February 23, 2007

DRAFT
REMEDIAL INVESTIGATION REPORT

Coral Island Shopping Center
1650 Richmond Avenue
Staten Island, New York

NYSDEC BCP #C243033

Prepared for

WWP ASSOCIATES, LLC
8816 Six Forks road - Suite 201
Raleigh, North Carolina 27615

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

ROUX *209 Shafter Street, Islandia, New York 11749 ♦ 631-232-2600*

TABLE OF CONTENTS

TABLE OF CONTENTS

(Continued)

TABLES

FIGURES

APPENDICES

PLATES

PLATES (continued)

1.0 INTRODUCTION

On behalf of WWP Associates, LLC (WWP), Roux Associates, Inc. (Roux Associates) has prepared this Remedial Investigation (RI) Report for the Coral Island Shopping Center (Site) located at 1650 Richmond Avenue, Staten Island, New York (Figure 1). The RI was conducted in accordance with the provisions of the Brownfield Cleanup Agreement, Index Number: W2-1040-05-01 dated March 2005 between the New York State Department of Environmental Conservation (NYSDEC) and WWP.

The RI was conducted in accordance with the April 18, 2005 RI Work Plan approved by the NYSDEC. The scope of work presented in the RI Work Plan was developed to further define the nature and extent of impacted soil and groundwater related to historical operations of the dry cleaners onsite and specifically included the following objectives:

- Confirmation of all historic dry cleaning operations at the Site;
- Refine the delineation of tetrachloroethene (PCE)-impacted soil above the water table at the Site;
- Evaluate soil quality and the potential for residual Dense Non-Aqueous Phase Liquids (DNAPLs) to exist below the water table;
- Determine the nature and extent of potential impacts to groundwater quality resulting from historical operations of a dry cleaner located at the Site; and
- Evaluate the potential for impacts to soil vapor associated with subsurface contamination to occur and the potential for vapor intrusion into adjacent buildings.
- This RI Report also includes summaries of NYSDEC approved supplemental investigations conducted in accordance with the Work Plan, including:
- Indoor air sampling at Our Lady of Pity Church (Church) and the Moore Catholic High School (School) performed in November 2005;
- A Supplemental Remedial Investigation (SRI) performed in August 2006; and
- Indoor and outdoor air and sub-slab soil vapor sampling at the Church and the School performed in December 2006.

Previous investigations performed at the Site are discussed below and summarized in the flowing reports:

- MTS EnviroSurv. "Hazardous Substances Survey and Report." August 12, 1994.
- EBI Consulting. "Phase I Environmental Site Assessment Report." June 17, 2004.
- EBI Consulting. "Limited Subsurface Investigation Report." July 13, 2004.
- Roux Associates, Inc. "Site Assessment Report." September 14, 2004.

2.0 SITE DESCRIPTION AND HISTORY

The Site is located at 1650 Richmond Avenue, Staten Island, New York (Figure 1), which is located in Richmond County, Borough of Staten Island, Block 2236, Lot 125, at latitude 40° 36' 27" north and longitude 74° 9' 47" west. The Coral Island Shopping Center consists of two single-story buildings (Northern Building and Southern Building), each with multiple tenants and a parking lot (Plate 1). A complete list of tenants for the shopping center was provided to the NYSDEC as part of the Brownfield Cleanup Program (BCP) Application. The building at the north end of the Site (Northern Building) includes the Charming Cleaners Dry Cleaner (Dry Cleaner), the focus of the RI. The tenant space to the west of the Dry Cleaner is the Tic-Tac Meats and Deli (Market), a small market with a kitchen and storage in the rear of the store. A utility room for the entire building is located off the kitchen area at the rear of the Market space. The tenant space to the east of the Dry Cleaner is the J+J Page Stationary (Stationary).

The area behind the dry cleaner is gravel covered (over landscaping fabric) and is only 15 feet wide (approximate), with the building to the south and a chain link fence on the property line to the north. A transformer is located approximately 20 feet to the west of the back door of the cleaners, with less than three feet of clearance between the building and the transformer, and the transformer and the chain link fence. There is a concrete sidewalk east of the Dry Cleaner space to a point where there is less than four feet of clearance between the property line fence and the corner of the building.

Immediately north of the Site and adjacent to the Dry Cleaner is the Church property, specifically a grass covered area behind a large multi-use building that includes meeting rooms, a kitchen, and a gym mostly used for basketball (Multi-Use Building). The chapel and a residence for Church personnel are located further to the north. The Moore Catholic High School (School) is located to the west and northwest. The School property includes three main buildings, a group of modular classrooms consisting of multiple trailers parked on an asphalt parking lot (Modular Classrooms), the main building with classrooms, gym, cafeteria, and offices (Main Building), and an administration building with offices and unused classrooms (Administration Building). The School's football field is to the west. Richmond Avenue is located to the east of the Site. There is a McDonald's restaurant located immediately to the southeast of the Site that has an access driveway from the Coral Island Shopping Center parking lot. There is a Mobil service

station, additional commercial buildings, and Victory Boulevard located to the south of McDonald's. Residential properties and Victory Boulevard are located to the southwest. Victory Boulevard and Richmond Avenue are large commercial corridors with mixed residential and commercial use, including auto repair, gasoline station, and car wash facilities. Plate 1 - Site Plan includes an aerial photograph showing general use of adjacent properties.

2.1 Topography

The Site topography is relatively flat with an approximate elevation of 30 feet above mean sea level. Most of the surface runoff at the site is directed towards catch basins in the shopping center parking lot connected to the New York City storm sewer system. However, direct precipitation to the graveled area behind the northern building infiltrates into the subsurface.

In general, regional topography slopes gently to the west. The nearest surface water body is the Saw Mill Creek located approximately 1.75 miles west of the Site.

2.2 Water Supply

Potable water in Staten Island is supplied by the New York City Bureau of Water and Sewer Operations. There are no public supply wells onsite or on the Church or School properties. Although it has not been conclusively verified, it is also unlikely that there are any private wells located near the Site.

2.3 Geologic Setting

The Site is located in the Embayed section of the Coastal Plain physiogeographic province. The province is characterized by areas of low relief and consists of unconsolidated Cretaceous Coastal Plain sediments overlying igneous and metamorphic bedrock. A detailed description of the sediments underlying the Site as observed during the RI is presented in Section 5.2 Hydrogeology.

2.4 Site Operational History

Sanborn Fire Insurance Maps reviewed by EBI Consultants (EBI), as presented in a June 17, 2004 "Phase I Environmental Site Assessment Report" (Phase I ESA), indicated that a house was located on the Site in 1917 and that between 1937 and 1950, the Site appeared vacant.

Building Department records indicate that the property was used as a parking lot as early as 1949 and a bowling alley was constructed on the Site sometime between 1955 and 1958. The bowling ally was part of the Northern Building. EBI identified the bowling alley as Building A. In 1958, two pipeline easements (one liquefied natural gas and one jet fuel) were granted that cross the Site in a west to east direction approximately 30 feet south of the Northern Building.

In 1974, the bowling alley was converted into a strip mall-type shopping center. The Northern Building was expanded in 1995 to its current configuration (Plate 1). EBI identified the expansion as Buildings B and C. The entire Northern Building (identified by EBI as Buildings A, B, and C) is continuous. A separate building, the Southern Building (identified by EBI as Building D), was constructed in the southern portion of the Site, also in 1995 (Plate 1).

