	0.71 U	0.82 U	0.77 U	0.80 U
Calcium	--	--		1510	1530	727 J	1140	1770	11600	795 J	497 J
Chromium	30	1500		18.8	13.6	17.6	21.3	26.9	17.4	19.8	15.1
Cobalt	--	--		8.0 J	5.2 J	6.3 J	14.4	13.5	9.4 J	7.4 J	5.8 J
Copper	50	270		29.4	22.6	31	32.2	28.3	**92.6**	28.3	23.2
Cyanide	27	27		0.058 BJ	0.024 J	0.054 BJ	0.12 U	0.063 BJ	0.020 J	0.11 U	0.027 J
Iron	--	--		21600	13400	14900	24100	28200	21600	19500	14800
Lead	63	1000		12.7	4.6	6.7	16.5	16.3	**386**	14.7	12.3
Magnesium	--	--		3470	2330	1810	4850	5990	2950	3270	2160
Manganese	1600	10000		503	438	361	1280	836	277	273	209
Mercury	0.18	2.8		0.034	0.019 U	0.018 U	0.019 U	0.020 U	0.017 U	0.032	0.015 J
Nickel	30	310		18.5	21.5	17.6	22.8	29.2	18.9	18.5	16.7
Potassium	--	--		1400	765 J	714 J	1600	1920	1330	1180	711 J
Selenium	3.9	1500		4.2 U	4.0 U	3.8 U	2.9 J	3.5 U	2.6 J	1.8 J	1.4 J
Silver	2	1500		2.1 U	2.0 U	1.9 U	2.1 U	1.8 U	2.1 U	1.9 U	2.0 U
Sodium	--	--		627 J	113 J	1410	1590	1440	830 J	1240	756 J
Thallium	--	--		4.2 U	4.0 U	3.8 U	4.2 U	3.5 U	4.1 U	3.9 U	4.0 U
Vanadium	--	--		31.8	15.8	17.8	28.9	32.5	24.4	24.9	20.6
Zinc	109	10000		51.8	27.1	25	55.3	74	**393**	42.2	34

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of the calibration range in the original sample
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NYSDEC - New York State Department of Environmental Conservation
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-- No SCO available
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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-12	SB-2	SB-2 DUP	SB-2	SB-3	SB-3	SB-4	SB-4
			Sample Date:	10/6/2015	10/23/2013	10/23/2013	10/28/2013	10/22/2013	10/23/2013	10/21/2013	10/28/2013
			Sample Depth (ft bls):	12 - 13	0-2	0-2	13-15	0-2	6-7	0-2	10-12
Aluminum	--	--		9690	6300	6600	4600	6100	2700	9800	7000
Antimony	--	--		4.4 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U
Arsenic	13	16		9.6	4.3 U	4.3 U	4.4 U	4.5 U	4.4 U	6.8	4.5 U
Barium	350	400		70.2	44	42	44	53	25	100	69
Beryllium	7.2	590		0.65	0.35	0.37	0.61	0.38	0.58	0.58	0.43
Cadmium	2.5	9.3		0.87 U	0.43 U	0.43 U	0.44 U	0.45 U	0.44 U	0.44 U	0.45 U
Calcium	--	--		511 J	1100 U	1100 U	1200	1100 U	1100 U	2000	32000
Chromium	30	1500		13.5	15	14	**39**	**47**	19	23	22
Cobalt	--	--		8.0 J	7.2	6.2	11	13	5.9	11	6.9
Copper	50	270		**55.7**	25	29	15	16	7.8	**69**	30
Cyanide	27	27		0.12 U	NA	NA	NA	NA	NA	NA	NA
Iron	--	--		12400	15000	16000	18000	19000	13000	27000	17000
Lead	63	1000		39.4	8.3	9.1	13	8.5	5.9	16	15
Magnesium	--	--		2010	3200	3200	2400	2300	1200	6500	13000
Manganese	1600	10000		156	400	330	240	420	140	720	430
Mercury	0.18	2.8		0.15	0.091 U	0.091 U	0.092 U	0.094 U	0.093 U	0.092 U	0.095 U
Nickel	30	310		14.1	16	16	**93**	**85**	**34**	23	18
Potassium	--	--		456 J	1100	1000	950	720	560	2000	1700
Selenium	3.9	1500		1.8 J	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
Silver	2	1500		2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U
Sodium	--	--		1320	300	300	350	920	310	990	590
Thallium	--	--		4.4 U	1.6 U	1.6 U	1.6 U	1.7 U	1.7 U	1.6 U	1.7 U
Vanadium	--	--		20.4	20	20	17	25	13	33	30
Zinc	109	10000		45.6	31	30	25	31	14	64	50

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
B - The analyte was found in an associated blank as well as in the sample
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-5	SB-5	SB-6	SB-6	SB-7	SB-7	SB-8	SB-8
			Sample Date:	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/21/2013	10/25/2013
			Sample Depth (ft bls):	0-2	14-15	0-2	14-15	0-2	12-13	0-2	10-12
Aluminum	--	--		9000	4300	7400	10000	11000	8100	9500	2900
Antimony	--	--		0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U
Arsenic	13	16		4.4 U	4.3 U	4.5 U	4.5 U	4.6 U	5.9	4.7 U	4.3 U
Barium	350	400		94	54	94	100	97	63	130	41
Beryllium	7.2	590		0.5	0.31	0.61	0.49	0.65	0.6	0.61	0.25
Cadmium	2.5	9.3		0.44 U	0.43 U	0.45 U	0.45 U	0.46 U	0.47 U	0.47 U	0.43 U
Calcium	--	--		2200	3900	14000	12000	1900	2600	2000	3700
Chromium	30	1500		20	14	20	**31**	22	20	22	14
Cobalt	--	--		11	11	10	8.6	12	10	12	5.2
Copper	50	270		43	23	28	41	37	36	45	31
Cyanide	27	27		NA	NA	NA	NA	NA	NA	NA	NA
Iron	--	--		24000	14000	21000	27000	27000	23000	25000	12000
Lead	63	1000		12	13	14	13	15	13	16	6.6
Magnesium	--	--		5700	3500	5900	8800	6900	5400	6000	3500
Manganese	1600	10000		620	340	430	420	700	510	1200	330
Mercury	0.18	2.8		0.093 U	0.091 U	0.095 U	0.094 U	0.096 U	0.097 U	0.097 U	0.089 U
Nickel	30	310		21	**31**	21	20	27	21	**37**	21
Potassium	--	--		2100	1200	1900	3900	2100	1800	1900	740
Selenium	3.9	1500		2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	2.3 U	2.3 U	2.1 U
Silver	2	1500		0.22 U	0.22 U	0.23 U	0.22 U	0.23 U	0.23 U	0.23 U	0.21 U
Sodium	--	--		870	270 U	780	600	1200	540	1200	270 U
Thallium	--	--		1.7 U	1.6 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.6 U
Vanadium	--	--		28	18	28	39	31	30	31	14
Zinc	109	10000		51	52	49	51	61	61	64	24

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
B - The analyte was found in an associated blank as well as in the sample
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-9	SB-9	SB-10	SB-10	SB-13	SB-14	SB-14	SB-15
			Sample Date:	10/24/2013	10/28/2013	10/28/2013	10/28/2013	10/14/2015	10/6/2015	10/6/2015	10/15/2015
			Sample Depth (ft bls):	0-2	13-15	0-2	8-10	0 - 2	0 - 2	6 - 8	0 - 2
Aluminum	--	--		11000	8000	8500	8100	8600	6190	5420	5980
Antimony	--	--		0.22 U	0.22 U	0.23 U	0.22 U	4.2 U	4.3 U	4.0 U	3.7 U
Arsenic	13	16		4.5 U	4.4 U	4.6 U	4.3 U	6.1	4.7	2.3 J	1.6 J
Barium	350	400		60	58	87	59	65.4	65.1	49	44.2
Beryllium	7.2	590		0.51	0.42	0.39	0.37	0.71	0.5	0.39 J	0.37
Cadmium	2.5	9.3		0.45 U	0.44 U	0.46 U	0.43 U	0.85 U	0.85 U	0.80 U	0.74 U
Calcium	--	--		1100 U	1200	12000	1400	1520	1020 J	1040	276 J
Chromium	30	1500		20	26	18	21	22.8	23.3	15	9.5
Cobalt	--	--		9.3	9.8	11	7.5	10.3 J	6.4 J	6.6 J	3.1 J
Copper	50	270		35	23	50	32	32.4	30.2	14.3	13.4
Cyanide	27	27		NA	NA	NA	NA	0.063 BJ	0.11 U	0.12 U	0.083 BJ
Iron	--	--		23000	21000	24000	16000	21900	17300	15900	12700
Lead	63	1000		13	10	16	16	12.6	6.2	5.5	4.9
Magnesium	--	--		5000	4400	4400	3500	4500	2820	3230	989
Manganese	1600	10000		450	440	410	400	592	502	395	151
Mercury	0.18	2.8		0.094 U	0.092 U	0.096 U	0.091 U	0.018 U	0.017 U	0.017 U	0.018 U
Nickel	30	310		19	**48**	20	**38**	23.6	14.4	15.1	12.8
Potassium	--	--		1400	1500	1400	1000	1650	1110	1120	370 J
Selenium	3.9	1500		2.2 U	2.2 U	2.3 U	2.2 U	4.2 U	2.8 J	1.6 J	3.7 U
Silver	2	1500		0.22 U	0.22 U	0.23 U	0.22 U	2.1 U	2.1 U	2.0 U	1.8 U
Sodium	--	--		880	270 U	750	270 U	1800	895 J	405 J	699 J
Thallium	--	--		1.7 U	1.6 U	1.7 U	1.6 U	4.2 U	4.3 U	4.0 U	3.7 U
Vanadium	--	--		27	25	62	26	32.2	22.6	16.1	17.3
Zinc	109	10000		49	43	48	45	56.4	33.1	33.1	61.5

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DUP - Duplicate sample
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µg/kg - Micrograms per kilogram
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Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-15	SB-16	SB-17	SB-17	SB-18 DUP	SB-18	SB-18	SB-19
			Sample Date:	10/20/2015	10/14/2015	10/1/2015	10/2/2015	10/5/2015	10/5/2015	10/7/2015	10/1/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	8 - 10
Aluminum	--	--		4200	9360	11600	9820	9640	11000	10400	7010
Antimony	--	--		3.5 U	4.1 U	3.6 U	3.8 U	4.4 U	4.1 U	4.7 U	3.4 U
Arsenic	13	16		3.1	5.6	9.3	4	3.8	4.9	5.8	6.8
Barium	350	400		51.1	96.7	96.6	72.4	86	86.7	116	92.6
Beryllium	7.2	590		0.59	0.78	0.66	0.81	0.65	0.84	0.67	0.54
Cadmium	2.5	9.3		0.71 U	0.82 U	0.71 U	0.77 U	0.89 U	0.81 U	0.94 U	0.67 U
Calcium	--	--		1070	1560	2400	1720	807 J	964 J	3480	2480
Chromium	30	1500		**31.9**	21.3	22.8	22.4	22.1	25.2	25.5	19.4
Cobalt	--	--		16.6	11.1	8.3 J	10.5	12	10.0 J	12.9	10.4
Copper	50	270		21.8	28.3	43.6	26.4	27.7	30.9	27.1	31.1
Cyanide	27	27		0.024 J	0.054 BJ	0.11	0.13 U	0.053 J	0.044 J	0.24	0.019 J
Iron	--	--		15900	23600	25100	22000	23800	26800	27200	20000
Lead	63	1000		9.1	12.4	37.5	11.6	13.4	13.1	14.7	14.2
Magnesium	--	--		2870	4830	5980	5600	4680	5160	5650	4840
Manganese	1600	10000		457	971	705	526	819	590	873	628
Mercury	0.18	2.8		0.017 U	0.018 U	0.16	0.022 U	0.019 U	0.019 U	0.020 U	0.014 J
Nickel	30	310		**221**	24.6	23.5	26.5	21.2	22.2	28.7	23.8
Potassium	--	--		904	1890	1310	1930	1740	1840	2120	1770
Selenium	3.9	1500		1.2 J	4.1 U	3.6 U	3.8 U	2.0 J	2.7 J	4.7 U	3.4 U
Silver	2	1500		1.8 U	2.0 U	1.8 U	1.9 U	2.2 U	2.0 U	2.4 U	1.7 U
Sodium	--	--		604 J	1150	1000	793 J	2490	2800	434 J	383 J
Thallium	--	--		3.5 U	4.1 U	3.6 U	3.8 U	4.4 U	4.1 U	4.7 U	3.4 U
Vanadium	--	--		17.6	29	30.7	22.8	25.8	29.8	29.4	25.1
Zinc	109	10000		31.1	54.8	88.4	62.2	54.4	60.8	64	59.8

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of the calibration range in the original sample
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NA-Not analyzed
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
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Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-19	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23	SB-23
			Sample Date:	9/30/2015	10/1/2015	10/1/2015	10/2/2015	10/7/2015	9/29/2015	9/29/2015	10/5/2015	10/5/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6	0 - 2	4 - 6
Aluminum	--	--		9360	3850	9590	14400	13500	9610	10200	8220	5950
Antimony	--	--		3.7 U	3.2 U	3.7 U	3.8 U	4.4 U	4.0 U	3.2 U	4.2 U	4.0 U
Arsenic	13	16		4	3.2	3.8	5.5	4.8	3.3	4.3	4.3	2.9 J
Barium	350	400		139	42.9	61.2	100	79.7	32.6 J	51.4	43	45.4
Beryllium	7.2	590		0.8	0.30 J	0.44	0.96	0.93	0.40 U	0.52	0.43	0.37 J
Cadmium	2.5	9.3		0.74 U	0.63 U	0.75 U	0.75 U	0.87 U	0.80 U	0.65 U	0.84 U	0.80 U
Calcium	--	--		1620	1040	1080	999	1400	886 J	746 J	468 J	829 J
Chromium	30	1500		21.9	13.7	20.6	26.7	26	16.6	16.5	15.8	20.4
Cobalt	--	--		10.5	5.2 J	8.4 J	15.2	11.8	6.9 J	7.5 J	6.9 J	6.4 J
Copper	50	270		29.6	20.2	24.3	31.1	29.6	25.9	29.8	22.2	25.3
Cyanide	27	27		0.11 U	0.10 U	0.023 J	0.020 J	0.12 U	0.022 J	0.11 U	0.019 J	0.11 U
Iron	--	--		24300	12200	20100	28900	29400	18700	17300	19600	15200
Lead	63	1000		11.3	5.1	9.6	15.3	15.1	10.4	9.6	9.8	9.4
Magnesium	--	--		5420	1990	4770	6470	5730	3400	3180	2880	2410
Manganese	1600	10000		620	284	509	779	705	306	414	289	297
Mercury	0.18	2.8		0.019 U	0.018 U	0.014 J	0.019 U	0.020 U	0.018 U	0.018 U	0.018 U	0.017 U
Nickel	30	310		22.9	14.5	20.4	27.6	26.4	12.8	12.3	13.5	27.3
Potassium	--	--		1930	755 J	1490	2100	2200	1130	1050	864 J	818 J
Selenium	3.9	1500		2.0 J	3.2 U	3.7 U	3.8 U	4.4 U	2.0 J	1.7 J	2.4 J	1.8 J
Silver	2	1500		1.9 U	1.6 U	1.9 U	1.9 U	2.2 U	2.0 U	1.6 U	2.1 U	2.0 U
Sodium	--	--		1720	341 J	1790	1160	988 J	288 J	213 J	688 J	329 J
Thallium	--	--		3.7 U	3.2 U	3.7 U	3.8 U	4.4 U	4.0 U	3.2 U	4.2 U	4.0 U
Vanadium	--	--		26.2	14.4	21.8	32.2	32.9	23.8	22.7	22.7	21.5
Zinc	109	10000		59.5	23.3	50.2	66.8	66.1	42.4	39.7	37.8	31.2

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Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-24	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28
			Sample Date:	10/14/2015	9/29/2015	9/29/2015	10/5/2015	10/6/2015	10/5/2015	10/5/2015	9/30/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2	4 - 6	4 - 6
Aluminum	--	--		7040	12600	13700	4210	4410	9780	9650	8930
Antimony	--	--		4.5 U	4.6 U	4.2 U	3.7 U	4.2 U	4.5 U	3.9 U	3.6 U
Arsenic	13	16		4.6	3.6	4.8	2.8 U	2.2 J	6.1	5.8	4.4
Barium	350	400		47.9	48.4	72	43.7	48.5	64.5	46.1	42.9
Beryllium	7.2	590		0.65	0.47	0.86	0.37 U	0.42 U	0.54	0.4	0.43
Cadmium	2.5	9.3		0.91 U	0.91 U	0.84 U	0.74 U	0.85 U	0.90 U	0.78 U	0.73 U
Calcium	--	--		2370	815 J	1040 J	834 J	1660	925 J	702 J	594 J
Chromium	30	1500		17.1	19.4	**38.6**	12.6	12.6	19.4	17	22.8
Cobalt	--	--		7.5 J	8.6 J	10.7	5.7 J	5.8 J	7.4 J	5.8 J	7.2 J
Copper	50	270		40.6	21	38.7	9.8	22.1	42.3	25.6	30.6
Cyanide	27	27		0.057 BJ	0.12 U	0.11 U	0.11 U	0.11 U	0.020 J	0.12 U	0.12 U
Iron	--	--		18800	23200	23700	13200	15300	20300	19600	17900
Lead	63	1000		8.9	13.2	12.4	5.2	4.5	44.4	36.2	17.2
Magnesium	--	--		3700	4170	4720	2540	2870	3330	2250	3120
Manganese	1600	10000		397	381	454	328	397	413	266	281
Mercury	0.18	2.8		0.018 U	0.025	0.018 U	0.017 U	0.019 U	0.17	0.045	0.053
Nickel	30	310		15.1	16.8	20.1	15.6	15.9	15.3	12.6	27.9
Potassium	--	--		903 J	1150	1880	952	934 J	815 J	648 J	966
Selenium	3.9	1500		4.5 U	2.8 J	2.3 J	1.3 J	1.8 J	2.0 J	2.0 J	1.9 J
Silver	2	1500		2.3 U	2.3 U	2.1 U	1.8 U	2.1 U	2.3 U	1.9 U	1.8 U
Sodium	--	--		1400	184 J	180 J	568 J	483 J	860 J	407 J	541 J
Thallium	--	--		4.5 U	4.6 U	4.2 U	3.7 U	4.2 U	4.5 U	3.9 U	3.6 U
Vanadium	--	--		26.1	26.2	35.4	14.6	17.1	28.9	26.5	26.2
Zinc	109	10000		31.4	58.2	51.4	23.6	26.2	65	44.2	44