As part of the RI, Roux Associates conducted a search for records in the Staten Island Department of Buildings, as well as with the current owner of the shopping center. Based on those searches and a review of historical reports, it was determined that dry cleaning operations at the Site commenced in 1975 in the Northern Building. All dry cleaning operations were performed in the same tenant space since 1975 (Plate 1) and no other occupants of any building at the Site that would potentially use PCE were identified. Since 1975, there have been four operators of the dry cleaners at the Site. Ilio-Umberto Cleaning & Tailoring, Inc. operated the facility from 1975 to 1986. DFG Dry Cleaning Corp., doing business as (d/b/a) Coral Lanes Cleaners, began operation in 1986. Operation of the facility transitioned to Chim Bok Chung d/b/a Charming French Cleaners between 1986 and 1993 (the exact date is unknown). In 1993, the current operator, Guyon Cleaners, Inc. d/b/a Charming Cleaners assumed operation of the facility.

A 1994 "Hazardous Substances Survey and Report" prepared by MTS EnviroSurv reported that a majority of cleaning activities conducted by Charming Cleaners were performed offsite. In addition, MTS EnviroSurv was able to review waste manifests for verification of removal of PCE waste by Safety Kleen. There were no floor drains observed in the dry cleaner space during the 1994 inspection by MTS EnviroSurv. The current dry cleaning tenant, Charming Cleaners, operates fourth generation self-enclosed units, as reported in the Phase I ESA and in the facility audit conducted as part of this RI (Appendix A). These units were installed at the facility after

2000. There were no floor drains observed in the Dry Cleaner space during the 2004 inspection by EBI or during the RI. Waste handling manifests dating from 2000 to 2004 were reviewed by EBI as part of the Phase I ESA and to January 2007 by Roux Associates during the RI.

The Site was connected to an onsite septic tank with leaching field from 1958 (construction of bowling alley) to 1982. Building Department records indicate that the Site was connected to the New York City sewer system in 1982, at which time the septic tank was cleaned out and filled with sand. The former leachfield is reported to have been west of the bowling alley, which is now under part of the 1995 expansion of the Northern Building, and the parking lot south of the Northern Building. A geophysical investigation was performed as part of the RI to identify the approximate area of the former leachfield and any structures associated with the former septic system. However, the geophysical investigation did not identify the former leachfield or any subsurface structures. A sewer investigation consisting of videotaping the sanitary line in the area was performed by the owner outside the scope of the RI. There were no breaks observed in the sanitary line.

As discussed above, Roux Associates conducted a search for records in the Staten Island Department of Buildings, as well as with the current owner of the Site to develop a better understanding of the layout of the current and historical site facilities. However, no documentation describing information beyond what was already presented in the RI Work Plan was discovered. Roux Associates and the NYSDEC did use specific information presented by a local plumber on the Site's sewer system to establish the location of monitoring well cluster MW-107.

2.5 Site Investigation History

An August 12, 1994, the "Hazardous Substances Survey and Report" was prepared by MTS EnviroSurv for the Site. The report summarized a Site Inspection, review of Building Department records, and analytical data from nine soil samples. MTS reviewed records that indicated Building A was connected to a septic tank with a leachfield from 1958 to 1982. The location of the leachfield, as described by MTS, places it partially under the 1995 expansion of the Northern Building and the parking lot just south of the Northern Building. MTS obtained a soil sample (Sample 1) from 8 to 10 feet bls in the reported location of the former leachfield.

Soil Sample 1 was analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and the Target Analyte List of metals. Analytical results indicated that PCE was not detected at a detection limit of 12 micrograms per kilogram (µg/kg). A detection of lead in Sample 1 of 7,070 milligrams per kilogram (mg/kg) resulted in an additional eight samples being obtained and analyzed for lead only. Lead concentrations in the additional samples ranged from 6.0 mg/kg to 62.6 mg/kg, suggesting either an erroneous result from Sample 1 or a very limited area exhibiting a high concentration of lead that could not be duplicated.

In 2004, a "Phase I Environmental Site Assessment Report" (Phase I ESA) was prepared by EBI on behalf of a lending institution. Following the recommendations in the Phase I ESA, EBI performed a Limited Subsurface Investigation. The Limited Subsurface Investigation identified soil impacted by PCE and trichloroethene (TCE) behind the Charming Cleaners facility at concentrations ranging from 2,600 µg/kg to 7,400,000 µg/kg. EBI also identified groundwater behind the dry cleaner as being impacted by cis-1,2 dichloroethene (cis-1,2-DCE), TCE, and PCE at concentrations ranging from 4,800 micrograms per liter (µg/L) to 170,000 µg/L. Three additional soil samples and two additional groundwater samples were collected south of and under the building slab as part of the EBI investigation. These samples did not indicate impacts above NYSDEC Recommended Soil Cleanup Objectives (RSCOs) or Ambient Water Quality Standards (AWQS).

A Limited Site Assessment was performed in July 2004 by Roux Associates to confirm the analytical results obtained by EBI and to determine the lateral extent of impacted soil, as well as groundwater in the downgradient direction. Four air, 16 soil, and 5 groundwater samples were collected as part of the Limited Site Assessment. Roux Associates collected 16 soil samples from 10 soil borings at the Site (SB-1 to SB-10). Concentrations of PCE and its associated degradation products detected above NYSDEC RSCOs were observed in one soil sample only. The maximum VOC concentration observed was 3,100 µg/kg of cis-1,2-DCE in soil boring SB-2 from the one to two foot interval below land surface (bls), located approximately 20 feet west of the back door of the Dry Cleaners. The maximum concentration of PCE observed was 2,000 µg/kg, also from the 1-2 foot interval bls at SB-2. Despite sampling within a few feet of

the samples obtained by EBI, the Site Assessment samples obtained by Roux Associates did not confirm the 7,400,000 µg/kg PCE concentration observed in the EBI samples.

Five groundwater samples were collected at the Site during the Limited Site Assessment by Roux Associates in July 2004. The shallow saturated zone was sampled at four locations across the Site and the groundwater flow direction was determined to be following the northern property line toward the west. Impacts by VOCs, including PCE and its associated degradation products, were detected in the shallow saturated zone at concentrations above NYSDEC AWQS, but significantly lower than observed by EBI. For example, the maximum concentration of PCE observed by Roux Associates was 7,500 µg/L (PZ-4), compared to 170,000 µg/L observed by EBI. The shallow saturated zone did not extend to the downgradient (western) property boundary. A deeper saturated zone was observed at two locations and sampled at the western Site boundary (PZ-6). VOCs were detected in the deeper saturated zone at this location but at concentrations below AWQS.

Three indoor ambient air samples and one outdoor ambient air sample were collected by Roux Associates as part of the 2004 Site Assessment. One indoor air sample was collected within the Dry Cleaner. Two indoor air samples were collected in adjacent businesses: one in the Market to the west and one in the Stationery to the east. One outdoor ambient air sample was collected in the parking lot approximately 50 feet south of the Dry Cleaner. PCE was not detected in the Market or the Stationery air samples. PCE was detected at 3,900 micrograms per cubic meter ($\mu g/m^3$) in the sample collected from inside the Dry Cleaner. This concentration falls within a range of PCE concentrations typically detected in dry cleaning facilities and may be attributed to off-gassing of cleaned clothing hanging in the facility.

Following the September 2004 Site Assessment Report, WWP submitted a BCP Application to the NYSDEC. In March 2005, WWP and the NYSDEC entered into a Brownfield Cleanup Agreement to implement a Remedial Response Program for the Site. As discussed above, this RI was conducted based on the April 18, 2005 RI Work Plan, an October 25, 2005 "Draft Preliminary Soil Gas Analytical Results" letter to the NYSDEC, a June 12, 2006 "Supplemental Investigation Proposal" letter to the NYSDEC, a July 20, 2006 letter from the NYSDEC to Roux

Associates, and an October 25, 2006 "Confirmation Vapor Sampling" letter from the New York State Department of Health (NYSDOH) to the NYSDEC.

3.0 DISCUSSION OF INVESTIGATION ACTIVITIES

The scope of work for the RI was conducted according to the methods discussed in the RI Work Plan. Each task is described below in detail.

The scope of work included the following tasks:

- Task 1 – Compliance Audit and Site History Review (discussed in Section 2.4);
- Task 2 – Soil Vapor Screening;
- Task 3 - Ambient Air Sampling and Soil Vapor Sampling;
- Task 4 - Soil Boring and Sampling;
- Task 5 - Surface Soil Sampling;
- Task 6 - Temporary Monitoring Well Installation;
- Task 7 - Survey; and
- Task 8 - Water-Level Measurement and Groundwater Sampling.

3.1 Task 1 - Compliance Audit of Dry Cleaner

An environmental compliance audit of the Dry Cleaner was performed on September 1, 2005 and January 26, 2007. A summary of the audit findings is presented in Section 4.7 and the full compliance audit is presented as Appendix A.

3.2 Task 2 - Soil Vapor Screening

Fifty-five soil vapor screening locations (Figure 2) were advanced during the RI in August 2005 in an approximate three-foot by three-foot grid pattern (with allowances for utilities and aboveground obstructions) behind the dry cleaner and to the west to identify potential shallow PCE source areas. At each location, a ½-inch diameter steel rod was advanced two feet bls to create a void space. Polyethylene tubing was inserted to just above the bottom of the void and the annular space around the tubing was sealed at the surface with a clean cloth to minimize intrusion of ambient air. A PID was used to monitor soil vapor continuously for one minute and a one-minute running average of VOC concentrations in the soil vapor was recorded.

3.3 Task 3 - Ambient Air Sampling and Soil Vapor Sampling

3.3.1 Ambient Air Sampling

Three ambient air samples and a duplicate were collected during the RI in September 2005; 10 air samples were collected in November 2005 and seven air samples plus a duplicate were collected during both the SRI in August 2006 and during a confirmation event in December 2006, as summarized below:

	Designation	Location	Type
RI	AS-101	Dry Cleaners	Indoor
RI	AS-102	Utility room behind Market	Indoor
RI	AS-103	South of Church gym	Outdoor
RI	AS-103 (DUP)	South of Church gym	Outdoor
11/05	AS-104	School Modular Classrooms girl's bathroom	Indoor
11/05	AS-105	School Modular Classrooms Room M-7	Indoor
11/05	AS-106	School Modular Classrooms Room M-10	Indoor
11/05	AS-107	South of School Modular Classrooms	Outdoor
11/05	AS-108	School Main Building kitchen/cafeteria	Indoor
11/05	AS-109	School Administration Building Room CV-5	Indoor
11/05	AS-110	Church gym	Indoor
11/05	AS-111	Church storage room off gym	Indoor
11/05	AS-112	Church general purpose room	Indoor
11/05	AS-113	South of Church gym	Outdoor
SRI	AS-301	South of School cafeteria	Outdoor
SRI	AS-302	School Main Building kitchen/cafeteria	Indoor
SRI	AS-302 (DUP)	School Main Building kitchen/cafeteria	Indoor
SRI	AS-303	School Main Building Office	Indoor

	Designation	Location	Type
SRI	AS-304	School Main Building Room A-6	Indoor
SRI	AS-305	South of Church gym	Outdoor
SRI	AS-306	Church gym	Indoor
SRI	AS-307	Church classroom	Indoor
12/06	AS-301	South of School cafeteria	Outdoor
12/06	AS-302	School Main Building kitchen/cafeteria	Indoor
12/06	AS-303	School Main Building Office	Indoor
12/06	AS-304	School Main Building Room A-6	Indoor
12/06	AS-305	South of Church gym	Outdoor
12/06	AS-306	Church gym	Indoor
12/06	AS-306 (DUP)	Church gym	Indoor
12/06	AS-307	Church classroom	Indoor

DUP – Duplicate sample

Note that, as discussed above in Section 2.5: Site Investigation History, ambient air samples were collected by Roux Associates during the Limited Site Assessment in July 2004 from within the Dry Cleaner and the tenant spaces immediately east and west of the dry cleaner (Market and Stationary), as well as in the parking lot south of the Dry Cleaner.

At each ambient air sampling location, a sample was collected in a pre-evacuated six-liter Summa canister and regulator supplied by the laboratory. During the Limited Site Assessment and the RI, the Summa canister was allowed to collect the sample over a 0.5-hour period. During the SRI and December 2006 event, the Summa canisters were allowed to collect the sample over an 8-hour period. Once the Summa canister was filled, the valve on the canister was closed. Air samples collected during the RI were analyzed for Target Compound List (TCL) VOCs using USEPA method TO-15 and for a reduced list using USEPA method TO-15 SIM during the SRI and December 2006 confirmatory sampling event.

3.3.2 Soil Vapor Sampling

Three soil vapor samples were collected during the RI in September 2005 and five soil vapor samples and a duplicate were collected during both the SRI in August 2006 and during a confirmation event in December 2006, as summarized below:

	Designation	Location	Type
RI	SG-101	Dry Cleaners	sub-slab
RI	SG-102	Utility room behind Market	sub-slab
RI	SG-103	South of Church gym	outdoor soil
SRI	SV-201	School Main Building kitchen closet	sub-slab
SRI	SV-202	School Main Building telephone room	sub-slab
SRI	SV-203	South of Church gym	outdoor soil
SRI	SV-204	Church Storage room off gym	sub-slab
SRI	SV-204 (DUP)	Church Storage room off gym	sub-slab
SRI	SV-205	Church Small boiler room	sub-slab
12/06	SV-201	School Main Building kitchen closet	sub-slab
12/06	SV-202	School Main Building telephone room	sub-slab
12/06	SV-204	Church storage room off gym	sub-slab
12/06	SV-205	Church small boiler room	sub-slab
12/06	SV-206	School Main Building Room A-6	sub-slab
12/06	SV-206 (DUP)	School Main Building Room A-6	sub-slab

DUP – Duplicate sample
No sample collected in December 2006 from SV-203 due to water being drawn into sample.

All sampling locations were selected by the NYSDEC, NYSDOH, and Roux Associates during several site visits. The Northern Building of the Coral Island Shopping Center, the Main Building of the School, the Administration Building of the School, and the Multi-Use Building of the Church are all slab on grade. The Modular Classrooms are multiple trailers parked on an asphalt parking lot. There is a void space between the trailers and the asphalt that is covered only with plywood.