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Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-28	SB-29	SB-29	SB-30	SB-30	SB-31	SB-31	SB-32 DUP
			Sample Date:	9/30/2015	10/7/2015	10/7/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	4 - 6	0 - 2	4 - 6	6 - 8	0 - 2	0 - 2
Aluminum	--	--		5190	7720	6970	9570	9630	3700	6030	8270
Antimony	--	--		3.3 U	3.9 U	3.9 U	3.4 U	3.8 U	4.0 U	3.9 U	3.2 U
Arsenic	13	16		2.6	4.3	4	5.5	4.4	3.5	4.1	5
Barium	350	400		39	59.7	48.9	83.7	51.9	58.4	65.2	113
Beryllium	7.2	590		0.38	0.57	0.36 J	0.56	0.54	0.40 U	0.42	0.52
Cadmium	2.5	9.3		0.66 U	0.78 U	0.78 U	0.67 U	0.75 U	0.80 U	0.78 U	0.64 U
Calcium	--	--		13600	1330	1480	8210	1120	1500	3720	17800
Chromium	30	1500		15.4	**34**	18.4	21.6	19.7	10.7	17.7	21.7
Cobalt	--	--		6.1 J	10.4	7.1 J	8.1 J	8.8 J	5.2 J	7.3 J	9.3
Copper	50	270		22.1	29	23.3	38.3	28.2	25.4	31.3	32.2
Cyanide	27	27		0.12 U	0.028 J	0.067 J	0.084 J	0.11 U	0.047 J	0.055 J	0.038 J
Iron	--	--		12700	20400	16600	18900	18800	11500	16700	20800
Lead	63	1000		11	26.4	11.9	56.9	11	5.6	9.7	25.5
Magnesium	--	--		9420	3140	2880	4040	3800	2090	3880	6160
Manganese	1600	10000		213	349	347	385	505	384	476	612
Mercury	0.18	2.8		0.018	0.025	0.017 J	0.12	0.018	0.019 U	0.019 U	0.045
Nickel	30	310		24.1	**80**	26.7	23.1	23.5	12	24.8	24.4
Potassium	--	--		776 J	1080	939 J	1250	1240	854 J	1240	1960
Selenium	3.9	1500		1.2 J	3.9 U	3.9 U	1.9 J	2.1 J	4.0 U	3.9 U	3.2 U
Silver	2	1500		1.6 U	1.9 U	1.9 U	1.7 U	1.9 U	2.0 U	2.0 U	1.6 U
Sodium	--	--		458 J	648 J	384 J	200 J	116 J	650 J	1220	566 J
Thallium	--	--		3.3 U	3.9 U	3.9 U	3.4 U	3.8 U	4.0 U	3.9 U	3.2 U
Vanadium	--	--		19.1	23.6	22.7	26.6	23.4	15.6	22.5	23.8
Zinc	109	10000		33	48.9	37.9	78	43.6	21.3	38	61.6

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Table 3. Summary of Metals in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in mg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 10/1/2015 0 - 2	SB-32 10/1/2015 6 - 8
Aluminum	--	--		8210	6810
Antimony	--	--		3.7 U	3.4 U
Arsenic	13	16		5.7	5.9
Barium	350	400		123	150
Beryllium	7.2	590		0.55	0.55
Cadmium	2.5	9.3		0.74 U	0.68 U
Calcium	--	--		15100	16400
Chromium	30	1500		21.3	19.3
Cobalt	--	--		9.4	8.5
Copper	50	270		41.8	47
Cyanide	27	27		0.066 J	0.11 U
Iron	--	--		22200	20000
Lead	63	1000		20.1	9.6
Magnesium	--	--		5850	5420
Manganese	1600	10000		731	526
Mercury	0.18	2.8		0.058	0.013 J
Nickel	30	310		23.6	19.8
Potassium	--	--		2110	1750
Selenium	3.9	1500		3.7 U	3.4 U
Silver	2	1500		1.8 U	1.7 U
Sodium	--	--		587 J	396 J
Thallium	--	--		3.7 U	3.4 U
Vanadium	--	--		24.9	23.5
Zinc	109	10000		63.9	50.2

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DUP - Duplicate sample
NA-Not analyzed
µg/kg - Micrograms per kilogram
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Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7	MW-8
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/2/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2
Aroclor-1016	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1221	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1232	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1242	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1248	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1254	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1260	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1262	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
Aroclor-1268	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
PCBs, Total	100	1000		76 U	75 U	76 U	74 U	79 U	74 U	76 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
NA - Compound was not analyzed by laboratory
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-9	MW-9	MW-10	MW-11A	MW-11B
			Sample Date:	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/6/2015	10/15/2015
			Sample Depth (ft bls):	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2	0 - 2
Aroclor-1016	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1221	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1232	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1242	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1248	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1254	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1260	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1262	--	--		78 U	77 U	74 U	76 U	78 U	80 U
Aroclor-1268	--	--		78 U	77 U	74 U	76 U	78 U	80 U
PCBs, Total	100	1000		78 U	77 U	74 U	76 U	78 U	80 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

NYSDEC - New York State Department of Environmental Conservation

SCO - Soil Cleanup Objectives

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NA - Compound was not analyzed by laboratory

Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO

Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-11B	MW-12	MW-12	MW-12	SB-2	SB-2 DUP	SB-2
			Sample Date:	10/19/2015	10/5/2015	10/5/2015	10/6/2015	10/23/2013	10/23/2013	10/28/2013
			Sample Depth (ft bls):	8 - 10	0 - 2	4 - 6	12 - 13	0-2	0-2	13-15
Aroclor-1016	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1221	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1232	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1242	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1248	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1254	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1260	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1262	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
Aroclor-1268	--	--		74 U	73 U	73 U	77 U	27 U	27 U	27 U
PCBs, Total	100	1000		74 U	73 U	73 U	77 U	27 U	27 U	27 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

NYSDEC - New York State Department of Environmental Conservation

SCO - Soil Cleanup Objectives

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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
			Sample Date:	10/22/2013	10/23/2013	10/21/2013	10/28/2013	10/22/2013	10/23/2013
			Sample Depth (ft bls):	0-2	6-7	0-2	10-12	0-2	14-15
Aroclor-1016	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1221	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1232	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1242	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1248	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1254	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1260	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1262	--	--		28 U	28 U	27 U	28 U	28 U	27 U
Aroclor-1268	--	--		28 U	28 U	27 U	28 U	28 U	27 U
PCBs, Total	100	1000		28 U	28 U	27 U	28 U	28 U	27 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-6	SB-6	SB-7	SB-7	SB-8	SB-8
			Sample Date:	10/22/2013	10/23/2013	10/22/2013	10/23/2013	10/21/2013	10/25/2013
			Sample Depth (ft bls):	0-2	14-15	0-2	12-13	0-2	10-12
Aroclor-1016	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1221	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1232	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1242	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1248	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1254	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1260	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1262	--	--		28 U	28 U	29 U	29 U	29 U	27 U
Aroclor-1268	--	--		28 U	28 U	29 U	29 U	29 U	27 U
PCBs, Total	100	1000		28 U	28 U	29 U	29 U	29 U	27 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

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SCO - Soil Cleanup Objectives

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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-9	SB-9	SB-10	SB-10	SB-13	SB-14
			Sample Date:	10/24/2013	10/28/2013	10/28/2013	10/28/2013	10/14/2015	10/6/2015
			Sample Depth (ft bls):	0-2	13-15	0-2	8-10	0 - 2	0 - 2
Aroclor-1016	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1221	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1232	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1242	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1248	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1254	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1260	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1262	--	--		28 U	27 U	29 U	27 U	79 U	73 U
Aroclor-1268	--	--		28 U	27 U	29 U	27 U	79 U	73 U
PCBs, Total	100	1000		28 U	27 U	29 U	27 U	79 U	73 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

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µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-14	SB-15	SB-15	SB-16	SB-17	SB-17
			Sample Date:	10/6/2015	10/15/2015	10/20/2015	10/14/2015	10/1/2015	10/2/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	6 - 8	0 - 2	0 - 2	8 - 10
Aroclor-1016	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1221	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1232	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1242	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1248	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1254	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1260	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1262	--	--		74 U	71 U	74 U	80 U	77 U	85 U
Aroclor-1268	--	--		74 U	71 U	74 U	80 U	77 U	85 U
PCBs, Total	100	1000		74 U	71 U	74 U	80 U	77 U	85 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

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Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-18 DUP	SB-18	SB-18	SB-19	SB-19	SB-20	SB-20
			Sample Date:	10/5/2015	10/5/2015	10/7/2015	10/1/2015	9/30/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	8 - 10	8 - 10	0 - 2	8 - 10	0 - 2
Aroclor-1016	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1221	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1232	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1242	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1248	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1254	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1260	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1262	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
Aroclor-1268	--	--		77 U	77 U	79 U	77 U	76 U	73 U	78 U
PCBs, Total	100	1000		77 U	77 U	79 U	77 U	76 U	73 U	78 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

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Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-21	SB-21	SB-22	SB-22	SB-23	SB-23	SB-24
			Sample Date:	10/2/2015	10/7/2015	9/29/2015	9/29/2015	10/5/2015	10/5/2015	10/14/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2
Aroclor-1016	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1221	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1232	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1242	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1248	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1254	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1260	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1262	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
Aroclor-1268	--	--		79 U	80 U	74 U	75 U	74 U	73 U	80 U
PCBs, Total	100	1000		79 U	80 U	74 U	75 U	74 U	73 U	80 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

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Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-25	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28
			Sample Date:	9/29/2015	9/29/2015	10/5/2015	10/6/2015	10/5/2015	10/5/2015	9/30/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2	4 - 6	4 - 6
Aroclor-1016	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1221	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1232	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1242	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1248	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1254	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1260	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1262	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
Aroclor-1268	--	--		79 U	78 U	73 U	75 U	76 U	74 U	79 U
PCBs, Total	100	1000		79 U	78 U	73 U	75 U	76 U	74 U	79 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

ft bls - Feet below land surface

NYSDEC - New York State Department of Environmental Conservation

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Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-28	SB-29	SB-29	SB-30	SB-30	SB-31	SB-31
			Sample Date:	9/30/2015	10/7/2015	10/7/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015
			Sample Depth (ft bls):	0 - 2	0 - 2	4 - 6	0 - 2	4 - 6	6 - 8	0 - 2
Aroclor-1016	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1221	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1232	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1242	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1248	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1254	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1260	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1262	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
Aroclor-1268	--	--		75 U	77 U	76 U	79 U	75 U	73 U	73 U
PCBs, Total	100	1000		75 U	77 U	76 U	79 U	75 U	73 U	73 U

J - Estimated value

U - Indicates that the compound was analyzed for but not detected

D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample

DUP - Duplicate sample

µg/kg - Micrograms per kilogram

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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 4. Summary of Polychlorinated Biphenyls in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:** **Sample Date:** **Sample Depth (ft bls):**	SB-32 DUP 10/1/2015 0 - 2	SB-32 10/1/2015 0 - 2	SB-32 10/1/2015 6 - 8
Aroclor-1016	--	--		74 U	74 U	76 U
Aroclor-1221	--	--		74 U	74 U	76 U
Aroclor-1232	--	--		74 U	74 U	76 U
Aroclor-1242	--	--		74 U	74 U	76 U
Aroclor-1248	--	--		74 U	74 U	76 U
Aroclor-1254	--	--		74 U	74 U	76 U
Aroclor-1260	--	--		74 U	74 U	76 U
Aroclor-1262	--	--		74 U	74 U	76 U
Aroclor-1268	--	--		74 U	74 U	76 U
PCBs, Total	100	1000		74 U	74 U	76 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
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NA - Compound was not analyzed by laboratory
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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-5	MW-5	MW-6	MW-6	MW-7	MW-7	MW-8
			Sample Date:	9/29/2015	9/29/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/2/2015
			Sample Depth (ft bls):	0 - 2	4 - 6	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2
4,4'-DDD	3.3	92000		7.6 U	7.5 U	7.6 U	**7.2 J**	7.9 U	7.4 U	7.6 U
4,4'-DDE	3.3	62000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
4,4'-DDT	3.3	47000		7.6 U	7.5 U	7.6 U	2.9 J	7.9 U	7.4 U	7.6 U
Aldrin	5	680		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
alpha-BHC	20	3400		2.3 U	2.2 U	2.3 U	2.2 U	2.4 U	2.2 U	2.3 U
beta-BHC	36	3000		2.3 U	2.2 U	2.3 U	2.2 U	2.4 U	2.2 U	2.3 U
Chlordane	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U
delta-BHC	40	500000		2.3 U	2.2 U	2.3 U	2.2 U	2.4 U	2.2 U	2.3 U
Dieldrin	5	1400		2.3 U	2.2 U	2.3 U	2.2 U	2.4 U	2.2 U	2.3 U
Endosulfan I	2400	200000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Endosulfan II	2400	200000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Endosulfan sulfate	2400	200000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Endrin aldehyde	--	--		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Endrin ketone	--	--		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Endrin	14	89000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
gamma-BHC (Lindane)	100	9200		2.3 U	2.2 U	2.3 U	2.2 U	2.4 U	2.2 U	2.3 U
Heptachlor epoxide	--	--		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Heptachlor	42	15000		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Methoxychlor	--	--		7.6 U	7.5 U	7.6 U	7.4 U	7.9 U	7.4 U	7.6 U
Toxaphene	--	--		76 U	75 U	76 U	74 U	79 U	74 U	76 U

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of the calibration range in the original sample
DUP - Duplicate sample
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NYSDEC - New York State Department of Environmental Conservation
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Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
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Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-8	MW-9	MW-9	MW-10	MW-11A	MW-11B	MW-11B
			Sample Date:	10/7/2015	10/14/2015	10/19/2015	10/14/2015	10/6/2015	10/15/2015	10/19/2015
			Sample Depth (ft bls):	8 - 10	0 - 2	8 - 10	0 - 2	0 - 2	0 - 2	8 - 10
4,4'-DDD	3.3	92000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
4,4'-DDE	3.3	62000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
4,4'-DDT	3.3	47000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Aldrin	5	680		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
alpha-BHC	20	3400		2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2.4 U	2.2 U
beta-BHC	36	3000		2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2.4 U	2.2 U
Chlordane	--	--		78 U	77 U	74 U	76 U	78 U	80 U	74 U
delta-BHC	40	500000		2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2.4 U	2.2 U
Dieldrin	5	1400		2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2.4 U	2.2 U
Endosulfan I	2400	200000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Endosulfan II	2400	200000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Endosulfan sulfate	2400	200000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Endrin aldehyde	--	--		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Endrin ketone	--	--		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Endrin	14	89000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
gamma-BHC (Lindane)	100	9200		2.3 U	2.3 U	2.2 U	2.3 U	2.3 U	2.4 U	2.2 U
Heptachlor epoxide	--	--		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Heptachlor	42	15000		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Methoxychlor	--	--		7.8 U	7.7 U	7.4 U	7.6 U	7.8 U	8.0 U	7.4 U
Toxaphene	--	--		78 U	77 U	74 U	76 U	78 U	80 U	74 U

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Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	MW-12	MW-12	MW-12	SB-2	SB-2 DUP	SB-2	SB-3
			Sample Date:	10/5/2015	10/5/2015	10/6/2015	10/23/2013	10/23/2013	10/28/2013	10/22/2013
			Sample Depth (ft bls):	0 - 2	4 - 6	12 - 13	0-2	0-2	13-15	0-2
4,4'-DDD	3.3	92000		**11**	**9.9**	7.7 U	2.7 U	2.7 U	2.7 U	2.8 U
4,4'-DDE	3.3	62000		7.3 U	7.3 U	7.7 U	2.7 U	2.7 U	2.7 U	2.8 U
4,4'-DDT	3.3	47000		7.3 U	2.8 J	7.7 U	2.7 U	2.7 U	2.7 U	2.8 U
Aldrin	5	680		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
alpha-BHC	20	3400		2.2 U	2.2 U	2.3 U	1.1 U	1.1 U	1.1 U	1.1 U
beta-BHC	36	3000		2.2 U	2.2 U	2.3 U	1.1 U	1.1 U	1.1 U	1.1 U
Chlordane	--	--		73 U	73 U	77 U	27 U	27 U	27 U	28 U
delta-BHC	40	500000		2.2 U	2.2 U	2.3 U	5.4 U	5.4 U	5.5 U	5.6 U
Dieldrin	5	1400		2.2 U	2.2 U	2.3 U	1.1 U	1.1 U	1.1 U	1.1 U
Endosulfan I	2400	200000		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Endosulfan II	2400	200000		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Endosulfan sulfate	2400	200000		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Endrin aldehyde	--	--		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Endrin ketone	--	--		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Endrin	14	89000		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
gamma-BHC (Lindane)	100	9200		2.2 U	2.2 U	2.3 U	1.1 U	1.1 U	1.1 U	1.1 U
Heptachlor epoxide	--	--		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Heptachlor	42	15000		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Methoxychlor	--	--		7.3 U	7.3 U	7.7 U	5.4 U	5.4 U	5.5 U	5.6 U
Toxaphene	--	--		73 U	73 U	77 U	27 U	27 U	27 U	28 U