Sub-slab soil vapor sampling ports were installed by first coring a 4-inch diameter hole through the concrete floor with a coring machine and then advancing a Geoprobe® rod to a depth of approximately one foot below the top of the concrete slab. For soil vapor sampling location SV-203, Geoprobe rods were advanced to two feet bls. At each location, a permanent soil vapor sampling port consisting of a one-foot long stainless steel screen was advanced to the bottom of the Geoprobe® rod with a polyethylene sampling tube running to the surface. The annular space around the screen was filled with sand. A flush mount protective cover was installed above the screen and set in place with concrete. Following installation, the location was covered with an enclosure that was flooded with helium tracer gas as a quality assurance/quality control measure to verify that the soil vapor samples were not compromised by inadvertent introduction of ambient air into the sample.

One soil vapor grab sample was collected (SG-103). At this location, a Geoprobe® rod equipped with a Geoprobe soil vapor sampling connector and a disposable drive point was advanced 2 to 2.5 feet into the ground. Once at the desired depth, the Geoprobe rod was retracted approximately six inches, creating a void space. One end of a polyethylene sampling tube was connected to an adapter inserted into the Geoprobe rods. The adapter was threaded onto the post run tubing connector at the bottom of the rods, sealing off the ambient air with a silicon o-ring. The other end of the sampling tube was run through an enclosure that covers the top of the sample probe. As discussed above, the integrity of the sampling location was tested using helium as a tracer gas.

Sampling tubing from each temporary or permanent point was connected to a disposable three-way stopcock. Tubing from one of the stopcock ports led to a vacuum pump and tubing from the other stopcock port led to a pre-evacuated six-liter Summa canister supplied by the laboratory.

The stopcock valve isolated the pump and the Summa canister. Initially, the valve leading to the Summa canister was closed and the valve leading to the vacuum pump was open. The soil vapor sampling location was purged of approximately three tubing volumes using the vacuum pump set at a rate equal to or less than 0.2 liters per minute. Following purging, the valve leading to the pump was closed, the pump turned off, and the valve leading to the Summa canister was opened. Each sample was collected in a pre-evacuated six-liter Summa canister with a regulator supplied by the laboratory. During the RI, the Summa canister was allowed to collect the sample over a 0.5-hour period. During the SRI and December 2006 event, the Summa canisters were allowed to collect the sample over an 8-hour period. Once the Summa canister was filled, the valve on the canister was closed and the canister disconnected from the sampling tubing. Soil vapor samples collected during the RI were analyzed for TCL VOCs using USEPA method TO-15 and for a reduced list using USEPA method TO-15 SIM during the SRI and December 2006 confirmatory sampling event.

3.4 Task 4 - Soil Boring and Sampling

Twenty-six soil borings were completed during the RI and 19 were completed during the SRI (Plate 2). Thirty-one samples and one duplicate from 17 of the 26 soil borings were analyzed during the RI. Thirty-four samples and two duplicates from all 19 of the soil borings were analyzed during the SRI. Table 1 summarizes soil borings completed at the Site.

Prior to subsurface activity, soil boring locations were cleared for utilities using ground-penetrating radar and electromagnetic tracing. At each soil boring location, soil samples were collected using a Geoprobe direct push sampler. Soil samples were collected in five-foot increments to the completion depth indicated in Table 1. Each five-foot increment was collected in dedicated acetate sleeves. The acetate sleeve was laid on a piece of polyethylene sheeting and opened. Soil samples in the acetate sleeve were separated into two-foot sections and screened with a PID. Following the PID screening, a portion of soil from each two-foot section was placed into pre-cleaned sample jars and placed on ice in a cooler at 4°C. All remaining soils were visually characterized according to the Unified Soils Classification System (USCS) and placed into zip-lock plastic storage bags and homogenized. The bags were allowed to stand for approximately 30 minutes and the bag headspace was monitored for organic vapors with a PID.

All soil samples were analyzed for TCL VOCs. In addition, soil samples collected from soil borings SB-101, SB-107, SB-107A, SB-108, SB-109, SB-113, SB-114, SB-115, SB-116, and SB-117 were analyzed for TCL SVOCs, TCL pesticides and herbicides, TCL polychlorinated biphenyls, and the target analyte list of metals.

Soil borings were backfilled with either concrete, bentonite chips, or sand (shallow soil borings on Church property) and the ground surface was restored to match pre-installation conditions. All soil cuttings generated during the soil sampling task were containerized for offsite disposal.

3.5 Task 5 - Surface Soil Sampling

Two surface soil samples (SB-127 and SB-128) were collected from beneath the grassy area on the adjacent Church property immediately north of the Site (Plate 2). At each location, soil from the zero to two-inch (0.17 feet) interval below the grass was collected using a hand trowel. Samples were placed into pre-cleaned four-ounce VOC sample jars and placed on ice in a cooler at 4° C. Surface soil samples were analyzed for TCL VOCs.

3.6 Task 6 - Temporary Monitoring Well Installation

Thirteen two-well clusters--each consisting of a shallow and deep temporary monitoring well--were installed in September 2005 during the RI (Plate 2). Four two-well clusters were installed in August 2006 during the SRI. One well in each cluster was screened above the top of the shallow silt unit identified during the preliminary investigation and one well was screened above the top of the deeper silt/clay unit. Well construction details are provided in Table 2 and in Monitoring Well Construction Logs (Appendix B).

A soil boring was advanced at each well cluster location using the Geoprobe dual-tube sampling system from ground surface through the shallow silt/clay unit and into the deeper clay unit. Each soil interval was collected in dedicated acetate sleeves. After a soil interval was collected, the acetate sleeve was laid on a piece of clean polyethylene sheeting and opened. Soils in the acetate sleeve were screened with a PID and then visually characterized according to the USCS.

Once the desired depth of the boreholes had been reached, an outer probe rod with an expendable anchor point attached at the bottom was advanced. Once the probe rods were at the desired

depth, one five-foot length of Geoprobe pre-packed screen and Schedule 40 PVC riser pipe was connected to the anchor point with a snap-lock connector. Geoprobe pre-packed screens are five-foot long sections of 1-inch Schedule 40 PVC with 0.01-inch slots encased inside a 2.5-inch diameter stainless steel wire mesh with 0.011-inch pore size. The void between the PVC and wire mesh is packed with 20/40 grade silica sand. The anchor point was dislodged from the probe rods and the probe rods retracted. Clean #1 sand was poured into the annulus between the borehole and the riser pipe to approximately one foot below ground surface. Concrete was used to fill the remaining annular space to the surface. The temporary monitoring wells were finished with a flush-mounted well cover. The second monitoring well in each cluster was installed within five feet of the first monitoring well.

3.7 Task 7 - Survey

The measuring point of all temporary monitoring wells was surveyed and referenced vertically and horizontally to the National Geodetic Vertical Datum (NGVD) of 1988 and the North American Datum 1983, respectively. Survey data are provided in Table 2.

3.8 Task 8 - Water-Level Measurements and Groundwater Sampling

Two rounds of water-level measurements were performed: one during the RI on September 28, 2005 and one during the SRI on August 14, 2006.

Groundwater samples were collected during the RI from four of the shallow temporary monitoring wells and all 13 of the deep wells. At nine of the well clusters, there was insufficient water in the shallow well to obtain a sample. Groundwater samples were also collected as grab samples from eight soil borings during the RI (SB-113 through SB-120). Groundwater samples were collected from both wells at each of the four clusters installed during the SRI.

Groundwater samples were collected approximately one to two weeks after well installation or immediately following completion of the soil boring through a Geoprobe screen for grab samples. At each groundwater sampling location, groundwater samples were collected using low-flow (minimal drawdown) procedures. Prior to sample collection, each point was purged at low-flow evacuation rates of 0.1 to 0.5 liters per minute (L/min) using either a bladder pump or a peristaltic pump. Flow rates were adjusted to maintain a drawdown of less than 0.3 feet during

purging, where possible. An in-line water quality measurement device (Horiba U-22) was used to monitor water quality indicator parameters such as pH, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP), temperature, and turbidity. Measurements were taken periodically until, at a minimum, four of the six parameters had stabilized for three successive readings or the point ran dry. Stabilization was achieved when the indicator parameter were within the following ranges:

- pH: +/- 0.1 standard units
- conductivity: +/- 3%
- ORP: +/- 10 mv
- Temperature, turbidity and DO: +/- 10%

Upon parameter stabilization, sampling was initiated. Groundwater samples were collected at the same flow rate as purging using the same device as was used for purging. VOC samples were collected first and directly into pre-preserved sample containers.

All groundwater samples were analyzed for TCL VOCs. In addition, groundwater samples collected from monitoring wells MW-101S, MW-101D, MW-104D, MW-107S, MW-107D, and MW-108D, were analyzed for TCL SVOCs, TCL pesticides and herbicides, TCL polychlorinated biphenyls, and the target analyte list of metals.

Monitoring wells MW-103S, MW-104S, MW-105S, MW-106S, MW-108S, MW-109S, MW-111S, MW-112S, and MW-126S, all shallow wells in the cluster, were not sampled due to the lack of water in the wells.

3.9 Laboratory Analyses

All samples selected for analysis were transported to Hampton Clarke/Veritech (NYSDOH Certification Number 10602) of Fairfield, New Jersey and analyzed as described above. Air and soil vapor samples were subcontracted to Air Toxics Ltd (NYSDOH Certification Number 11291) of Folsom, California.

3.10 Decontamination

All non-disposable field equipment used during groundwater sampling was decontaminated between each sampling location to avoid cross contamination. All non-disposable sampling equipment (i.e., Geoprobe rods, trowel) was decontaminated through the following steps:

- Fresh water rinse;
- Scrubbing with non-phosphorus detergent wash; and
- Fresh water rinse.

Disposable, phthalate-free gloves were worn during all sampling and decontamination activities. All wastewater generated during decontamination was containerized for disposal offsite.

3.11 Data Validation

The laboratory was instructed to provide all data in NYSDEC Analytical Services Protocol (ASP) Category B deliverable with case narratives describing how closely the data met the quality objectives as described by the NYSDEC ASP. All data was submitted to a third party data validation subcontractor for preparation of at Data Usability Summary Report (DUSR).

4.0 PRESENTATION OF ANALYTICAL RESULTS

The results summarized in this section include results from the RI performed in September 2005, the air sampling round performed in November 2005, the SRI performed in August 2006, and the December 2006 indoor air and sub-slab soil vapor sampling round. Analytical data was provided in NYSDEC ASP Category B deliverable packages (attached on diskette as Appendix C) with case narratives describing how closely the data met the quality objectives as described by the NYSDEC ASP. A DUSR for all data is currently being prepared by a third party data validation subcontractor. Once finalized, the DUSR will be included as Appendix D of this report.

Analytical results for onsite soil samples were compared to NYSDEC Restricted Use Soil Cleanup Objectives (SCOs) for the Protection of Public Health for Commercial Properties presented in 6 NYCRR Subpart 375-6. Analytical results for offsite soil samples were compared to NYSDEC Unrestricted Use SCOs, also presented in 6 NYCRR Subpart 375-6. These SCOs were selected based on the current, intended, and reasonably anticipated future use of the Site, as well as the anticipated BCP cleanup tracks for soil remediation that will be evaluated as part of the Remedial Action Work Plan.

Analytical results for groundwater samples were compared to the NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSGVs). Presented in the June 1998 Division of Water Technical and Operational Guidance Series (1.1.1) – Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, and an April 2000 Addendum to the June 1998 Division of Water Technical and Operational Guidance Series (1.1.1).

4.1 Soil Vapor Screening Results

Table 3 presents a summary of PID soil vapor screening results during the RI. Peak PID measurements ranged from 0.0 parts per million (ppm) to 6.5 ppm and 1-minute time-waited average (TWA) concentrations ranged from 0.0 ppm to 5.0 ppm. The low range in detections was not expected given the relatively high concentrations of VOCs in shallow soil observed by EBI in 2004. The area of SVS-37 and SVS-38 was selected for the placement of monitoring well cluster MW-101 based on the slightly elevated soil vapor screening results and the historical EBI sampling location.

4.2 Soil Vapor Sampling Results

Table 4 presents a summary of soil vapor sampling results. The soil vapor samples fall into two groups: sub-slab (i.e., soil pore spaces beneath a building floor slab) and outdoor (i.e., shallow soil pore spaces). The only outdoor samples were in soil immediately south of the Church gym. These locations were sampled once during the RI (SG-103) and once during the SRI (SV-203).

4.2.1 VOCs in Soil Vapor From the Outdoor Locations

The following summarizes detections of PCE and associated degradation products in soil vapor from shallow soil south of the Church gym:

Compound	Maximum Concentration ($\mu g/m^3$)
PCE	130 (SG-103)
TCE	49 (SG-103)
cis-1,2-DCE	19 (SG-103)
trans-1,2-DCE	9.3 (SG-103)

PCE – tetrachloroethene; TCE – trichloroethene; DCE - dichloroethene
$\mu g/m^3$ – micrograms per cubic meter

The following 10 compounds not associated with PCE from the Dry Cleaners were detected in soil vapor from shallow soil south of the Church gym:

Compound	Maximum Concentration ($\mu g/m^3$)
acetone	48 (SG-103)
benzene	0.60 (SG-103)
carbon disulfide	6.4 (SG-103)
ethylbenzene	7.1 (SV-203)
2-butanone	13 (SG-103)
styrene	4.9 (SG-103)
toluene	35 (SV-203)
1,1,1-trichloroethane	0.28 (SV-203)
m&p-xylenes	27 (SV-203)
o-xylene	11 (SV-203)

$\mu g/m^3$ – micrograms per cubic meter

4.2.2 VOCs in Soil Vapor From Sub-Slab Locations

Sub-slab soil vapor samples were obtained both onsite (beneath the Dry Cleaner and the utility room behind Market) and offsite (beneath the Church Multi-Use Building and the School's Main Building).