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Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-3	SB-4	SB-4	SB-5	SB-5	SB-6	SB-6
			Sample Date:	10/23/2013	10/21/2013	10/28/2013	10/22/2013	10/23/2013	10/22/2013	10/23/2013
			Sample Depth (ft bls):	6-7	0-2	10-12	0-2	14-15	0-2	14-15
4,4'-DDD	3.3	92000		2.8 U	2.7 U	2.8 U	2.8 U	2.7 U	2.8 U	2.8 U
4,4'-DDE	3.3	62000		2.8 U	2.7 U	2.8 U	2.8 U	2.7 U	2.8 U	2.8 U
4,4'-DDT	3.3	47000		2.8 U	2.7 U	2.8 U	2.8 U	2.7 U	2.8 U	2.8 U
Aldrin	5	680		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
alpha-BHC	20	3400		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
beta-BHC	36	3000		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Chlordane	--	--		28 U	27 U	28 U	28 U	27 U	28 U	28 U
delta-BHC	40	500000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Dieldrin	5	1400		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Endosulfan I	2400	200000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Endosulfan II	2400	200000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Endosulfan sulfate	2400	200000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Endrin aldehyde	--	--		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Endrin ketone	--	--		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Endrin	14	89000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
gamma-BHC (Lindane)	100	9200		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Heptachlor epoxide	--	--		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Heptachlor	42	15000		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Methoxychlor	--	--		5.6 U	5.5 U	5.7 U	5.6 U	5.4 U	5.7 U	5.6 U
Toxaphene	--	--		28 U	27 U	28 U	28 U	27 U	28 U	28 U

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Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-7	SB-7	SB-8	SB-8	SB-9	SB-9	SB-10
			Sample Date:	10/22/2013	10/23/2013	10/21/2013	10/25/2013	10/24/2013	10/28/2013	10/28/2013
			Sample Depth (ft bls):	0-2	12-13	0-2	10-12	0-2	13-15	0-2
4,4'-DDD	3.3	92000		2.9 U	2.9 U	2.9 U	2.7 U	2.8 U	2.7 U	2.9 U
4,4'-DDE	3.3	62000		2.9 U	2.9 U	2.9 U	2.7 U	2.8 U	2.7 U	**32**
4,4'-DDT	3.3	47000		2.9 U	2.9 U	2.9 U	2.7 U	2.8 U	2.7 U	2.9 U
Aldrin	5	680		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
alpha-BHC	20	3400		1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
beta-BHC	36	3000		1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Chlordane	--	--		29 U	29 U	29 U	27 U	28 U	27 U	29 U
delta-BHC	40	500000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Dieldrin	5	1400		1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Endosulfan I	2400	200000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Endosulfan II	2400	200000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Endosulfan sulfate	2400	200000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Endrin aldehyde	--	--		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Endrin ketone	--	--		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Endrin	14	89000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
gamma-BHC (Lindane)	100	9200		1.1 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Heptachlor epoxide	--	--		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Heptachlor	42	15000		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Methoxychlor	--	--		5.7 U	5.8 U	5.8 U	5.3 U	5.6 U	5.5 U	5.7 U
Toxaphene	--	--		29 U	29 U	29 U	27 U	28 U	27 U	29 U

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Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-10	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16
			Sample Date:	10/28/2013	10/14/2015	10/6/2015	10/6/2015	10/15/2015	10/20/2015	10/14/2015
			Sample Depth (ft bls):	8-10	0 - 2	0 - 2	6 - 8	0 - 2	6 - 8	0 - 2
4,4'-DDD	3.3	92000		**4800**	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
4,4'-DDE	3.3	62000		**240**	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
4,4'-DDT	3.3	47000		**1200**	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Aldrin	5	680		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
alpha-BHC	20	3400		1.1 U	2.4 U	2.2 U	2.2 U	2.1 U	2.2 U	2.4 U
beta-BHC	36	3000		1.1 U	2.4 U	2.2 U	2.2 U	2.1 U	2.2 U	2.4 U
Chlordane	--	--		27 U	79 U	73 U	74 U	71 U	74 U	80 U
delta-BHC	40	500000		5.4 U	2.4 U	2.2 U	2.2 U	2.1 U	2.2 U	2.4 U
Dieldrin	5	1400		1.1 U	2.4 U	2.2 U	2.2 U	2.1 U	2.2 U	2.4 U
Endosulfan I	2400	200000		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Endosulfan II	2400	200000		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Endosulfan sulfate	2400	200000		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Endrin aldehyde	--	--		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Endrin ketone	--	--		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Endrin	14	89000		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
gamma-BHC (Lindane)	100	9200		1.1 U	2.4 U	2.2 U	2.2 U	2.1 U	2.2 U	2.4 U
Heptachlor epoxide	--	--		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Heptachlor	42	15000		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Methoxychlor	--	--		5.4 U	7.9 U	7.3 U	7.4 U	7.1 U	7.4 U	8.0 U
Toxaphene	--	--		27 U	79 U	73 U	74 U	71 U	74 U	80 U

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Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-17	SB-17	SB-18 DUP	SB-18	SB-18	SB-19	SB-19
			Sample Date:	10/1/2015	10/2/2015	10/5/2015	10/5/2015	10/7/2015	10/1/2015	9/30/2015
			Sample Depth (ft bls):	0 - 2	8 - 10	0 - 2	0 - 2	8 - 10	8 - 10	0 - 2
4,4'-DDD	3.3	92000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
4,4'-DDE	3.3	62000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
4,4'-DDT	3.3	47000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Aldrin	5	680		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
alpha-BHC	20	3400		2.3 U	2.5 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
beta-BHC	36	3000		2.3 U	2.5 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
Chlordane	--	--		77 U	85 U	77 U	77 U	79 U	77 U	76 U
delta-BHC	40	500000		2.3 U	2.5 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
Dieldrin	5	1400		2.3 U	2.5 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
Endosulfan I	2400	200000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Endosulfan II	2400	200000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Endosulfan sulfate	2400	200000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Endrin aldehyde	--	--		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Endrin ketone	--	--		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Endrin	14	89000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
gamma-BHC (Lindane)	100	9200		2.3 U	2.5 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
Heptachlor epoxide	--	--		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Heptachlor	42	15000		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Methoxychlor	--	--		7.7 U	8.5 U	7.7 U	7.7 U	7.9 U	7.7 U	7.6 U
Toxaphene	--	--		77 U	85 U	77 U	77 U	79 U	77 U	76 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
NA - Compound was not analyzed by laboratory
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-20	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23
			Sample Date:	10/1/2015	10/1/2015	10/2/2015	10/7/2015	9/29/2015	9/29/2015	10/5/2015
			Sample Depth (ft bls):	8 - 10	0 - 2	0 - 2	8 - 10	0 - 2	4 - 6	0 - 2
4,4'-DDD	3.3	92000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	**4.4 J**
4,4'-DDE	3.3	62000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
4,4'-DDT	3.3	47000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	**3.7 J**
Aldrin	5	680		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
alpha-BHC	20	3400		2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U
beta-BHC	36	3000		2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U
Chlordane	--	--		73 U	78 U	79 U	80 U	74 U	75 U	74 U
delta-BHC	40	500000		2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U
Dieldrin	5	1400		2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U
Endosulfan I	2400	200000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Endosulfan II	2400	200000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Endosulfan sulfate	2400	200000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Endrin aldehyde	--	--		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Endrin ketone	--	--		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Endrin	14	89000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
gamma-BHC (Lindane)	100	9200		2.2 U	2.3 U	2.4 U	2.4 U	2.2 U	2.2 U	2.2 U
Heptachlor epoxide	--	--		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Heptachlor	42	15000		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Methoxychlor	--	--		7.3 U	7.8 U	7.9 U	8.0 U	7.4 U	7.5 U	7.4 U
Toxaphene	--	--		73 U	78 U	79 U	80 U	74 U	75 U	74 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
NA - Compound was not analyzed by laboratory
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-23	SB-24	SB-25	SB-25	SB-26	SB-26	SB-27
			Sample Date:	10/5/2015	10/14/2015	9/29/2015	9/29/2015	10/5/2015	10/6/2015	10/5/2015
			Sample Depth (ft bls):	4 - 6	0 - 2	0 - 2	4 - 6	0 - 2	6 - 8	0 - 2
4,4'-DDD	3.3	92000		**49**	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
4,4'-DDE	3.3	62000		**6.7 J**	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
4,4'-DDT	3.3	47000		**150**	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Aldrin	5	680		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
alpha-BHC	20	3400		2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.2 U	2.3 U
beta-BHC	36	3000		2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.2 U	2.3 U
Chlordane	--	--		73 U	80 U	79 U	78 U	73 U	75 U	76 U
delta-BHC	40	500000		2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.2 U	2.3 U
Dieldrin	5	1400		2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.2 U	2.3 U
Endosulfan I	2400	200000		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Endosulfan II	2400	200000		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Endosulfan sulfate	2400	200000		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Endrin aldehyde	--	--		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Endrin ketone	--	--		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Endrin	14	89000		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
gamma-BHC (Lindane)	100	9200		2.2 U	2.4 U	2.3 U	2.3 U	2.2 U	2.2 U	2.3 U
Heptachlor epoxide	--	--		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Heptachlor	42	15000		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Methoxychlor	--	--		7.3 U	8.0 U	7.9 U	7.8 U	7.3 U	7.5 U	7.6 U
Toxaphene	--	--		73 U	80 U	79 U	78 U	73 U	75 U	76 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
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NYSDEC - New York State Department of Environmental Conservation
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Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-27	SB-28	SB-28	SB-29	SB-29	SB-30	SB-30
			Sample Date:	10/5/2015	9/30/2015	9/30/2015	10/7/2015	10/7/2015	9/30/2015	9/30/2015
			Sample Depth (ft bls):	4 - 6	4 - 6	0 - 2	0 - 2	4 - 6	0 - 2	4 - 6
4,4'-DDD	3.3	92000		7.4 U	**1100**	**1200**	7.7 U	7.6 U	**18**	2.1 J
4,4'-DDE	3.3	62000		7.4 U	**160**	**44 J**	7.7 U	7.6 U	7.9 U	7.5 U
4,4'-DDT	3.3	47000		7.4 U	**100**	**750**	7.7 U	7.6 U	**6.1 J**	7.5 U
Aldrin	5	680		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
alpha-BHC	20	3400		2.2 U	24 U	22 U	2.3 U	2.3 U	2.4 U	2.2 U
beta-BHC	36	3000		2.2 U	24 U	22 U	2.3 U	2.3 U	2.4 U	2.2 U
Chlordane	--	--		74 U	790 U	750 U	77 U	76 U	79 U	75 U
delta-BHC	40	500000		2.2 U	24 U	22 U	2.3 U	2.3 U	2.4 U	2.2 U
Dieldrin	5	1400		2.2 U	24 U	22 U	2.3 U	2.3 U	2.4 U	2.2 U
Endosulfan I	2400	200000		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Endosulfan II	2400	200000		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Endosulfan sulfate	2400	200000		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Endrin aldehyde	--	--		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Endrin ketone	--	--		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Endrin	14	89000		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
gamma-BHC (Lindane)	100	9200		2.2 U	24 U	22 U	2.3 U	2.3 U	2.4 U	2.2 U
Heptachlor epoxide	--	--		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Heptachlor	42	15000		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Methoxychlor	--	--		7.4 U	79 U	75 U	7.7 U	7.6 U	7.9 U	7.5 U
Toxaphene	--	--		74 U	790 U	750 U	77 U	76 U	79 U	75 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
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-- No SCO available
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Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 5. Summary of Pesticides in Soil, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/kg)	NYSDEC Part 375 Unrestricted Use SCO	NYSDEC Part 375 Commercial SCO	**Sample Designation:**	SB-31	SB-31	SB-32 DUP	SB-32	SB-32
			Sample Date:	10/7/2015	10/7/2015	10/1/2015	10/1/2015	10/1/2015
			Sample Depth (ft bls):	6 - 8	0 - 2	0 - 2	0 - 2	6 - 8
4,4'-DDD	3.3	92000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
4,4'-DDE	3.3	62000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
4,4'-DDT	3.3	47000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Aldrin	5	680		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
alpha-BHC	20	3400		2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
beta-BHC	36	3000		2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
Chlordane	--	--		73 U	73 U	74 U	74 U	76 U
delta-BHC	40	500000		2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
Dieldrin	5	1400		2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
Endosulfan I	2400	200000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Endosulfan II	2400	200000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Endosulfan sulfate	2400	200000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Endrin aldehyde	--	--		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Endrin ketone	--	--		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Endrin	14	89000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
gamma-BHC (Lindane)	100	9200		2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
Heptachlor epoxide	--	--		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Heptachlor	42	15000		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Methoxychlor	--	--		7.3 U	7.3 U	7.4 U	7.4 U	7.6 U
Toxaphene	--	--		73 U	73 U	74 U	74 U	76 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
D - A secondary analysis after dilution due to exceedance
of the calibration range in the original sample
DUP - Duplicate sample
µg/kg - Micrograms per kilogram
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- No SCO available
NA - Compound was not analyzed by laboratory
Bold data indicates that parameter was detected above the NYSDEC Part 375 Unrestricted Use SCO
Boxed data indicates that parameter was detected above the NYSDEC Part 375 Commercial SCO

Table 6. Summary of Volatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-2 11/7/2013	MW-1 10/30/2015	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
1,1,1-Trichloroethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,1-Dichloroethene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dibromoethane	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
1,4-Dioxane	--		50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Butanone (MEK)	50		1 U	1 U	5.0 U	1 U	1 U	5.0 U	5.0 U
2-Hexanone	50		1 U	1 U	5.0 U	1 U	1 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	--		1 U	1 U	5.0 U	1 U	1 U	5.0 U	5.0 U
Acetone	50		10 U	10 U	5.0 UT	10 U	10 U	5.0 U	5.0 UT
Benzene	1		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	1.0 U	1.0 U
Bromochloromethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromodichloromethane	50		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromoform	50		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Bromomethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon disulfide	60		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Carbon tetrachloride	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chlorobenzene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloroform	7		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Chloromethane	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Cyclohexane	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U

Table 6. Summary of Volatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-2 11/7/2013	MW-1 10/30/2015	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
Dibromochloromethane	50		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Dibromochloropropane	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Dichlorodifluoromethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Ethylbenzene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Freon 113	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Isopropylbenzene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
m+p-Xylene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Methyl acetate	--		1 U	1 U	5.0 U	1 U	1 U	5.0 U	5.0 U
Methylcyclohexane	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Methylene chloride	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
MTBE	10		0.93	1.3	0.60 J	2.4	2	2	1.0 U
o-Xylene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Styrene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Tetrachloroethene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Toluene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	--		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Trichloroethene	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Trichlorofluoromethane	5		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Vinyl chloride	2		1 U	1 U	1.0 U	1 U	1 U	1.0 U	1.0 U
Xylenes (total)	5		1 U	1 U	---	1 U	1 U	---	---

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
µg/L -Micrograms per liter
J - Estimated Value
U - Compound was analyzed for but not detected
DUP - Duplicate
- - No NYSDEC AWQSGV available
--- Not analyzed for in 2015
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 6. Summary of Volatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
1,1,1-Trichloroethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	--		50 U	50 U	50 U	50 U	50 U	50 U	50 U
2-Butanone (MEK)	50		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	50		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)	--		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	50		5.0 U	5.0 UT	5.0 UT	5.0 UT	5.0 UT	5.0 UT	5.0 U
Benzene	1		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	50		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	60		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	7		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1
Chloromethane	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 6. Summary of Volatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
Dibromochloromethane	50		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloropropane	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon 113	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m+p-Xylene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl acetate	--		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	10		0.79 J	1	1.0 U	1.0 U	0.68 J	0.53 J	1.7
o-Xylene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	2		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (total)	5		---	---	---	---	---	---	---

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
µg/L -Micrograms per liter
J - Estimated Value
U - Compound was analyzed for but not detected
DUP - Duplicate
- - No NYSDEC AWQSGV available
--- Not analyzed for in 2015
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-1 10/30/2015	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
1,1'-Biphenyl	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,4,5-Trichlorophenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,4,6-Trichlorophenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,4-Dichlorophenol	5		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,4-Dimethylphenol	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2,4-Dinitrophenol	10		0.51 U	21 U	0.52 U	0.52 U	0.51 U	21 U	21 U
2,4-Dinitrotoluene	5		10 U	2.1 U	10 U	10 U	10 U	2.1 U	2.1 U
2,6-Dinitrotoluene	5		2 U	2.1 U	2.1 U	2.1 U	2 U	2.1 U	2.1 U
2-Chloronaphthalene	10		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2-Chlorophenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2-Methylnaphthalene	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2-Methylphenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
2-Nitroaniline	5		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
2-Nitrophenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
3,3'-Dichlorobenzidine	5		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
3-Nitroaniline	5		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
4,6-Dinitro-2-methylphenol	--		2 U	21 UT	2.1 U	2.1 U	2 U	21 U	21 UT
4-Bromophenyl phenyl ether	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
4-Chloroaniline	5		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
4-Chlorophenyl phenyl ether	--		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
4-Methylphenol	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
4-Nitroaniline	5		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
4-Nitrophenol	--		2 U	21 U	2.1 U	2.1 U	2 U	21 U	21 U
Acenaphthene	20		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Acenaphthylene	20		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Acetophenone	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Anthracene	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Atrazine	--		2 U	2.1 U	2.1 U	2.1 U	2 U	2.1 U	2.1 U
Benzaldehyde	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-1 10/30/2015	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
Benzo[a]anthracene	0.002		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Benzo[a]pyrene	0		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Benzo[b]fluoranthene	0.002		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Benzo[g,h,i]perylene	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Benzo[k]fluoranthene	0.002		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Bis(2-chloroethoxy)methane	5		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Bis(2-chloroethyl) ether	--		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
bis(2-Chloroisopropyl)ether	5		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
Bis(2-ethylhexyl) phthalate	5		2 U	2.1 U	2.1 U	2.1 U	2 U	2.1 U	2.1 U
Butylbenzyl phthalate	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Caprolactam	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Carbazole	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Chrysene	0.002		2 U	2.1 U	2.1 U	2.1 U	2 U	2.1 U	2.1 U
Dibenzo[a,h]anthracene	--		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Dibenzofuran	--		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
Diethyl phthalate	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Dimethyl phthalate	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Di-n-butyl phthalate	50		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
Di-n-octyl phthalate	--		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Fluoranthene	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Fluorene	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Hexachlorobenzene	0.04		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Hexachlorobutadiene	0.5		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	5		2 U	10 U	2.1 U	2.1 U	10 U	10 U	10 U
Hexachloroethane	5		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Indeno[1,2,3-cd]pyrene	0.002		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 U	1.0 U
Isophorone	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Naphthalene	10		0.51 U	10 U	0.52 U	0.52 U	0.51 U	10 U	10 U
Nitrobenzene	0.4		2 U	1.0 U	2.1 U	2.1 U	2 U	1.0 UT	1.0 U
n-Nitrosodi-n-propylamine	--		0.51 U	1.0 U	0.52 U	0.52 U	0.51 U	1.0 U	1.0 U
n-Nitrosodiphenylamine	50		2 U	10 U	2.1 U	2.1 U	2 U	10 UT	10 U
Pentachlorophenol	1		10 U	21 U	10 U	10 U	10 U	21 U	21 U