Onsite

The following summarizes detections of PCE and associated degradation products in soil vapor from onsite sub-slab locations:

Compound	Maximum Concentration ($\mu g/m^3$)
cis-1,2-DCE	260 (SG-101)
trans-1,2-DCE	6.4 (SG-101)
PCE	1,300 (SG-101)
TCE	220 (SG-101)
VC	3.3 (SG-101)

PCE – tetrachloroethene; TCE – trichloroethene; DCE - dichloroethene
µg/m3 – micrograms per cubic meter

The maximum concentrations of the above five compounds were detected beneath the Dry Cleaners floor slab.

The following 16 compounds not associated with PCE from the Dry Cleaners were detected in soil vapor from onsite sub-slab locations:

Compound	Maximum Concentration ($\mu g/m^3$)
acetone	14 (SG-102)
carbon disulfide	7.5 (SG-102)
chloroethane	2.1 (SG-101)
chloroform	230 (SG-101)
cyclohexane	6.0 (SG-102)
dichlorodifluoromethane	180 (SG-102)
ethylbenzene	6.5 (SG-101 and SG-102)
hexane	8.4 (SG-102)
2-butanone	4.6 (SG-101)

Compound	Maximum Concentration ($\mu g/m^3$)
styrene	17 (SG-101)
tetrahydrofuran	5.4 (SG-102)
toluene	98 (SG-102)
1,2,4-trimethylbenzene	4.1 (SG-101)
M&p-xylenes	22 (SG-101)
o-xylene	13 (SG-101)

$\mu g/m^3$ – micrograms per cubic meter

Offsite

Offsite sub-slab soil vapor samples were analyzed using the TO-15 SIM method that results in a shorter list of reportable compounds, including benzene, toluene, ethylbenzene, xylenes (i.e., BTEX compounds) and methyl-tertiary butyl ether (MTBE), in addition to PCE and associated degradation products. BTEX compounds and MTBE are associated with petroleum hydrocarbon contamination and are not site-related compounds associated with the dry cleaner.

The following summarizes detections of PCE and associated degradation products in soil vapor from offsite sub-slab locations:

Compound	Maximum Concentration Beneath the Church ($\mu g/m^3$)	Maximum Concentration Beneath the School ($\mu g/m^3$)
PCE	12 (SV-204)	45 (SV-201)
TCE	3.0 (SV-205)	4.9 (SV-201)

PCE – tetrachloroethene; TCE – trichloroethene
µg/m3 – micrograms per cubic meter

The following summarizes BTEX compounds detected in offsite sub-slab soil vapor samples:

Compound	Maximum Concentration Beneath the Church ($\mu g/m^3$)	Maximum Concentration Beneath the School ($\mu g/m^3$)
Benzene	4.7 (SV-205)	1.8 (SV-202)
1,2 Dichloroethane	0.26 (SV-205)	nd
Toluene	300 (SV-204)	7,200 (SV-202)
Ethylbenzene	21 (SV-205)	32 (SV-202)
1,1,1 Trichloroethane	0.33 (SV-205)	1.1 (SV-201)
m&p-Xylenes	67 (SV-205)	93 (SV-202)
o-Xylenes	23 (SV-205)	28 (SV-206)

$\mu g/m^3$ – micrograms per cubic meter
nd – not detected

4.3 Air Sampling Results

Table 5 presents a summary of air sampling results. Indoor air samples were obtained onsite (inside the Dry Cleaner and the utility room behind the Market) and offsite (inside the Church Multi-Use Building and all three School buildings). Outdoor air samples were obtained offsite (south of the Church gym, south of the School Modular Classrooms, and south of the School cafeteria). Indoor air samples at the Market and Stationary, as well as an onsite outdoor air sample, had previously been obtained during the Preliminary Site Assessment in 2004.

4.3.1 Onsite Indoor Air Sample Results

The following summarizes detections of PCE and associated degradation products in onsite indoor air samples:

Compound	Maximum Concentration ($\mu g/m^3$)	Location of Maximum Concentration
PCE	710	Dry Cleaners
TCE	8.9	Dry Cleaners

PCE – tetrachloroethene; TCE – trichloroethene
µg/m3 – micrograms per cubic meter

The following six compounds not associated with PCE from the Dry Cleaners were detected in indoor air samples from onsite locations:

Compound	Maximum Concentration ($\mu g/m^3$)	Location of Maximum Concentration
acetone	28	Utility Room
dichlorodifluoromethane	23	Utility Room
ethanol	170	Dry Cleaners
isopropyl alcohol	53	Utility Room
2-butanone	7.9	Utility Room
toluene	4.1	Utility Room

$\mu g/m^3$ – micrograms per cubic meter

4.3.2 Offsite Outdoor Air Sample Results

Offsite outdoor air samples were obtained in September 2005 (south of the Church gym), November 2005 (south of the School Modular Classrooms and south of the Church gym), and August and December 2006 (south of the School cafeteria and south of the Church gym).

The following summarizes detections of PCE and associated degradation products in offsite outdoor air samples:

Compound	Maximum Concentration Outside the Church ($\mu g/m^3$)	Maximum Concentration Outside the School ($\mu g/m^3$)
PCE	32 (AS-305)	0.64 (AS-301)
TCE	0.42 (AS-305)	0.34 (AS-301)

PCE – tetrachloroethene; TCE – trichloroethene
µg/m3 – micrograms per cubic meter

Nine compounds not related to the Dry Cleaners were detected at low levels in offsite outdoor air samples, including acetone, benzene, dichlorodifuoromethane, ethylbenzene, propene, tetrahydrofuran, toluene and xylenes. The maximum concentration detected was 16 $\mu g/m^3$ of toluene in Sample AS-305 (South of the Church gym).

4.3.3 Offsite Indoor Air Sample Results

Offsite indoor air samples were obtained in November 2005 (School's Modular Classrooms, School's Main Building, School's Administration Building and the Church's Multi-Use Building), and August and December 2006 (School's Main Building and the Church's Multi-Use Building).

The following summarizes detections of PCE in offsite indoor air samples:

Designation	PCE ($\mu g/m^3$)	Location
AS-302	1.1	School's Main Building kitchen
AS-303	1.6	School's Main Building office
AS-304	18	School's Main Building Room A-6
AS-306	27	Church Gym
AS-307	2.7	Church Classroom

µg/m3 – micrograms per cubic meter

Sixteen compounds not related to the Dry Cleaners were detected in offsite indoor air samples, including acetone, benzene, 2-chlorotoluene, cumene, dichlorodifuoromethane, 1,1-dichloroethane ethanol, ethylbenzene, hexane, isopropyl alcohol, MTBE, propene, 1,1,2,2-tetrachloroethene, toluene, vinyl acetate, and xylenes. The maximum concentration detected was 19 $\mu g/m^3$ of m&p-xylenes in Sample AS-302 (School's Main Building kitchen [duplicate sample]).

The range in detection of PCE in indoor air was similar to the range in detections of the other compounds listed above that are not related to the Dry Cleaners.

4.4 Soil Sampling Results

Tables 6 through 10 summarize soil sampling analytical data obtained during the RI and SRI for VOCs, SVOCs, metals, PCBs, and pesticides and herbicides, respectively. Soil data were compared with the NYSDEC Subpart 375 (NYCRR Subpart 376-6) Remedial Program Soil

Cleanup Objectives (SCOs). Onsite soil data were evaluated against the restricted commercial SCOs and offsite soil data were evaluated against the unrestricted residential SCOs.