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-1 10/30/2015	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
Phenanthrene	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Phenol	1		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U
Pyrene	50		2 U	10 U	2.1 U	2.1 U	2 U	10 U	10 U

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
µg/L -Micrograms per liter
J - Estimated Value
U - Compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
1,1'-Biphenyl	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	10		21 U	21 U	21 U	21 U	21 U	21 U	21 U
2,4-Dinitrotoluene	5		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2,6-Dinitrotoluene	5		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2-Chloronaphthalene	10		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	--		21 U	21 UT	21 UT	21 UT	21 UT	21 UT	21 U
4-Bromophenyl phenyl ether	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	--		21 U	21 U	21 U	21 U	21 U	21 U	21 U
Acenaphthene	20		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	20		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine	--		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Benzaldehyde	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
Benzo[a]anthracene	0.002		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo[a]pyrene	0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo[b]fluoranthene	0.002		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo[g,h,i]perylene	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	0.002		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bis(2-chloroethoxy)methane	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-chloroethyl) ether	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
bis(2-Chloroisopropyl)ether	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl) phthalate	5		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Butylbenzyl phthalate	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Caprolactam	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Dibenzo[a,h]anthracene	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	0.04		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobutadiene	0.5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	5		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	5		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno[1,2,3-cd]pyrene	0.002		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isophorone	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	0.4		1.0 UT	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UT
n-Nitrosodi-n-propylamine	--		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
n-Nitrosodiphenylamine	50		10 UT	10 U	10 U	10 U	10 U	10 U	10 UT
Pentachlorophenol	1		21 U	21 U	21 U	21 U	21 U	21 U	21 U

Table 7. Summary of Semivolatile Organic Compounds in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
Phenanthrene	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	1		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	50		10 U	10 U	10 U	10 U	10 U	10 U	10 U

NYSDEC - New York State Department of Environmental Conservation
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T - LCS or LCSD is outside acceptance limits
DUP - Duplicate
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 8. Summary of Metals in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013 Dissolved	MW-1 11/7/2013 Total	MW-1 10/30/2015 Total	MW-1 10/30/2015 Dissolved	MW-2 11/7/2013 Dissolved	MW-2 11/7/2013 Total	MW-3 10/29/2015 Total
Aluminum	--		200 U	200 U	165 J	150 J	200 U	200 U	165 J
Antimony	3		2 U	2 U	20.0 U	20.0 U	2 U	2 U	20.0 U
Arsenic	25		2 U	2 U	15.0 U	15.0 U	2 U	2 U	10.7 J
Barium	1000		300	300	341	332	380	410	405
Beryllium	3		1 U	1 U	2.0 U	2.0 U	1 U	1 U	2.0 U
Cadmium	5		2 U	2 U	4.0 U	4.0 U	2 U	2 U	4.0 U
Calcium	--		83000	84000	87700	84800	95000	100000	435000
Chromium	50		50 U	50 U	10.0 U	10.0 U	50 U	50 U	10.0 U
Cobalt	--		2 U	2 U	50.0 U	50.0 U	2 U	2 U	50.0 U
Copper	200		50 U	50 U	25.0 U	25.0 U	50 U	50 U	25.0 U
Cyanide	200		---	---	10 U	NA	---	---	10 U
Iron	300		300 U	300 U	150 U	150 U	300 U	300 U	**5560**
Lead	25		3 U	3 U	4.7 J	4.7 J	3 U	3 U	10.0 U
Magnesium	35000		49000	50000	**48700**	**46800**	56000	62000	**151000**
Manganese	300		40 U	40 U	6.3 J	15.0 U	40 U	40 U	**9500**
Mercury	0.7		0.7 U	0.7 U	0.20 U	0.20 U	0.7 U	0.7 U	0.20 U
Nickel	100		50 U	50 U	40.0 U	40.0 U	50 U	50 U	62.3
Potassium	--		5000 U	5000 U	3460 J	3360 J	5000 U	5000 U	13100
Selenium	10		10 U	10 U	20.0 U	20.0 U	10 U	10 U	**10.1 J**
Silver	50		20 U	20 U	10.0 U	10.0 U	20 U	20 U	2.0 J
Sodium	20000		**160000**	**160000**	**165000**	**160000**	**260000**	**270000**	**416000**
Thallium	0.5		2 U	2 U	20.0 U	20.0 U	2 U	2 U	**6.8 J**
Vanadium	--		50 U	50 U	50.0 U	50.0 U	50 U	50 U	17.6 J
Zinc	2000		50 U	50 U	30.0 U	30.0 U	50 U	50 U	10.4 J

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NA - Compound was not analyzed by laboratory

Table 8. Summary of Metals in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-3 11/7/2013 Dissolved	MW-3 11/7/2013 Total	MW-3 DUP 11/7/2013 Dissolved	MW-3 DUP 11/7/2013 Total	MW-3 10/29/2015 Dissolved	MW-5 10/30/2015 Total	MW-5 10/30/2015 Dissolved
Aluminum	--		200 U	200 U	200 U	200 U	403	301	239
Antimony	3		2 U	2 U	2 U	2 U	20.0 U	20.0 U	20.0 U
Arsenic	25		2 U	2 U	2 U	2 U	8.0 J	15.0 U	15.0 U
Barium	1000		350	360	360	360	262	166 J	164 J
Beryllium	3		1 U	1 U	1 U	1 U	2.0 U	2.0 U	2.0 U
Cadmium	5		2 U	2 U	2 U	2 U	4.0 U	4.0 U	4.0 U
Calcium	--		440000	450000	450000	450000	443000	153000	148000
Chromium	50		50 U	50 U	50 U	50 U	10.0 U	9.3 J	9.4 J
Cobalt	--		8	7.2	7.8	8.6	50.0 U	50.0 U	50.0 U
Copper	200		50 U	50 U	50 U	50 U	25.0 U	25.0 U	25.0 U
Cyanide	200		---	---	---	---	NA	10 U	NA
Iron	300		300 U	300 U	300 U	300 U	131 J	150 U	150 U
Lead	25		3 U	3 U	3 U	3 U	10.0 U	6.3 J	6.3 J
Magnesium	35000		160000	160000	160000	160000	**150000**	**159000**	**154000**
Manganese	300		**11000**	**11000**	**12000**	**12000**	**9690**	57.7	52.2
Mercury	0.7		0.7 U	0.7 U	0.7 U	0.7 U	0.20 U	0.20 U	0.20 U
Nickel	100		89	79	100	95	74.9	77	73
Potassium	--		16000	16000	16000	16000	11100	3520 J	3510 J
Selenium	10		10 U	10 U	10 U	10 U	20.0 U	20.0 U	20.0 U
Silver	50		20 U	20 U	20 U	20 U	10.0 U	10.0 U	10.0 U
Sodium	20000		**400000**	**390000**	**400000**	**390000**	**428000**	**97600**	**95200**
Thallium	0.5		2 U	2 U	2 U	2 U	**16.2 J**	20.0 U	20.0 U
Vanadium	--		50 U	50 U	50 U	50 U	50.0 U	50.0 U	50.0 U
Zinc	2000		50 U	50 U	50 U	50 U	9.4 J	30.0 U	30.0 U

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Table 8. Summary of Metals in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015 Total	MW-6 10/29/2015 Dissolved	MW-7 10/30/2015 Total	MW-7 10/30/2015 Dissolved	MW-8 10/30/2015 Total	MW-8 10/30/2015 Dissolved	MW-8 DUP 10/30/2015 Total
Aluminum	--		76.2 J	289	215	153 J	487	462	490
Antimony	3		20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U
Arsenic	25		7.1 J	6.6 J	15.0 U	15.0 U	5.2 J	7.1 J	6.9 J
Barium	1000		325	303	337	330	754	760	726
Beryllium	3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	5		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	--		221000	217000	96600	91700	690000	682000	673000
Chromium	50		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	--		50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Copper	200		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Cyanide	200		10 U	NA	10 U	NA	10 U	NA	10 U
Iron	300		150 U	150 U	119 J	150 U	150 U	150 U	150 U
Lead	25		10.0 U	10.0 U	6.7 J	5.1 J	7.9 J	7.5 J	8.6 J
Magnesium	35000		**85600**	**81700**	**82700**	**77200**	**105000**	**106000**	**101000**
Manganese	300		**8300**	**8240**	177	151	289	295	**301**
Mercury	0.7		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	100		59.9	57.5	6.0 J	40.0 U	34.5 J	35.7 J	38.4 J
Potassium	--		6740	6260	5040	4830 J	10200	10300	10300
Selenium	10		**11.9 J**	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U
Silver	50		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	20000		**188000**	**196000**	**182000**	**173000**	**631000**	**603000**	**618000**
Thallium	0.5		**7.4 J**	**14.3 J**	20.0 U	20.0 U	20.0 U	**7.0 J**	**4.7 J**
Vanadium	--		15.4 J	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc	2000		7.2 J	7.0 J	30.0 U	30.0 U	30.0 U	30.0 U	30.0 U

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Table 8. Summary of Metals in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-8 DUP 10/30/2015 Dissolved	MW-9 10/30/2015 Total	MW-9 10/30/2015 Dissolved	MW-11B 10/30/2015 Total	MW-11B 10/30/2015 Dissolved	MW-12 10/29/2015 Total	MW-12 10/29/2015 Dissolved
Aluminum	--		471	209	207	169 J	150 J	165 J	119 J
Antimony	3		20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U
Arsenic	25		4.6 J	15.0 U	15.0 U	15.0 U	15.0 U	5.7 J	15.0 U
Barium	1000		776	531	523	391	403	302	303
Beryllium	3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cadmium	5		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	--		688000	136000	135000	92500	92900	70000	72300
Chromium	50		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt	--		50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	14.9 J	14.9 J
Copper	200		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Cyanide	200		NA	10 U	NA	10 U	NA	10 U	NA
Iron	300		150 U	150 U	150 U	150 U	150 U	207	150 U
Lead	25		8.6 J	5.6 J	6.7 J	4.4 J	10.0 U	10.0 U	10.0 U
Magnesium	35000		**107000**	**66200**	**66600**	**62600**	**61100**	**60400**	**61300**
Manganese	300		291	26.8	24.9	28.5	26	**5770**	**6450**
Mercury	0.7		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Nickel	100		36.1 J	9.7 J	8.1 J	40.0 U	40.0 U	73.6	75.4
Potassium	--		10400	4070 J	4110 J	4050 J	4000 J	6040	6440
Selenium	10		20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	9.3 J	20.0 U
Silver	50		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	20000		**605000**	**213000**	**214000**	**166000**	**161000**	**122000**	**138000**
Thallium	0.5		**4.8 J**	20.0 U	20.0 U	20.0 U	20.0 U	**7.3 J**	**10.7 J**
Vanadium	--		50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	10.7 J	50.0 U
Zinc	2000		30.0 U	30.0 U	7.7 J	30.0 U	30.0 U	8.1 J	6.2 J

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Table 9. Summary of Polychlorinated Biphenyls in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-1 10/30/2015	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
Aroclor-1016	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1221	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1232	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1242	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1248	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1254	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1260	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1262	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
Aroclor-1268	--		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U
PCBs, Total	0.09		0.25 U	0.40 U	0.25 U	0.25 U	0.25 U	0.40 U	0.40 U

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J - Estimated Value
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DUP - Duplicate
- - No NYSDEC AWQSGV available
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PCBs - Polychlorinated Biphenyls

Table 9. Summary of Polychlorinated Biphenyls in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
Aroclor-1016	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1221	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1232	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1242	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1248	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1254	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1260	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1262	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1268	--		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
PCBs, Total	0.09		0.41 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U

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PCBs - Polychlorinated Biphenyls

Table 10. Summary of Pesticides in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-1 10/30/2015	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	MW-3 10/29/2015	MW-5 10/30/2015
4,4'-DDD	0.3		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
4,4'-DDE	0.2		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
4,4'-DDT	0.2		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Aldrin	0		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
alpha-BHC	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
beta-BHC	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Chlordane	0.05		0.1 U	0.50 U	0.1 U	0.1 U	0.1 U	0.50 U	0.50 U
delta-BHC	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 U	0.020 U
Dieldrin	0.004		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endosulfan I	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endosulfan II	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endosulfan sulfate	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endrin aldehyde	5		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endrin ketone	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Endrin	0		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
gamma-BHC (Lindane)	--		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Heptachlor epoxide	0.03		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Heptachlor	0.04		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Methoxychlor	35		0.01 U	0.020 U	0.01 U	0.01 U	0.01 U	0.020 UT	0.020 U
Toxaphene	0.06		0.25 U	0.50 U	0.25 U	0.25 U	0.25 U	0.50 U	0.50 U

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J - Estimated Value
U - Compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 10. Summary of Pesticides in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Designation:** **Sample Date:**	MW-6 10/29/2015	MW-7 10/30/2015	MW-8 10/30/2015	MW-8 DUP 10/30/2015	MW-9 10/30/2015	MW-11B 10/30/2015	MW-12 10/29/2015
4,4'-DDD	0.3		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
4,4'-DDE	0.2		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
4,4'-DDT	0.2		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Aldrin	0		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
alpha-BHC	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
beta-BHC	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Chlordane	0.05		0.51 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
delta-BHC	--		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Dieldrin	0.004		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endosulfan I	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endosulfan II	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endosulfan sulfate	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endrin aldehyde	5		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endrin ketone	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Endrin	0		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
gamma-BHC (Lindane)	--		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Heptachlor epoxide	0.03		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Heptachlor	0.04		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Methoxychlor	35		0.020 UT	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 UT
Toxaphene	0.06		0.51 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
µg/L -Micrograms per liter
J - Estimated Value
U - Compound was analyzed for but not detected
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQS(

Table 11. Summary of General Chemistry in Groundwater, Staten Island Mall Expansion, Staten Island, New York

Parameter	NYSDEC AWQSGVs	Units	**Sample Designation:** **Sample Date:**	MW-1 11/7/2013	MW-2 11/7/2013	MW-3 11/7/2013	MW-3 DUP 11/7/2013	FB 110713 11/7/2013
Cyanide	--	mg/L		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
mg/L -Milligrams per liter
J - Estimated Value
U - Compound was analyzed for but not detected
DUP - Duplicate
- - No NYSDEC AWQSGV available
Bold data indicates that parameter was detected above the NYSDEC AWQSGVs

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:**	SV-1	SV-1	SV-2	SV-2	SV-3	SV-3 DUP	SV-3	SV-3	SV-5	SV-7	SV-8
	Sample Date:	11/7/2013	10/27/2015	11/7/2013	10/29/2015	11/7/2013	11/7/2013	10/27/2015	10/27/2015	10/30/2015	10/29/2015	10/27/2015
1,1,1-Trichloroethane		**2.2**	**1.2 J**	1.6 U	**0.31 J**	1.9 U	2 U	9.7 U	9.7 U	4.4 U	22 U	11 U
1,1,2,2-Tetrachloroethane		1 U	2.7 U	1 U	1.4 U	1.2 U	1.3 U	12 U	12 U	5.5 U	27 U	14 U
1,1,2-Trichloroethane		0.82 U	2.2 U	0.79 U	1.1 U	0.96 U	1 U	9.7 U	9.7 U	4.4 U	22 U	11 U
1,1-Dichloroethane		1.2 U	**3.9**	1.2 U	**0.20 J**	1.4 U	1.5 U	7.2 U	7.2 U	3.2 U	16 U	8.1 U
1,1-Dichloroethene		1.2 U	1.6 U	1.2 U	0.79 U	1.4 U	1.5 U	7.0 U	7.0 U	3.2 U	16 U	7.9 U
1,2,4-Trichlorobenzene		2.2 U	7.4 U	2.2 U	3.7 U	2.6 U	2.8 U	33 U	33 U	15 U	74 U	37 U
1,2,4-Trimethylbenzene		**6.4**	**0.60 J**	**9**	**0.53 J**	1.7 U	**6.3**	8.7 U	8.7 U	3.9 U	20 U	9.8 U
1,2-Dibromoethane		2.3 U	3.1 U	2.2 U	1.5 U	2.7 U	2.9 U	14 U	14 U	6.1 U	31 U	15 U
1,2-Dichlorobenzene		1.8 U	2.4 U	1.8 U	1.2 U	2.1 U	2.2 U	11 U	11 U	4.8 U	24 U	12 U
1,2-Dichloroethane		0.61 U	1.6 U	0.59 U	0.81 U	0.72 U	0.75 U	7.2 U	7.2 U	3.2 U	16 U	8.1 U
1,2-Dichloroethene (total)		---	3.2 U	---	1.6 U	---	---	14 U	14 U	6.3 U	32 U	16 U
1,2-Dichloropropane		1.4 U	1.8 U	1.4 U	0.92 U	1.6 U	1.7 U	8.2 U	8.2 U	3.7 U	18 U	9.2 U
1,3,5-Trimethylbenzene		**2.9**	2.0 U	**3.5**	0.98 U	1.7 U	**2.5**	8.7 U	8.7 U	3.9 U	20 U	9.8 U
1,3-Butadiene		0.67 U	0.88 U	0.65 U	0.44 U	0.79 U	0.82 U	3.9 U	3.9 U	1.8 U	8.8 U	4.4 U
1,3-Dichlorobenzene		1.8 U	2.4 U	1.8 U	1.2 U	2.1 U	2.2 U	11 U	11 U	4.8 U	24 U	12 U
1,4-Dichlorobenzene		1.8 U	2.4 U	1.8 U	**2.6**	2.1 U	2.2 U	11 U	11 U	**1.4 J**	24 U	12 U
1,4-Dioxane			36 U	---	**3.3 J**	---	---	160 U	160 U	72 U	360 U	180 U
2-Butanone (MEK)		**7.1**	**3.2**	**6.6**	**8.4**	1 U	**8.6**	**13**	**13**	5.9 U	29 U	15 U
2-Hexanone		1.2 U	**0.63 J**	1.2 U	**1.5 J**	1.5 U	**3**	**4.4 J**	**4.4 J**	8.2 U	41 U	20 U
2-Propanol		0.74 U	---	0.72 U		0.88 U	0.92 U	---	---	---	---	---
3-Chloropropene		---	3.1 U	---	1.6 U	---	---	14 U	14 U	6.3 U	31 U	16 U
4-Ethyltoluene		**2.2**	2.0 U	**3.1**	**0.30 J**	1.8 U	1.8 U	8.7 U	8.7 U	3.9 U	20 U	9.8 U
4-Methyl-2-pentanone (MIBK)		1.2 U	4.1 U	1.2 U	2.0 U	1.5 U	1.5 U	18 U	18 U	8.2 U	41 U	20 U
Acetone		0.72 U	**7.3 J**	**10.2**	**36**	0.84 U	**39.5**	**34 J**	**34 J**	48 U	240 U	120 U
Benzene		0.48 U	**0.46 J**	**3.2**	**0.39 J**	**5.6**	**4.7**	**40**	**40**	2.6 U	**75**	**2.1 J**
Benzyl chloride		1.6 U	2.1 U	1.5 U	1.0 U	1.8 U	1.9 U	9.2 U	9.2 U	4.1 U	21 U	10 U
Bromodichloromethane		2 U	2.7 U	2 U	1.3 U	2.4 U	2.5 U	12 U	12 U	5.4 U	27 U	13 U
Bromoethene		---	1.7 U	---	0.87 U	---	---	7.8 U	7.8 U	3.5 U	17 U	8.7 U
Bromoform		3.1 U	4.1 U	3 U	2.1 U	3.7 U	3.8 U	18 U	18 U	8.3 U	41 U	21 U
Bromomethane		1.2 U	1.6 U	1.1 U	0.78 U	1.4 U	1.4 U	6.9 U	6.9 U	3.1 U	15 U	7.8 U
Butane		---	**9.9**	---	**2.4**	---	---	**130**	**130**	**110**	**1000**	**360**
Carbon disulfide		**663**	**4.2**	**109**	**5.8**	**2**	**2**	**3.1 J**	**3.1 J**	**5.5 J**	**370**	**9.7 J**
Carbon tetrachloride		0.95 U	0.50 U	0.92 U	0.25 U	1.1 U	1.2 U	2.2 U	2.2 U	1.0 U	5.0 U	2.5 U
Chlorobenzene		1.4 U	1.8 U	1.4 U	0.92 U	1.6 U	1.7 U	8.2 U	8.2 U	3.7 U	**58**	9.2 U
Chlorodifluoromethane		---	**20**	---	**2.2**	---	---	16 U	16 U	7.1 U	**52**	**20**
Chloroethane		**3.1**	2.6 U	0.78 U	1.3 U	0.94 U	0.99 U	12 U	12 U	5.3 U	26 U	13 U
Chloroform		1.5 U	**5.7**	**3.1**	**2.1**	1.7 U	**3.7**	8.7 U	8.7 U	**3.8 J**	19 U	**120**
Chloromethane		0.63 U	2.1 U	0.6 U	**0.61 J**	**31.1**	0.77 U	9.2 U	9.2 U	**1.8 J**	**4.5 J**	**2.0 J**
cis-1,2-Dichloroethene		1.2 U	1.6 U	1.2 U	0.79 U	1.4 U	1.5 U	7.0 U	7.0 U	3.2 U	16 U	7.9 U
cis-1,3-Dichloropropene		1.4 U	1.8 U	1.3 U	0.91 U	1.6 U	1.7 U	8.1 U	8.1 U	3.6 U	18 U	9.1 U

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:**	SV-1	SV-1	SV-2	SV-2	SV-3	SV-3 DUP	SV-3	SV-3	SV-5	SV-7	SV-8
	Sample Date:	11/7/2013	10/27/2015	11/7/2013	10/29/2015	11/7/2013	11/7/2013	10/27/2015	10/27/2015	10/30/2015	10/29/2015	10/27/2015
Cyclohexane		1 U	1.4 U	**2.6**	**0.92**	**50.1**	**75.3**	**22**	**22**	2.8 U	**150**	6.9 U
Dibromochloromethane		2.6 U	3.4 U	2.5 U	1.7 U	3 U	3.2 U	15 U	15 U	6.8 U	34 U	17 U
Dichlorodifluoromethane		**75.6**	**200**	**9.4**	**12**	1.8 U	1.8 U	22 U	22 U	**7.1 J**	49 U	25 U
Ethanol		0.57 U	---	0.55 U	---	**4.4**	**5.6**	---	---	---	---	---
Ethyl Acetate		1.1 U	---	1.1 U	---	1.3 U	1.3 U	---	---	---	---	---
Ethylbenzene		**9**	1.7 U	**10**	**4.1**	**3.4**	**5.8**	7.7 U	7.7 U	**1.6 J**	17 U	8.7 U
Freon 113		2.4 U	3.1 U	2.3 U	**0.58 J**	2.8 U	2.9 U	14 U	14 U	6.1 U	31 U	15 U
Freon 114		2.1 U	2.8 U	2 U	1.4 U	2.5 U	2.6 U	12 U	12 U	5.6 U	28 U	14 U
Hexachlorobutadiene		3.3 U	4.3 U	3.2 U	2.1 U	3.8 U	4 U	19 U	19 U	8.5 U	42 U	21 U
Isooctane		---	**0.39 J**	---	0.93 U	---	---	**13**	**13**	3.7 U	**840**	**7.5 J**
ISOPROPANOL		---	25 U	---	12 U	---	---	110 U	110 U	49 U	240 U	120 U
Isopropylbenzene		---	2.0 U	---	**1.2**	---	---	8.7 U	8.7 U	3.9 U	20 U	9.8 U
Methyl Methacrylate		---	4.1 U		2.0 U	---	---	18 U	18 U	8.2 U	41 U	20 U
Methylene chloride		1.1 U	**1.8 J**	**6.6**	**1.3 J**	**21.1**	**5**	**22**	**22**	6.9 U	35 U	**6.6 J**
MTBE		1.1 U	**1.1 J**	**6.4**	**1**	**76.3**	**46.4**	**680**	**680**	2.9 U	**71**	7.2 U
Naphthalene		**2.2**	5.2 U	**2.1**	**0.65 J**	1.9 U	2 U	23 U	23 U	10 U	**7.9 J**	26 U
n-Butylbenzene		---	2.2 U		1.1 U	---	---	9.7 U	9.7 U	4.4 U	22 U	11 U
n-Heptane		**19.7**	1.6 U	**3.6**	0.82 U	**5.2**	**6.5**	**67**	**67**	3.3 U	**49**	8.2 U
n-Hexane		**828**	**0.53 J**	**2.2**	**0.61 J**	**8.1**	**8.3**	**31**	**31**	2.8 U	**69**	**5.1 J**
n-Propylbenzene		---	2.0 U	---	**1.2**	---	---	8.7 U	8.7 U	3.9 U	20 U	9.8 U
o-Chlorotoluene		---	2.1 U	---	1.0 U	---	---	9.2 U	9.2 U	4.1 U	21 U	10 U
p-Isopropyltoluene		---	2.2 U	---	1.1 U	---	---	9.7 U	9.7 U	4.4 U	**4.9 J**	11 U
sec-Butylbenzene		---	2.2 U	---	**0.46 J**	---	---	9.7 U	9.7 U	4.4 U	**9.1 J**	11 U
Propene		**20000 E**		0.5 U		0.61 U	0.64 U	---	---	---	---	---
Styrene		1.3 U	1.7 U	1.3 U	**30**	1.5 U	1.6 U	7.6 U	7.6 U	**7.9**	17 U	8.5 U
t-Butyl Alcohol		---	30 U	---	**7.9 J**	---	---	130 U	130 U	61 U	300 U	150 U
tert-Butylbenzene		---	2.2 U	---	1.1 U	---	---	9.7 U	9.7 U	4.4 U	**4.9 J**	11 U
Tetrachloroethene		**2.2**	**3.6**	0.99 U	**0.48 J**	1.2 U	1.3 U	12 U	12 U	**1.9 J**	27 U	**2.1 J**
Tetrahydrofuran		0.89 U	29 U	0.86 U	15 U	1 U	1.1 U	130 U	130 U	59 U	290 U	150 U
Toluene		**70.3**	**1.1 J**	**26.8**	**1.8**	**16.6**	**18**	**32**	**32**	**2.3 J**	**22**	7.5 U
trans-1,2-Dichloroethene		1.2 U	1.6 U	1.2 U	0.79 U	1.4 U	1.5 U	7.0 U	7.0 U	3.2 U	16 U	7.9 U
trans-1,3-Dichloropropene		1.4 U	1.8 U	1.3 U	0.91 U	1.6 U	1.7 U	8.1 U	8.1 U	3.6 U	18 U	9.1 U
Trichloroethene		0.82 U	**1.4**	0.79 U	0.21 U	0.96 U	1 U	1.9 U	1.9 U	0.86 U	4.3 U	2.1 U
Trichlorofluoromethane		**6.2**	**12**	**3.2**	**2.9**	2 U	2.1 U	10 U	10 U	**2.9 J**	22 U	11 U
Vinyl acetate		1.1 U	---	1 U	---	1.3 U	1.3 U	---	---	---	---	---
Vinyl chloride		0.39 U	0.20 U	0.37 U	0.10 U	0.46 U	0.48 U	0.91 U	0.91 U	0.41 U	2.0 U	1.0 U
Xylenes (total)		**44.4**	**0.87 J**	**52.4**	**33**	**16.9**	**28.9**	**2.7 J**	**2.7 J**	**11 J**	**6.1 J**	30 U

J - Estimated value
U - Indicates that the compound was analyzed for but not detected
E - Indicates value exceeded calibration range
DUP - Duplicate sample
ug/m^3 - Micrograms per cubic meter
Bold data indicates that parameter was detected
--- Not analyzed for in 2013 or 2015

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:**	SV-9	SV-10	SV-10 DUP	SV-11	SV-12	SV-13	SV-14	SV-17	AMB110713	AMB-102715
	Sample Date:	10/30/2015	10/29/2015	10/29/2015	10/29/2015	10/27/2015	10/27/2015	10/27/2015	10/30/2015	11/7/2013	10/27/2015
1,1,1-Trichloroethane		1.1 U	1.1 U	1.1 U	1.1 U	**0.68 J**	75 U	1.6 U	1.1 U	1.6 U	1.1 U
1,1,2,2-Tetrachloroethane		1.4 U	1.4 U	1.4 U	1.4 U	2.7 U	94 U	2.1 U	1.4 U	1 U	1.4 U
1,1,2-Trichloroethane		1.1 U	1.1 U	1.1 U	1.1 U	2.2 U	75 U	1.6 U	1.1 U	0.79 U	1.1 U
1,1-Dichloroethane		0.81 U	0.81 U	0.81 U	0.81 U	1.6 U	56 U	**0.63 J**	0.81 U	1.2 U	0.81 U
1,1-Dichloroethene		0.79 U	0.79 U	0.79 U	0.79 U	1.6 U	55 U	1.2 U	0.79 U	1.2 U	0.79 U
1,2,4-Trichlorobenzene		3.7 U	3.7 U	3.7 U	3.7 U	7.4 U	260 U	5.6 U	3.7 U	2.2 U	3.7 U
1,2,4-Trimethylbenzene		0.98 U	**2**	0.98 U	**0.31 J**	**1.4 J**	68 U	**0.81 J**	0.98 U	1.4 U	**0.30 J**
1,2-Dibromoethane		1.5 U	1.5 U	1.5 U	1.5 U	3.1 U	110 U	2.3 U	1.5 U	2.2 U	1.5 U
1,2-Dichlorobenzene		1.2 U	1.2 U	1.2 U	1.2 U	2.4 U	83 U	1.8 U	1.2 U	1.8 U	1.2 U
1,2-Dichloroethane		0.81 U	0.81 U	0.81 U	0.81 U	1.6 U	56 U	1.2 U	0.81 U	0.59 U	0.81 U
1,2-Dichloroethene (total)		1.6 U	1.6 U	1.6 U	1.6 U	3.2 U	**17 J**	**3.4**	1.6 U	---	1.6 U
1,2-Dichloropropane		0.92 U	0.92 U	0.92 U	0.92 U	1.8 U	64 U	1.4 U	0.92 U	1.4 U	0.92 U
1,3,5-Trimethylbenzene		0.98 U	**0.60 J**	0.98 U	0.98 U	**0.50 J**	68 U	**0.30 J**	0.98 U	1.4 U	0.98 U
1,3-Butadiene		0.44 U	0.44 U	0.44 U	0.44 U	**0.68 J**	30 U	0.67 U	0.44 U	0.65 U	0.44 U
1,3-Dichlorobenzene		1.2 U	1.2 U	1.2 U	1.2 U	2.4 U	83 U	1.8 U	1.2 U	1.8 U	1.2 U
1,4-Dichlorobenzene		**0.75 J**	1.2 U	1.2 U	**2.1**	2.4 U	83 U	1.8 U	**1.2**	1.8 U	1.2 U
1,4-Dioxane		18 U	18 U	18 U	18 U	36 U	1200 U	27 U	18 U	---	18 U
2-Butanone (MEK)		1.5 U	**3.1**	**2.1**	**0.90 J**	2.9 U	100 U	**1.3 J**	**1.1 J**	**4.2**	**1.5**
2-Hexanone		2.0 U	**0.49 J**	2.0 U	2.0 U	4.1 U	140 U	3.1 U	2.0 U	1.2 U	2.0 U
2-Propanol		---	---	---	---	---	---	---	---	0.72 U	---
3-Chloropropene		1.6 U	1.6 U	1.6 U	1.6 U	3.1 U	110 U	2.4 U	1.6 U	---	1.6 U
4-Ethyltoluene		0.98 U	**0.54 J**	0.98 U	0.98 U	2.0 U	68 U	1.5 U	0.98 U	1.4 U	0.98 U
4-Methyl-2-pentanone (MIBK)		2.0 U	2.0 U	2.0 U	2.0 U	4.1 U	140 U	3.1 U	2.0 U	1.2 U	2.0 U
Acetone		**4.2 J**	**16**	**9.0 J**	**7.7 J**	**8.1 J**	820 U	**15 J**	**7.1 J**	**12.5**	**7.8 J**
Benzene		**0.20 J**	**0.52 J**	**0.43 J**	**0.23 J**	**0.54 J**	44 U	**2.9**	**0.21 J**	**0.54**	**1.6**
Benzyl chloride		1.0 U	1.0 U	1.0 U	1.0 U	2.1 U	71 U	1.6 U	1.0 U	1.5 U	1.0 U
Bromodichloromethane		1.3 U	1.3 U	1.3 U	1.3 U	2.7 U	92 U	2.0 U	1.3 U	2 U	1.3 U
Bromoethene		0.87 U	0.87 U	0.87 U	0.87 U	1.7 U	60 U	1.3 U	0.87 U	---	0.87 U
Bromoform		2.1 U	2.1 U	2.1 U	2.1 U	4.1 U	140 U	3.1 U	2.1 U	3 U	2.1 U
Bromomethane		0.78 U	0.78 U	0.78 U	0.78 U	1.6 U	53 U	1.2 U	0.78 U	1.1 U	0.78 U
Butane		**27**	**7.6**	**8.1**	**0.70 J**	**79**	82 U	**9.4**	**7.8**	---	**12**
Carbon disulfide		**1.7**	**8.2**	**6**	**0.74 J**	**47**	110 U	**42**	**1.8**	0.91 U	**0.54 J**
Carbon tetrachloride		0.25 U	**0.26**	**0.31**	0.25 U	0.50 U	17 U	0.38 U	0.25 U	0.92 U	**0.47**
Chlorobenzene		0.92 U	0.92 U	0.92 U	0.92 U	1.8 U	63 U	1.4 U	0.92 U	1.4 U	0.92 U
Chlorodifluoromethane		**0.94 J**	**1.3 J**	**1.4 J**	**1.0 J**	**16**	**41 J**	**2.5 J**	**1.3 J**	---	**3.2**
Chloroethane		1.3 U	1.3 U	1.3 U	1.3 U	**1.2 J**	91 U	**19**	1.3 U	0.78 U	1.3 U
Chloroform		**12**	**2.3**	**2.4**	**20**	**70**	**240**	**92**	**1.8**	1.4 U	0.98 U
Chloromethane		**0.24 J**	**0.31 J**	**0.47 J**	**0.46 J**	**1.2 J**	71 U	**1.8**	**0.60 J**	**0.96**	**1.1**
cis-1,2-Dichloroethene		0.79 U	0.79 U	0.79 U	0.79 U	1.6 U	**18 J**	**3.4**	0.79 U	1.2 U	0.79 U
cis-1,3-Dichloropropene		0.91 U	0.91 U	0.91 U	0.91 U	1.8 U	62 U	1.4 U	0.91 U	1.3 U	0.91 U