4.4.1 Onsite Soil Sampling Results

A review of the onsite soil sampling VOC results indicated that PCE was the only compound potentially associated with the Dry Cleaners detected at concentrations above the restricted commercial SCOs, as summarized below:

Designation	Depth (ft bls)	PCE (150)
SB-101	0.5-2	390
SB-102X	2.5-5	500
SB-103X (DUP)	0.5-2	180
SB-201	3-5	2,200

Concentrations in milligrams per kilogram (mg/kg)
ft bls – feet below land surface
(150) – denotes restricted commercial SCO
(DUP) – duplicate sample
-- - not detected or detected below SCO

One SVOCs (benzo(a)pyrene) was detected in three soil samples (SB-109, SB-114, and SB-115) and one SVOC (dibenzo(a,h)anthracene) was detected in one soil sample (SB-109), all from the zero to two foot interval bls at concentrations slightly above the restricted commercial SCO. There were no other SVOCs, metals, PCBs, or pesticides/herbicides detected above the restricted commercial SCOs in soil samples collected at the Site.

4.4.2 Offsite Soil Sampling Results

A review of the offsite soil sampling results indicated that PCE, TCE, and cis-1,2-DCE were the compounds potentially associated with the Dry Cleaners detected at concentrations above the unrestricted residential SCOs, as summarized below:

Designation	Depth (ft bls)	PCE (1.3)	TCE (0.47)	cis-1,2-DCE (0.25)
SB-214	0-2	1,600	15	0.57
SB-214	3-5	11	--	--

Concentrations in milligrams per kilogram (mg/kg)
ft bls – feet below land surface
(1.3) – denotes unrestricted residential SCO
-- - not detected or detected below SCO

Location SB-214 is in the grassy area behind the Church gym immediately north of the Dry Cleaners. One additional VOC (acetone) was detected in soil boring SB-210 at a depth of 3-5 feet, at a concentration that slightly exceeded the unrestricted residential SCO.

4.5 Water-Level Measurements

Two rounds of water-level measurements were performed: one during the RI on September 28, 2005 and one during the SRI on August 14, 2006. A summary of water-level data is provided in Table 11. Water-level elevations collected on September 28, 2005 are shown on Plate 3 for shallow monitoring wells and on Plate 4 for deep monitoring wells. Water-level elevations collected on August 14, 2006 are shown on Plate 5 for shallow monitoring wells and on Plate 6 for deep monitoring wells.

4.6 Groundwater Sampling Results

Tables 12 through 16 summarizes groundwater sampling analytical data obtained during the RI and SRI for VOCs, SVOCs, metals, PCBs, and pesticides and herbicides, respectively. A review of VOC results indicating detections of compounds potentially associated with the dry cleaners (i.e., PCE and it degradation products) at concentrations above NYSDEC ambient water-quality standards and guidance values (AWQSGVs) is summarized below and on Plate 7.

Well Designation	Location	PCE (5)	TCE (5)	1,1-DCE (5)	cis-1,2-DCE (5)	VC (2)
MW-101S	Onsite	3,500	9,900	220J	31,000	2,800
MW-101D	Onsite	17,000	6,700	--	19,000	1,500
MW-102S	Onsite	1,200	3,200	--	11,000	610
MW-102D	Onsite	--	670	--	7,800	660
MW-103D	Onsite	--	--	--	220	15
MW-104D	Onsite	--	--	--	69	16
MW-107S	Onsite	--	--	--	21	63
MW-107D	Onsite	--	--	--	380	300
MW-111D	Onsite	--	--	--	17	4.6J
MW-112D	Offsite	--	20J	--	760	44J
MW-113S	Offsite	150J	1,600	--	11,000	380J
MW-113D	Offsite	250	780	--	2,700	52J

Concentrations in micrograms per liter (µg/L)
(5) – denotes AWQSGV in µg/L
-- - not detected or detected below AWQSGV
J – estimated concentration

In addition to VOC compounds of concern, methylene chloride and toluene were detected above the NYSDEC AWQSGVs in two wells and ethylbenzene was detected above the NYSDEC AWQSGV in one well. Five metals (iron, magnesium, manganese, nickel, and sodium) were detected in at least one of all six groundwater samples collected for metals at the Site above the NYSDEC AWQSGVs (Table 14). There were no other metals, SVOCs, PCBs, or pesticides/herbicides detected above the NYSDEC AWQSGV in groundwater samples collected at the Site.

4.7 Compliance Audit

An environmental compliance audit of the dry cleaner was performed on September 1, 2005 and January 26, 2007. The full compliance audit is attached as Appendix A. The compliance audit concluded that the facility should mark accumulation start dates on full hazardous waste drums and assure that all drums are labeled as hazardous waste and that the labels are readily visible. There were no other specific findings.

5.0 DISCUSSION OF THE NATURE AND EXTENT OF CONTAMINANTS

The following discussion of results includes samples obtained during the Limited Site Assessment performed in July 2004, the RI performed in September 2005, an air sampling round performed in November 2005, the SRI performed in August 2006 and an air and soil vapor sampling round performed in December 2006.

5.1 Hydrogeology

The soil boring logs presented in Appendix B were used to create a generalized hydrogeologic cross-section of the Site (Plate 8). The cross section line runs east-west, approximately parallel to and running along the fence that marks the northern border of the Site. In addition, the groundwater levels measured during the RI (September 2005) and SRI (August 2006) were used to prepare water-level elevation maps (Plates 3 through 6).

5.1.1 Site Specific Geology

In the Limited Site Assessment performed by Roux Associates in July 2004, preliminary results were interpreted to indicate that the Site was underlain by two clay layers: a shallow brown to gray clay layer approximately two-feet thick at a depth between five feet bls and nine feet bls and a deeper brown clay layer approximately four feet thick at a depth between 12 feet bls and 19 feet bls. These observations had led to the initial conclusion that the shallow saturated zone may be a discontinuous perched zone. However, as shown in Plate 8, the interpretation of subsurface hydrogeology following the RI indicates that a perched zone is probably not beneath most of the Site. In addition, although layers of lower permeable soils were observed during field investigation and were used to select well installation depths, what was originally interpreted as clay layers were interpreted following the RI to be low-permeability mixtures of silt or silt and clay.

Based on a review of the RI results, the area of the Site immediately behind and beneath the dry cleaner (i.e., the source area) is underlain by the following generalized layers:

- a one-inch thick surface course of gravel underlain by landscaping fabric.
- Fill – ranging from two to four feet thick and described as a brown coarse to fine sand with brick, glass, concrete, and wood fragments.

- Sand and Silt – two to six-foot thick layer of grey to brown, coarse to fine sand and silt, with occasional variable amounts of gravel. For clarification purposes in the discussion below, this layer will be referred to as the sand layer.
- Silt – eight to 13-foot thick layer of brown silt with some gravel and little fine sand.
- Silt and Clay – Brown silt and clay, greater than 12-feet thick immediately beneath the dry cleaner.