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:**	SV-9	SV-10	SV-10 DUP	SV-11	SV-12	SV-13	SV-14	SV-17	AMB110713	AMB-102715
	Sample Date:	10/30/2015	10/29/2015	10/29/2015	10/29/2015	10/27/2015	10/27/2015	10/27/2015	10/30/2015	11/7/2013	10/27/2015
Cyclohexane		**0.37 J**	**0.49 J**	**0.61 J**	**0.60 J**	**13**	47 U	**8.3**	**0.41 J**	1 U	**0.61 J**
Dibromochloromethane		1.7 U	1.7 U	1.7 U	1.7 U	3.4 U	120 U	2.6 U	1.7 U	2.5 U	1.7 U
Dichlorodifluoromethane		**2.2 J**	**3.1**	**3.3**	**2.7**	**160**	**5700**	**2.9 J**	**3.6**	**2.4**	**2.5**
Ethanol		---	---	---	---	---	---	---	---	**4.9**	---
Ethyl Acetate		---	---	---	---	---	---	---	---	1.1 U	---
Ethylbenzene		**1.3**	**0.40 J**	0.87 U	**2.5**	**0.43 J**	60 U	**2.2**	**1.3**	1.3 U	**0.75 J**
Freon 113		**0.59 J**	**0.64 J**	**0.62 J**	1.5 U	3.1 U	110 U	2.3 U	**0.64 J**	2.3 U	1.5 U
Freon 114		1.4 U	1.4 U	1.4 U	1.4 U	2.8 U	96 U	2.1 U	1.4 U	2 U	1.4 U
Hexachlorobutadiene		2.1 U	2.1 U	2.1 U	2.1 U	4.3 U	150 U	3.2 U	2.1 U	3.2 U	2.1 U
Isooctane		0.93 U	0.93 U	0.93 U	0.93 U	**3.9**	64 U	**1.2 J**	0.93 U	---	**1.6**
ISOPROPANOL		12 U	12 U	12 U	12 U	25 U	850 U	19 U	12 U	---	**3.8 J**
Isopropylbenzene		**0.40 J**	0.98 U	0.98 U	**0.72 J**	2.0 U	68 U	**0.54 J**	**0.42 J**	---	0.98 U
Methyl Methacrylate		2.0 U	2.0 U	2.0 U	2.0 U	4.1 U	140 U	3.1 U	2.0 U	---	**1.4 J**
Methylene chloride		**0.70 J**	**0.72 J**	**0.66 J**	**0.99 J**	**1.4 J**	120 U	**4.5**	1.7 U	**1.5**	0.72 U
MTBE		0.72 U	0.72 U	0.72 U	0.72 U	1.4 U	50 U	**0.52 J**	**1.3**	1.1 U	2.6 U
Naphthalene		2.6 U	2.6 U	2.6 U	2.6 U	5.2 U	180 U	4.0 U	2.6 U	1.5 U	1.1 U
n-Butylbenzene		1.1 U	1.1 U	1.1 U	1.1 U	2.2 U	76 U	1.7 U	1.1 U	---	**0.99**
n-Heptane		0.82 U	0.82 U	0.82 U	0.82 U	1.6 U	56 U	**4.7**	0.82 U	1.2 U	---
n-Hexane		0.70 U	**0.59 J**	**0.63 J**	**0.39 J**	**13**	48 U	**10**	**0.26 J**	1 U	**1.6**
n-Propylbenzene		**0.34 J**	**0.29 J**	0.98 U	**0.77 J**	2.0 U	68 U	1.5 U	**0.41 J**	---	0.98 U
o-Chlorotoluene		1.0 U	1.0 U	1.0 U	1.0 U	2.1 U	71 U	1.6 U	1.0 U	---	1.0 U
p-Isopropyltoluene		1.1 U	1.1 U	1.1 U	1.1 U	2.2 U	76 U	1.7 U	1.1 U	---	1.1 U
sec-Butylbenzene		1.1 U	1.1 U	1.1 U	**0.32 J**	2.2 U	76 U	1.7 U	1.1 U	---	1.1 U
Propene		---	---	---	---	---	---	---	---	0.5 U	---
Styrene		**9.1**	0.85 U	0.85 U	**18**	1.7 U	59 U	1.3 U	**8.6**	1.3 U	0.85 U
t-Butyl Alcohol		15 U	**4.3 J**	**4.3 J**	15 U	**5.2 J**	1000 U	23 U	15 U	---	15 U
tert-Butylbenzene		1.1 U	1.1 U	1.1 U	1.1 U	2.2 U	76 U	1.7 U	1.1 U	---	1.1 U
Tetrachloroethene		**0.45 J**	**0.74 J**	**0.46 J**	**79**	**87**	**3900**	**300**	**9.5**	0.99 U	**0.65 J**
Tetrahydrofuran		15 U	15 U	15 U	15 U	29 U	1000 U	22 U	15 U	0.86 U	15 U
Toluene		**0.55 J**	**1.2**	**0.56 J**	**1.3**	**1.2 J**	52 U	**38**	**0.70 J**	**2**	**4.2**
trans-1,2-Dichloroethene		0.79 U	0.79 U	0.79 U	0.79 U	1.6 U	55 U	1.2 U	0.79 U	1.2 U	0.79 U
trans-1,3-Dichloropropene		0.91 U	0.91 U	0.91 U	0.91 U	1.8 U	62 U	1.4 U	0.91 U	1.3 U	0.91 U
Trichloroethene		0.21 U	0.21 U	0.21 U	**1.7**	**15**	**290**	**37**	0.21 U	0.79 U	0.21 U
Trichlorofluoromethane		**1.2**	**1.5**	**1.6**	**81**	**4.4**	**77**	**1.2 J**	**1.8**	1.6 U	**1.3**
Vinyl acetate		---	---	---	---	---	---	---	---	**1.9**	---
Vinyl chloride		0.10 U	0.10 U	0.10 U	0.10 U	0.20 U	7.0 U	0.15 U	0.10 U	0.37 U	0.10 U
Xylenes (total)		**11**	**2.3 J**	3.0 U	**21**	**1.8 J**	210 U	**2.6 J**	**11**	3.8 U	**2.9 J**

J - Estimated value
U - Indicates that the compound was analyzed for but not de
E - Indicates value exceeded calibration range
DUP - Duplicate sample
ug/m^3 - Micrograms per cubic meter
Bold data indicates that parameter was detected
--- Not analyzed for in 2013 or 2015

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:** **Sample Date:**	AMB-102915 10/29/2015	AMB-103015 10/30/2015	BLANK
1,1,1-Trichloroethane		1.1 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane		1.4 U	1.4 U	0.7 U
1,1,2-Trichloroethane		1.1 U	1.1 U	0.55 U
1,1-Dichloroethane		0.81 U	0.81 U	0.82 U
1,1-Dichloroethene		0.79 U	0.79 U	0.81 U
1,2,4-Trichlorobenzene		3.7 U	3.7 U	1.5 U
1,2,4-Trimethylbenzene		**0.30 J**	0.98 U	1 U
1,2-Dibromoethane		1.5 U	1.5 U	1.6 U
1,2-Dichlorobenzene		1.2 U	1.2 U	1.2 U
1,2-Dichloroethane		0.81 U	0.81 U	0.41 U
1,2-Dichloroethene (total)		1.6 U	1.6 U	---
1,2-Dichloropropane		0.92 U	0.92 U	0.94 U
1,3,5-Trimethylbenzene		0.98 U	0.98 U	1 U
1,3-Butadiene		0.44 U	0.44 U	0.45 U
1,3-Dichlorobenzene		1.2 U	1.2 U	1.2 U
1,4-Dichlorobenzene		1.2 U	1.2 U	1.2 U
1,4-Dioxane		18 U	18 U	---
2-Butanone (MEK)		**5.7**	**0.69 J**	0.6 U
2-Hexanone		2.0 U	2.0 U	0.83 U
2-Propanol		---	---	0.5 U
3-Chloropropene		1.6 U	1.6 U	---
4-Ethyltoluene		0.98 U	0.98 U	1 U
4-Methyl-2-pentanone (MIBK)		2.0 U	2.0 U	0.83 U
Acetone		**11 J**	**4.2 J**	0.48 U
Benzene		**0.55 J**	**0.43 J**	0.32 U
Benzyl chloride		1.0 U	1.0 U	1 U
Bromodichloromethane		1.3 U	1.3 U	1.4 U
Bromoethene		0.87 U	0.87 U	---
Bromoform		2.1 U	2.1 U	2.1 U
Bromomethane		0.78 U	0.78 U	0.79 U
Butane		**3.2**	**11**	---
Carbon disulfide		**0.17 J**	1.6 U	0.63 U
Carbon tetrachloride		**0.37**	**0.36**	0.64 U
Chlorobenzene		0.92 U	0.92 U	0.94 U
Chlorodifluoromethane		**0.98 J**	**1.1 J**	---
Chloroethane		1.3 U	1.3 U	0.54 U
Chloroform		0.98 U	0.98 U	0.99 U
Chloromethane		**1.2**	**0.88 J**	0.42 U
cis-1,2-Dichloroethene		0.79 U	0.79 U	0.81 U
cis-1,3-Dichloropropene		0.91 U	0.91 U	0.92 U

Table 12. Summary of Volatile Organic Compounds in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

Parameter (Concentrations in ug/m^3)	**Sample Designation:** **Sample Date:**	AMB-102915 10/29/2015	AMB-103015 10/30/2015	BLANK
Cyclohexane		0.69 U	**0.24 J**	0.7 U
Dibromochloromethane		1.7 U	1.7 U	1.7 U
Dichlorodifluoromethane		**2.1 J**	**2.2 J**	1 U
Ethanol		---	---	0.38 U
Ethyl Acetate		---	---	0.73 U
Ethylbenzene		**0.24 J**	**0.16 J**	0.88 U
Freon 113		1.5 U	1.5 U	1.6 U
Freon 114		1.4 U	1.4 U	1.4 U
Hexachlorobutadiene		2.1 U	2.1 U	2.2 U
Isooctane		**0.29 J**	**0.47 J**	---
ISOPROPANOL		12 U	12 U	---
Isopropylbenzene		**0.47 J**	0.98 U	---
Methyl Methacrylate		**3.2**	**1.3 J**	---
Methylene chloride		0.72 U	0.72 U	0.71 U
MTBE		2.6 U	2.6 U	0.73 U
Naphthalene		1.1 U	1.1 U	1.1 U
n-Butylbenzene		0.82 U	**0.22 J**	---
n-Heptane		---	---	0.83 U
n-Hexane		**0.56 J**	**0.78**	0.72 U
n-Propylbenzene		0.98 U	0.98 U	---
o-Chlorotoluene		1.0 U	1.0 U	---
p-Isopropyltoluene		1.1 U	1.1 U	---
sec-Butylbenzene		1.1 U	1.1 U	---
Propene		---	---	0.35 U
Styrene		0.85 U	0.85 U	0.87 U
t-Butyl Alcohol		15 U	15 U	---
tert-Butylbenzene		1.1 U	1.1 U	---
Tetrachloroethene		1.4 U	1.4 U	0.69 U
Tetrahydrofuran		15 U	15 U	0.6 U
Toluene		**1.5**	**0.72 J**	0.77 U
trans-1,2-Dichloroethene		0.79 U	0.79 U	0.81 U
trans-1,3-Dichloropropene		0.91 U	0.91 U	0.92 U
Trichloroethene		0.21 U	0.21 U	0.55 U
Trichlorofluoromethane		**1.1 J**	**1.1 J**	1.1 U
Vinyl acetate		---	---	0.72 U
Vinyl chloride		0.10 U	0.10 U	0.26 U
Xylenes (total)		**1.2 J**	**0.48 J**	2.68 U

J - Estimated value
U - Indicates that the compound was analyzed for but not de
E - Indicates value exceeded calibration range
DUP - Duplicate sample
ug/m^3 - Micrograms per cubic meter
Bold data indicates that parameter was detected
--- Not analyzed for in 2013 or 2015

Table 13. Summary of Methane in Soil Vapor, Staten Island Mall Expansion, Staten Island, New York

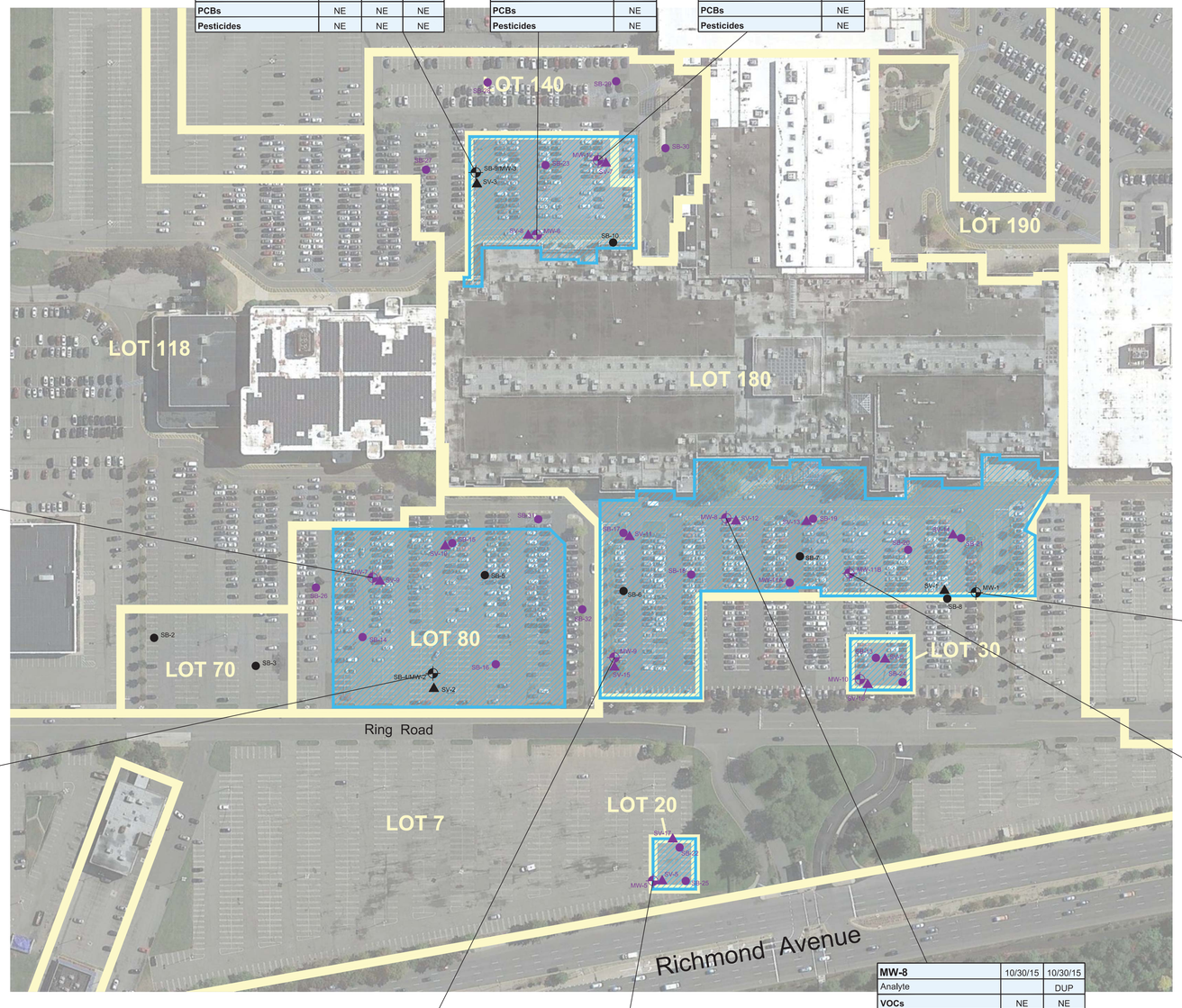
Sample Designation	Sample Date	Methane (Concentrations in % v/v)
AMB-102715	10/27/2015	0.054 U
AMB-102915	10/29/2015	0.060 U
AMB-103015	10/30/2015	0.056 U
AMB110713	11/7/2013	**0.00038**
SV-1	11/7/2013	**0.00738**
SV-1	10/27/2015	0.053 U
SV-2	11/7/2013	**0.00019**
SV-2	10/29/2015	0.054 U
SV-3	11/7/2013	**6.01 E**
SV-3 DUP	11/7/2013	**9.57 E**
SV-3	10/27/2015	**0.44**
SV-5	10/30/2015	0.054 U
SV-7	10/29/2015	**22**
SV-8	10/27/2015	0.060 U
SV-9	10/30/2015	0.061 U
SV-10	10/29/2015	0.058 U
SV-10 DUP	10/29/2015	0.059 U
SV-11	10/29/2015	0.062 U
SV-12	10/27/2015	0.052 U
SV-13	10/27/2015	0.054 U
SV-14	10/27/2015	0.052 U
SV-17	10/30/2015	0.060 U

U - Indicates that the compound was analyzed for but not detected
E - Indicates value exceeded calibration range
DUP - Duplicate sample
% v/v - Volume-volume percentage
Bold data indicates that parameter was detected

MW-3	11/7/13	11/7/13	10/29/15
Analyte		DUP	
VOCs	NE	NE	NE
SVOCs	NE	NE	NE
Metals, Total			
Iron	NE	NE	5560
Magnesium	11000	12000	151000
Manganese	NE	NE	9500
Selenium	NE	NE	10.1 J
Sodium	390000	390000	416000
Thallium	NE	NE	6.8 J
Metals, Filtered			
Magnesium	NE	NE	150000
Manganese	11000	12000	9690
Sodium	400000	400000	428000
Thallium	NE	NE	16.2 J
PCBs	NE	NE	NE
Pesticides	NE	NE	NE

MW-6	10/29/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	85600
Manganese	8300
Selenium	11.9 J
Sodium	188000
Thallium	7.4 J
Metals, Filtered	
Magnesium	81700
Manganese	8240
Sodium	196000
Thallium	14.3 J
PCBs	NE
Pesticides	NE

MW-12	10/29/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	60400
Manganese	5770
Sodium	122000
Thallium	7.3 J
Metals, Filtered	
Magnesium	61300
Manganese	6450
Sodium	138000
Thallium	10.7 J
PCBs	NE
Pesticides	NE



MW-7	10/30/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	82700
Sodium	182000
Metals, Filtered	
Magnesium	77200
Sodium	173000
PCBs	NE
Pesticides	NE

MW-2	11/7/13
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Sodium	270000
Metals, Filtered	
Sodium	260000
PCBs	NE
Pesticides	NE

MW-1	11/7/13	10/30/15
Analyte		
VOCs	NE	NE
SVOCs	NE	NE
Metals, Total		
Magnesium	NE	48700
Sodium	160000	165000
Metals, Filtered		
Magnesium	NE	46800
Sodium	160000	160000
PCBs	NE	NE
Pesticides	NE	NE

MW-11B	10/30/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	62600
Sodium	166000
Metals, Filtered	
Magnesium	61100
Sodium	161000
PCBs	NE
Pesticides	NE

MW-9	10/30/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	66200
Sodium	213000
Metals, Filtered	
Magnesium	66600
Sodium	214000
PCBs	NE
Pesticides	NE

MW-5	10/30/15
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Magnesium	159000
Sodium	97600
Metals, Filtered	
Magnesium	154000
Sodium	95200
PCBs	NE
Pesticides	NE

MW-8	10/30/15	10/30/15
Analyte		DUP
VOCs	NE	NE
SVOCs	NE	NE
Metals, Total		
Magnesium	105000	101000
Manganese	NE	301
Sodium	631000	618000
Thallium	ND	4.7 J
Metals, Filtered		
Magnesium	106000	107000
Sodium	603000	605000
Thallium	7.0 J	4.8 J
PCBs	NE	NE
Pesticides	NE	NE

LEGEND

- SB-28 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2015
- MW-5 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2015
- SV-9 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2015
- SB-6 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2013
- MW-1 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2013
- SV-1 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2013
- EXPANSION / REDEVELOPMENT AREA (SITE)
- PROPOSED TAX LOT LINES

TYPICAL DATA BOX INFORMATION

SAMPLE I.D. → MW-2 | 11/7/13 ← SAMPLE DATE

ANALYTES — CONCENTRATIONS

MW-2	11/7/13
Analyte	
VOCs	NE
SVOCs	NE
Metals, Total	
Sodium	270000
Metals, Filtered	
Sodium	260000
PCBs	NE
Pesticides	NE

Parameter	Standards* (µg/L)
VOCs	NE
SVOCs	NE
Metals, Total	
Iron	300
Magnesium	35000
Manganese	300
Selenium	10
Sodium	20000
Thallium	0.5
Metals, Filtered	
Magnesium	35000
Manganese	300
Sodium	20000
Thallium	0.5
PCBs	NE
Pesticides	NE

Concentrations in µg/L
µg/L -Micrograms per liter
*NYSDEC AWQSGVs
NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water-Quality Standards and Guidance Values
-- Not detected above NYSDEC AWQSGV
B - Found in laboratory blank
E - Exceeds calibration limit
D - Dilution
J - Estimated value
DUP - Duplicate Sample
VOCs - Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds
PCBs - Polychlorinated Biphenyls
NE - No exceedances
ND - No detection

NOTE:

MONITORING WELL MW-10 WAS NOT ABLE TO BE INSTALLED

N

100' 0 100'

Title:

GROUNDWATER DETECTIONS IN EXCESS OF NYSDEC CLASS GA CRITERIA

STATEN ISLAND MALL EXPANSION
REMEDIAL INVESTIGATION

Prepared For:

GGP STATEN ISLAND MALL, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: L.D.	Date: 18MAR16	PLATE
Prepared by: B.H.C.	Scale: AS SHOWN	12.1
Project Mgr: D.T.B.	Project: 1287.0007Y000	
File: 1287.0007Y133.02.DWG		

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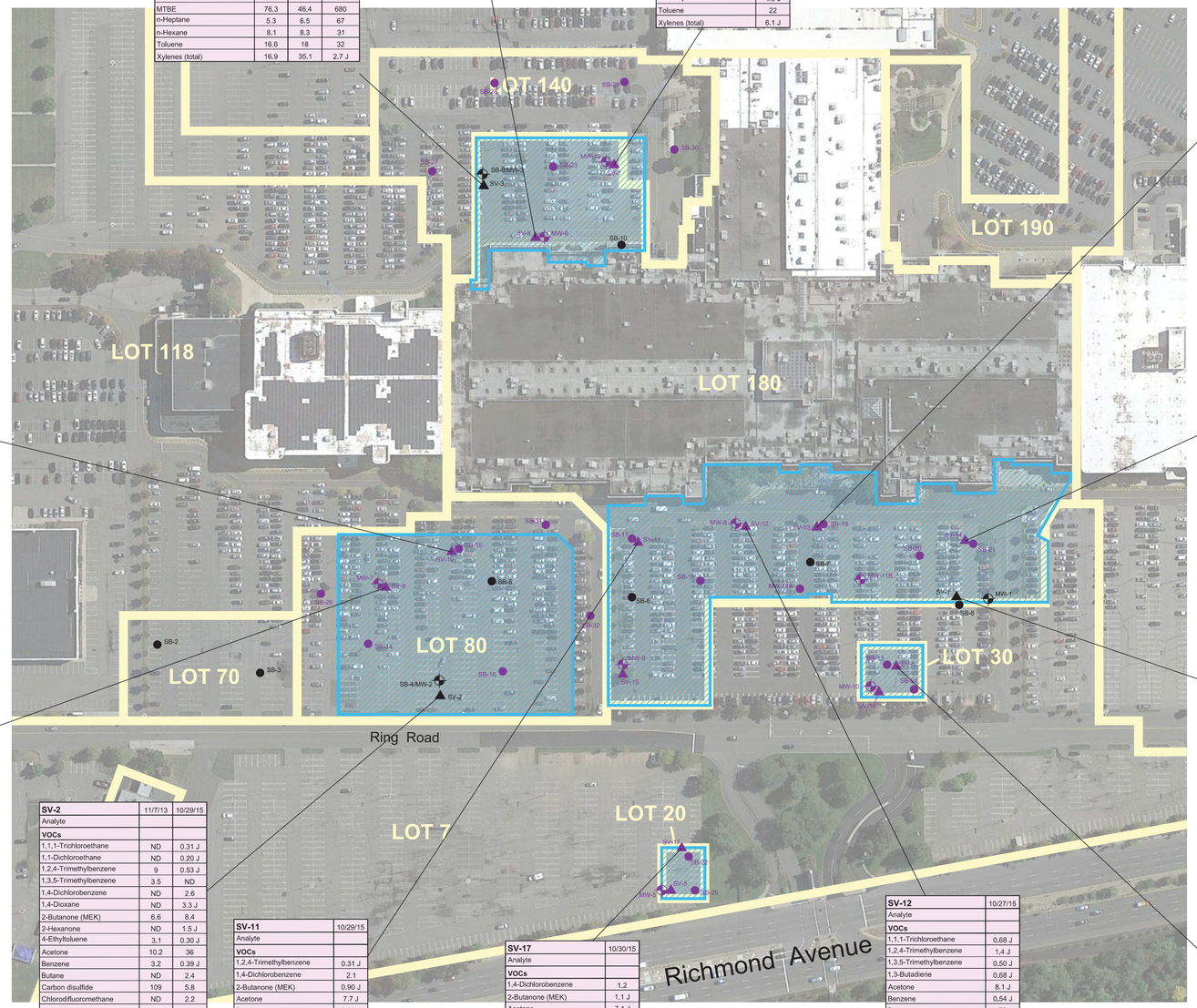
SV-3	11/7/13	11/7/13	10/27/15
Analyte		DUP	
VOCs			
1,2,4-Trimethylbenzene	ND	6.3	ND
1,3,5-Trimethylbenzene	ND	2.5	ND
2-Butanone (MEK)	ND	8.6	13
2-Hexanone	ND	3	4.4 J
Acetone	ND	39.5	34 J
Benzene	5.6	4.7	40
Butane	ND	ND	130
Carbon disulfide	2	2	3.1 J
Chloroform	ND	3.7	ND
Chloromethane	31.1	ND	ND
Cyclohexane	50.1	75.3	22
Ethanol	4.4	5.6	ND
Ethylbenzene	3.4	5.8	ND
Isooctane	ND	ND	13
Methylene chloride	21.1	5	22
MTBE	76.3	46.4	680
n-Heptane	5.3	6.5	67
n-Hexane	8.1	8.3	31
Toluene	16.6	18	32
Xylenes (total)	16.9	35.1	2.7 J

SV-8	10/27/15
Analyte	
VOCs	
Benzene	2.1 J
Butane	360
Carbon disulfide	9.7 J
Chlorodifluoromethane	20
Chloroform	120
Chloromethane	2.0 J
Isooctane	7.5 J
Methylene chloride	6.6 J
n-Hexane	5.1 J
Tetrachloroethene	2.1 J

SV-7	10/29/15
Analyte	
VOCs	
Benzene	75
Butane	1000
Carbon disulfide	370
Chlorobenzene	58
Chlorodifluoromethane	52
Chloromethane	4.5 J
Cyclohexane	150
Isooctane	840
MTBE	71
Naphthalene	7.9 J
n-Heptane	49
n-Hexane	69
p-Isopropyltoluene	4.9 J
sec-Butylbenzene	9.1 J
tert-Butylbenzene	4.9 J
Toluene	22
Xylenes (total)	6.1 J



SV-13	10/27/15
Analyte	
VOCs	
1,2-Dichloroethene (total)	17 J
Chlorodifluoromethane	41 J
Chloroform	240
cis-1,2-Dichloroethene	18 J
Dichlorodifluoromethane	5700
Tetrachloroethene	3900
Trichloroethene	290
Trichlorofluoromethane	77

SV-14	10/27/15
Analyte	
VOCs	
1,1-Dichloroethane	0.63 J
1,2,4-Trimethylbenzene	0.81 J
1,2-Dichloroethene (total)	3.4
1,3,5-Trimethylbenzene	0.30 J
2-Butanone (MEK)	1.3 J
Acetone	15 J
Benzene	2.9
Butane	9.4
Carbon disulfide	42
Chlorodifluoromethane	2.5 J
Chloroethane	19
Chloroform	92
Chloromethane	1.8
cis-1,2-Dichloroethene	3.4
Cyclohexane	8.3
Dichlorodifluoromethane	2.9 J
Ethylbenzene	2.2
Isooctane	1.2 J
Isopropylbenzene	0.54 J
Methylene chloride	4.5
MTBE	0.52 J
n-Heptane	4.7
n-Hexane	10
Tetrachloroethene	300
Toluene	38
Trichloroethene	37
Trichlorofluoromethane	1.2 J
Xylenes (total)	2.6 J

SV-10	10/29/15	10/29/15
Analyte		DUP
VOCs		
1,2,4-Trimethylbenzene	2	ND
1,3,5-Trimethylbenzene	0.60 J	ND
2-Butanone (MEK)	3.1	2.1
2-Hexanone	0.49 J	ND
4-Ethyltoluene	0.54 J	ND
Acetone	16	9.0 J
Benzene	0.52 J	0.43 J
Butane	7.6	8.1
Carbon disulfide	8.2	6
Carbon tetrachloride	0.26	0.31
Chlorodifluoromethane	1.3 J	1.4 J
Chloroform	2.3	2.4
Chloromethane	0.31 J	0.47 J
Cyclohexane	0.49 J	0.61 J
Dichlorodifluoromethane	3.1	3.3
Ethylbenzene	0.40 J	ND
Freon 113	0.64 J	0.62 J
Methylene chloride	0.72 J	0.66 J
n-Hexane	0.59 J	0.63 J
n-Propylbenzene	0.29 J	ND
t-Butyl Alcohol	4.3 J	4.3 J
Tetrachloroethene	0.74 J	0.46 J
Toluene	1.2	0.56 J
Trichlorofluoromethane	1.5	1.6
Xylenes (total)	2.3 J	ND

SV-9	10/30/15
Analyte	
VOCs	
1,4-Dichlorobenzene	0.75 J
Acetone	4.2 J
Benzene	0.20 J
Butane	27
Carbon disulfide	1.7
Chlorodifluoromethane	0.94 J
Chloroform	12
Chloromethane	0.24 J
Cyclohexane	0.37 J
Dichlorodifluoromethane	2.2 J
Ethylbenzene	1.3
Freon 113	0.59 J
Isopropylbenzene	0.40 J
Methylene chloride	0.70 J
n-Propylbenzene	0.34 J
Styrene	9.1
Tetrachloroethene	0.45 J
Toluene	0.55 J
Trichlorofluoromethane	1.2
Xylenes (total)	11

SV-2	11/7/13	10/29/15
Analyte		
VOCs		
1,1,1-Trichloroethane	ND	0.31 J
1,1-Dichloroethane	ND	0.20 J
1,2,4-Trimethylbenzene	9	0.53 J
1,3,5-Trimethylbenzene	3.5	ND
1,4-Dichlorobenzene	ND	2.6
1,4-Dioxane	ND	3.3 J
2-Butanone (MEK)	6.6	8.4
2-Hexanone	ND	1.5 J
4-Ethyltoluene	3.1	0.30 J
Acetone	10.2	36
Benzene	3.2	0.39 J
Butane	ND	2.4
Carbon disulfide	109	5.8
Chlorodifluoromethane	ND	2.2
Chloroform	3.1	2.1
Chloromethane	ND	0.61 J
Cyclohexane	2.6	0.92
Dichlorodifluoromethane	9.4	12
Ethylbenzene	10	4.1
Freon 113	ND	0.58 J
Isopropylbenzene	ND	1.2
Methylene chloride	6.6	1.3 J
MTBE	6.4	1
Naphthalene	2.1	0.65 J
n-Heptane	3.6	ND
n-Hexane	2.2	0.61 J
n-Propylbenzene	ND	1.2
sec-Butylbenzene	ND	0.46 J
Styrene	ND	30
t-Butyl Alcohol	ND	7.9 J
Tetrachloroethene	ND	0.48 J
Toluene	26.8	1.8
Trichlorofluoromethane	3.2	2.9
Xylenes (total)	52.4	33

SV-11	10/29/15
Analyte	
VOCs	
1,2,4-Trimethylbenzene	0.31 J
1,4-Dichlorobenzene	2.1
2-Butanone (MEK)	0.90 J
Acetone	7.7 J
Benzene	0.23 J
Butane	0.70 J
Carbon disulfide	0.74 J
Chlorodifluoromethane	1.0 J
Chloroform	20
Chloromethane	0.46 J
Cyclohexane	0.60 J
Dichlorodifluoromethane	2.7
Ethylbenzene	2.5
Isopropylbenzene	0.72 J
Methylene chloride	0.99 J
n-Hexane	0.39 J
n-Propylbenzene	0.77 J
sec-Butylbenzene	0.32 J
Styrene	18
Tetrachloroethene	79
Toluene	1.3
Trichloroethene	1.7
Trichlorofluoromethane	81
Xylenes (total)	21

SV-17	10/30/15
Analyte	
VOCs	
1,4-Dichlorobenzene	1.2
2-Butanone (MEK)	1.1 J
Acetone	7.1 J
Benzene	0.21 J
Butane	7.8
Carbon disulfide	1.8
Chlorodifluoromethane	1.3 J
Chloroform	1.8
Chloromethane	0.60 J
Cyclohexane	0.41 J
Dichlorodifluoromethane	3.6
Ethylbenzene	1.3
Freon 113	0.64 J
Isopropylbenzene	0.42 J
MTBE	1.3
n-Hexane	0.26 J
n-Propylbenzene	0.41 J
Styrene	8.6
Tetrachloroethene	9.5
Toluene	0.70 J
Trichlorofluoromethane	1.8
Xylenes (total)	11

SV-12	10/27/15
Analyte	
VOCs	
1,1,1-Trichloroethane	0.68 J
1,2,4-Trimethylbenzene	1.4 J
1,3,5-Trimethylbenzene	0.50 J
1,3-Butadiene	0.68 J
Acetone	8.1 J
Benzene	0.54 J
Butane	79
Carbon disulfide	47
Chlorodifluoromethane	16
Chloroethane	1.2 J
Chloroform	70
Chloromethane	1.2 J
Cyclohexane	13
Dichlorodifluoromethane	160
Ethylbenzene	0.43 J
Isooctane	3.9
Methylene chloride	1.4 J
n-Hexane	13
t-Butyl Alcohol	5.2 J
Tetrachloroethene	87
Toluene	1.2 J
Trichloroethene	15
Trichlorofluoromethane	4.4
Xylenes (total)	1.8 J

SV-1	11/7/13	10/27/15
Analyte		
VOCs		
1,1,1-Trichloroethane	2.2	1.2 J
1,1-Dichloroethane	ND	3.9
1,2,4-Trimethylbenzene	6.4	0.60 J
1,3,5-Trimethylbenzene	2.9	ND
2-Butanone (MEK)	7.1	3.2
2-Hexanone	ND	0.63 J
4-Ethyltoluene	2.2	ND
Acetone	ND	7.3 J
Benzene	ND	0.46 J
Butane	ND	9.9
Carbon disulfide	663	4.2
Chlorodifluoromethane	ND	20
Chloroethane	3.1	ND
Chloroform	ND	5.7
Dichlorodifluoromethane	75.6	200
Ethylbenzene	9	ND
Isooctane	ND	0.39 J
Methylene chloride	ND	1.8 J
MTBE	ND	1.1 J
n-Heptane	19.7	ND
n-Hexane	ND	0.53 J
Naphthalene	2.2	ND
Propene	20000 E	ND
Tetrachloroethene	2.2	3.6
Toluene	70.3	1.1 J
Trichloroethene	ND	1.4
Trichlorofluoromethane	6.2	12
Xylenes (total)	44.4	0.87 J

SV-5	10/30/15
Analyte	
VOCs	
1,4-Dichlorobenzene	1.4 J
Butane	110
Carbon disulfide	5.5 J
Chloroform	3.8 J
Chloromethane	1.8 J
Dichlorodifluoromethane	7.1 J
Ethylbenzene	1.6 J
Styrene	7.9
Tetrachloroethene	1.9 J
Toluene	2.3 J
Trichlorofluoromethane	2.9 J
Xylenes (total)	11 J

LEGEND

- SB-26 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2015
- MW-5 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2015
- SV-9 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2015
- SB-6 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2013
- MW-1 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2013
- SV-1 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2013
- EXPANSION / REDEVELOPMENT AREA (SITE)
- PROPOSED TAX LOT LINES

TYPICAL DATA BOX INFORMATION

SAMPLE I.D. → SV-7 | 10/29/15 ← SAMPLE DATE

Analyte	
VOCs	
Benzene	75
Butane	1000
Carbon disulfide	370
Chlorobenzene	58
Chlorodifluoromethane	52
Chloromethane	4.5 J
Cyclohexane	150
Isooctane	840
MTBE	71
Naphthalene	7.9 J
n-Heptane	49
n-Hexane	69
p-Isopropyltoluene	4.9 J
sec-Butylbenzene	9.1 J
tert-Butylbenzene	4.9 J
Toluene	22
Xylenes (total)	6.1 J

ANALYTES — CONCENTRATIONS

Concentrations in $\mu g/m^3$

$\mu g/m^3$ -Micrograms per cubic meter
VOCs - Volatile Organic Compounds
ND - Compound was analyzed for but not detected
J - Estimated value

NOTE:

SOIL VAPOR MONITORING POINTS SV-6 AND SV-16 WERE NOT ABLE TO BE INSTALLED.

N

100' 0 100'

Title:

VOC DETECTIONS IN SOIL VAPOR

STATEN ISLAND MALL EXPANSION
REMEDIAL INVESTIGATION

Prepared For:

GGP STATEN ISLAND MALL, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: L.D.	Date: 18MAR16	PLATE
Prepared by: B.H.C.	Scale: AS SHOWN	12.2
Project Mgr: D.T.B.	Project: 1287.0007Y000	
File: 1287.0007Y133.02.DWG		

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SV-3	11/7/13	11/7/13	10/27/15
Analyte		DUP	
Methane	6.01 E	9.57 E	0.44

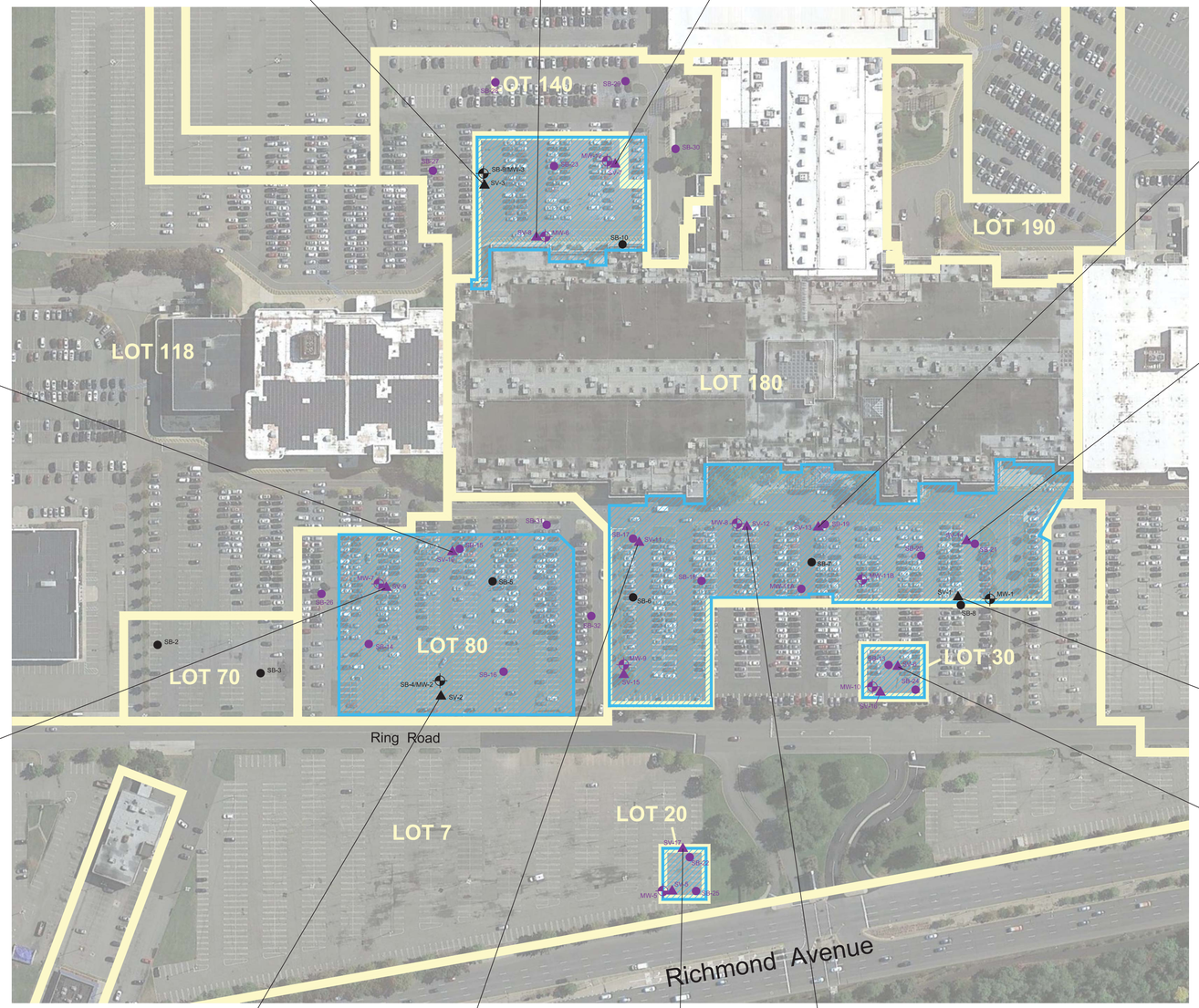
SV-8	10/27/15
Analyte	
Methane	ND

SV-7	10/29/15
Analyte	
Methane	22

SV-13	10/27/15
Analyte	
Methane	ND

SV-14	10/27/15
Analyte	
Methane	ND

SV-10	10/29/15	10/29/15
Analyte		DUP
Methane	ND	ND



SV-9	10/30/15
Analyte	
Methane	ND

SV-1	11/7/13	10/27/15
Analyte		
Methane	0.00738	ND

SV-5	10/30/15
Analyte	
Methane	ND

SV-2	11/7/13	10/29/15
Analyte		
Methane	0.00019	ND

SV-11	10/29/15
Analyte	
Methane	ND

SV-17	10/30/15
Analyte	
Methane	ND

SV-12	10/27/15
Analyte	
Methane	ND

LEGEND

- SB-26 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2015
- MW-5 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2015
- SV-9 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2015
- SB-6 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2013
- MW-1 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2013
- SV-1 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2013
- EXPANSION / REDEVELOPMENT AREA (SITE)
- PROPOSED TAX LOT LINES

TYPICAL DATA BOX INFORMATION

SAMPLE I.D. → | SV-3 | 11/7/13 | 11/7/13 | 10/27/15 | ← SAMPLE DATE

ANALYTE → | Analyte | | DUP | | ←

| Methane | 6.01 E | 9.57 E | 0.44 | ← CONCENTRATIONS

Concentrations in % v/v
% v/v - Volume-volume percentage
ND - Compound was analyzed for but not detected
DUP - Duplicate sample

NOTES:

1. SOIL VAPOR MONITORING POINTS SV-6 AND SV-16 WERE NOT ABLE TO BE INSTALLED.
2. 2013 DATA WAS REPORTED IN PARTS PER MILLION VOLUME (ppmv) AND 2015 DATA WAS REPORTED IN PERCENT VOLUME BY VOLUME (% v/v).

N

100' 0 100'

Title:

METHANE DETECTIONS IN SOIL VAPOR

STATEN ISLAND MALL EXPANSION
REMEDIAL INVESTIGATION

Prepared For:

GGP STATEN ISLAND MALL, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: L.D.	Date: 18MAR16	PLATE
Prepared by: B.H.C.	Scale: AS SHOWN	12.3
Project Mgr: D.T.B.	Project: 1287.0007Y000	
File: 1287.0007Y133.02.DWG		

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SB-27	10/5/15	10/5/15
Depth (ft bls)	0 - 2	4 - 6
VOCs		
Acetone	86 T	86 T
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides	NE	NE

SB-9	10/24/13	10/28/13
Depth (ft bls)	0-2	13-15
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Nickel	NE	48
PCBs	NE	NE
Pesticides	NE	NE

SB-28	9/30/15	9/30/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides		
4,4'-DDD	1200	1100
4,4'-DDE	44 J	160
4,4'-DDT	750	100

SB-23	10/5/15	10/5/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides		
4,4'-DDD	4.4 J	49
4,4'-DDE	ND	6.7 J
4,4'-DDT	3.7 J	150

SB-29	10/7/15	10/7/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	34	NE
Nickel	80	NE
PCBs	NE	NE
Pesticides	NE	NE

MW-12	10/5/15	10/5/15	10/6/15
Depth (ft bls)	0 - 2	4 - 6	12/13/15
VOCs			
Acetone	NE	NE	88 T
SVOCs	NE	NE	NE
Metals			
Copper	NE	NE	55.7
PCBs	NE	NE	NE
Pesticides			
4,4'-DDD	11	9.9	ND

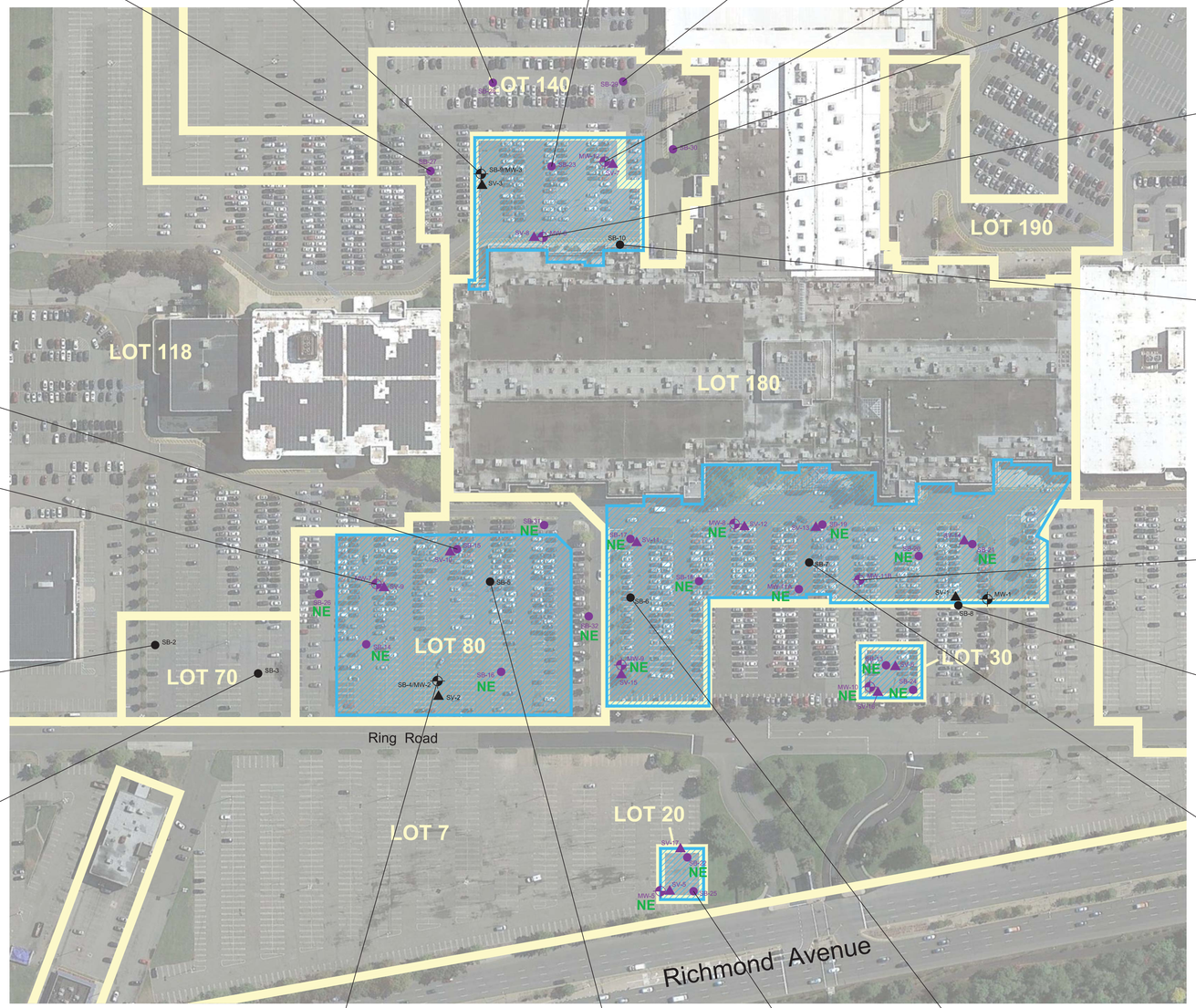
SB-30	9/30/15	9/30/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides		
4,4'-DDD	18	NE
4,4'-DDT	6.1 J	ND

LEGEND

- SB-26 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2015
- MW-5 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2015
- SV-9 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2015
- SB-6 — LOCATION AND DESIGNATION OF SOIL BORING INSTALLED 2013
- MW-1 — LOCATION AND DESIGNATION OF MONITORING WELL AND SOIL BORING INSTALLED 2013
- SV-1 — LOCATION AND DESIGNATION OF SOIL VAPOR SAMPLE INSTALLED 2013
- NE — NO EXCEEDANCE FOUND FOR ANY COMPOUND AT THIS LOCATION
- EXPANSION / REDEVELOPMENT AREA (SITE)
- PROPOSED TAX LOT LINES

TYPICAL DATA BOX INFORMATION

SAMPLE I.D.	SB-29	10/7/15	10/7/15	SAMPLE DATE
	Depth (ft bls)	0 - 2	4 - 6	SAMPLE DEPTH
ANALYTES	VOCs	NE	NE	CONCENTRATIONS
	Metals			
	Chromium	34	NE	
	Nickel	80	NE	
	Pesticides	NE	NE	



MW-6	10/6/15	10/6/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides		
4,4'-DDD	ND	7.2 J

SB-10	10/28/13	10/28/13
Depth (ft bls)	0-2	8-10
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Nickel	NE	38
PCBs	NE	NE
Pesticides		
4,4'-DDD	ND	4800
4,4'-DDE	32	240
4,4'-DDT	ND	1200

MW-11B	10/15/15	10/19/15
Depth (ft bls)	0 - 2	8 - 10
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Arsenic	NE	16.2
Copper	NE	92.6
Lead	NE	386
Zinc	NE	393
PCBs	NE	NE
Pesticides	NE	NE

SB-8	10/21/13	10/25/13
Depth (ft bls)	0-2	10-12
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Nickel	37	NE
PCBs	NE	NE
Pesticides	NE	NE

SB-7	10/22/13	10/23/13
Depth (ft bls)	0-2	12-13
VOCs	NE	NE
SVOCs	NE	NE
Metals	NE	NE
PCBs	NE	NE
Pesticides	NE	NE

SB-15	10/15/15	10/20/15
Depth (ft bls)	0 - 2	6 - 8
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	NE	31.9
Nickel	NE	221
PCBs	NE	NE
Pesticides	NE	NE

MW-7	10/15/15	10/20/15
Depth (ft bls)	0 - 2	6 - 8
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Mercury	0.27	ND
PCBs	NE	NE
Pesticides	NE	NE

SB-2	10/23/13	10/28/13
Depth (ft bls)	0-2	13-15
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	NE	39
Nickel	NE	93
PCBs	NE	NE
Pesticides	NE	NE

SB-3	10/22/13	10/23/13
Depth (ft bls)	0-2	6-7
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	47	NE
Nickel	85	34
PCBs	NE	NE
Pesticides	NE	NE

SB-4	10/21/13	10/28/13
Depth (ft bls)	0-2	10-12
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Copper	69	NE
PCBs	NE	NE
Pesticides	NE	NE

SB-5	10/22/13	10/23/13
Depth (ft bls)	0-2	14-15
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Nickel	NE	31
PCBs	NE	NE
Pesticides	NE	NE

SB-25	9/29/15	9/29/15
Depth (ft bls)	0 - 2	4 - 6
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	NE	38.6
PCBs	NE	NE
Pesticides	NE	NE

SB-6	10/22/13	10/23/13
Depth (ft bls)	0-2	14-15
VOCs	NE	NE
SVOCs	NE	NE
Metals		
Chromium	NE	31
PCBs	NE	NE
Pesticides	NE	NE

Parameter	Unrestricted Standards*	Commercial Standards**
VOCs (Concentrations in µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	500000
SVOCs (Concentrations in µg/kg)	NE	NE
Metals (Concentrations in mg/kg)	(mg/kg)	(mg/kg)
Arsenic	13	16
Chromium	30	1500
Copper	50	270
Lead	63	1000
Mercury	0.18	2.8
Nickel	30	310
Zinc	109	10000
PCBs (Concentrations in µg/kg)	NE	NE
Pesticides (Concentrations in µg/kg)		
4,4'-DDD	3.3	92000
4,4'-DDE	3.3	62000
4,4'-DDT	3.3	47000

µg/kg -Micrograms per kilogram
mg/kg -Milligrams per kilogram
*NYSDEC Part 375 Unrestricted Use SCO
**NYSDEC Part 375 Commercial SCO
NYSDEC - New York State Department of Environmental Conservation
SCO - Soil Cleanup Objectives
-- Not detected above NYSDEC SCO
J - Estimated value
T - LCS or LCSD is outside acceptance limits
DUP - Duplicate Sample
VOCs - Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds
PCBs - Polychlorinated Biphenyls
NE - No exceedance
ND - No detection
NA - Not analyzed for by laboratory
ft bls - Feet below land surface

NOTE:

NO DEEP SOIL SAMPLES WERE COLLECTED FROM SOIL BORINGS SB-16, MW-10, SB-13, AND SB-24.

N

100' 0 100'

Title:

SOIL DETECTIONS IN EXCESS OF NYSDEC PART 375 CRITERIA

STATEN ISLAND MALL EXPANSION
REMEDIAL INVESTIGATION

Prepared For:

GGP STATEN ISLAND MALL, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: L.D.	Date: 08DEC15	PLATE
Prepared by: B.H.C.	Scale: AS SHOWN	12.4
Project Mgr: D.T.B.	Project: 1287.0007Y000	
File: 1287.0007Y133.02.DWG		

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Appendix 13

Laboratory Deliverables

https://www.dropbox.com/sh/9d42j1jz11h3yb0/AABd8s2-haKq0NFdPEmdkveta?dl=0