A review of the cross-section (Plate 8) indicates that the sand layer ranges from two to 6.5 feet in thickness beneath most of the Site, with the exception of the western portion. In the vicinity of Well Cluster MW-103S/D beneath the western portion of the Site, the sand layer dips down and increases in thickness to approximately 15 feet and is overlain by a four-foot thick zone of primarily silt with a one-foot thick embedded sand and silt layer. The shallow silt zone was observed to the west at the MW-104S/D cluster, where it is approximately three-feet thick. In the vicinity of Well Cluster MW-108S/D in the eastern portion of the Site, the sand layer is also overlain by a two-foot thick silt layer.

The eight to 13 foot-thick layer consisting of primarily silt beneath the sand layer was also identified beneath most of the Site, with the exception of the western portion, where it pinches out or grades to the coarser sand and silt layer in the vicinity of Well Cluster MW-103S/D. Deep wells screened in this silt layer beneath the Dry Cleaners (MW 101D and MW-102D) indicated impacts by VOCs (discussed below). The relative low permeability of the silt layer is the probable explanation for the relatively high proportions of PCE degradation daughter products in groundwater relative to PCE, as discussed below.

Beneath the silt layer is a finer-grained silt and clay to clay layer. The silt and clay layer is thickest beneath the source area in the vicinity of Well Cluster MW-101S/D, where it is over 12 feet thick. Note that the bottom of the silt and clay layer was not encountered in the boring for Well Cluster MW-101S/D. The silt and clay layer decreases in thickness toward the east and west away from beneath the source area. Toward the east at MW-108S/D, the silt and clay layer is only approximately 2 feet thick. Toward the west at Well Cluster MW-103S/D, only a 1.5-foot thick clay layer is present. The clay layer increases again in thickness further toward the west at

Well Cluster MW-104S/D, where it is over three feet thick. Note that the bottom of the clay layer at MW-104S/D was not encountered.

A sand and silt layer was observed beneath the silt and clay layer at the borings for SB-1, MW-103S/D, and MW-108S/D. The thickness of this layer is unknown and it represents the lowest unit observed at the Site.

5.1.2 Shallow Water Levels

A shallow water-level elevation map produced from data obtained during the RI in September 2005 (Plate 3) indicated groundwater flow was away from the source area west-northwest towards the Church and School properties. Shallow zone water levels were only measurable in a limited area around the dry cleaner during the September 2005 RI water-level round because surrounding shallow wells were dry.

As part of the SRI, four additional shallow monitoring wells were installed to the north and northwest of the Site on the Church and School properties, providing a more extensive area of shallow groundwater levels. A shallow water-level elevation map produced from data obtained during the SRI in August 2006 (Plate 5) indicated groundwater flow components in a northwesterly direction in the vicinity of the source area behind the dry cleaner. This groundwater flow direction is consistent with the configuration of the plume of VOCs in groundwater, as discussed below. The shallow groundwater flow direction to the north of the Site beneath School property was more north-northwesterly and then northwesterly in the vicinity of MW-203S and MW-201S.

In addition, groundwater elevations were measured during the August 2006 water level gauging event in wells that were dry during the September 2005 water level gauging event. The increased spatial extent of water across the study area in the shallow zone suggests the shallow silt layer at the Site is acting as a semi permeable barrier to groundwater flow.

5.1.3 Deep Water Levels

Groundwater flow directions in the deep zone in September 2005 (Plate 4) were to the west, southwest during the RI. However, this observation contradicted the configuration of the plume

of VOCs in groundwater, as discussed below, and water level measured in August 2006, which suggested more of a west northwesterly component.

A review of water level elevations measured in deep wells in August 2006 (Plate 6) indicated that there was a "high spot" in the potentiometric surface immediate vicinity of the Dry Cleaner with groundwater flow directions radially outward from that location to the south, west and northwest. Deeper groundwater flows toward the west beneath the western portion of the Site, and to the west-northwest beneath School property.

5.2 Soil Quality

A review of soil quality data obtained during the three phases of soil investigations performed by Roux Associates at the Site (Limited Site Assessment, RI and SRI) indicated that shallow soil in a focused area behind the Dry Cleaner and Market, and extending onto the Church property in one small area immediately to the north, is impacted by relatively high concentrations of primarily PCE and TCE. The impacted zone is generally restricted to the upper two to five feet of fill. As discussed above, downward vertical migration of PCE may have been impeded by a shallow low-permeability layer of silt at five to seven ft bls that was observed at most soil boring locations.

The highest PCE concentrations (i.e., over 1,000 mg/kg) were observed at the following two locations:

- SB-201, which is onsite on the far side of an electrical transformer 30 feet west of the dry cleaner's back door from the three to five foot bls sampling interval; and
- SB-214, which is offsite located in a grassy area on Church property approximately 20 feet north of the Dry Cleaners from the zero to two foot bls sampling interval.

High concentrations of PCE and TCE were also observed in shallow soil (i.e., less than two ft bls) immediately behind and slightly to the west of the Dry Cleaners along the fence at locations SB-101 and SB-103X, and less than five ft bls at SB-102X, which is located near the electrical transformer.

Based on the information obtained as part of the RI, the probable source of the PCE in shallow soil was direct discharge to the ground of PCE associated with the historic use of the tenant space as a dry cleaner.

5.3 Groundwater Quality

A review of groundwater quality data indicates that groundwater to a depth of approximately 20 ft bls is impacted by relatively high concentrations of PCE and associated degradation products beneath the source area behind the Dry Cleaners. A plume of groundwater impacted by VOCs extends offsite toward the west-northwest beneath the Church and School properties (Plate 7). The downgradient offsite extent of the plume was delineated by non-detected concentrations of VOCs in Wells MW-201S/D and MW-203S/D beneath the School property. The lateral offsite (i.e., to the north) extent of the plume was delineated by samples from Wells MW-202S/D, which also did not contain detections of VOCs. The plume extends laterally to the south beneath most of the shopping center building containing the dry cleaners and just south to beneath the northern portion of the parking lot. The eastward extent of the plume was delineated by non-detected concentrations of VOCs in Well MW-108D.

The presence of significant concentrations of PCE degradation products (TCE, cis and trans-1,2-DCE and vinyl chloride) and limited downgradient extent of the VOC plume (less than 260 feet from the source area to the leading edge of the plume) indicates that *in situ* biodegradation of PCE in groundwater is occurring. The relative low permeability of the sand and silt units beneath the site result in low groundwater flow rates that, together with reductive dechlorination, have limited the downgradient migration of VOCs. Assuming that the source of contamination began as soon as a dry cleaner began operation at the Site in 1975, the downgradient extent of the plume suggests migration rates of significantly less than 0.1 foot per day. Therefore, the plume is probably in a stable configuration and not increasing significantly in downgradient extent.

5.4 Soil Vapor and Air Quality

With the exception of three samples, the September 2005 detection of PCE in the Dry Cleaner itself, the September 2005 detection of 42 micrograms per cubic meter ($\mu g/m^3$) PCE in the utility room off the Market, and the August 2006 detection of 18 $\mu g/m^3$ PCE in the School's Main

Building Room A-6, all of the levels of PCE detected in indoor air fall below the background air concentrations collected concurrently with each sample.

The August 2006 detection of PCE in the School's Main Building Room A-6 (18 $\mu g/m^3$) appeared to be anomalous based on the concentration of PCE in other indoor air samples collected from the School. This is further supported by the December 2006 sampling event, where PCE in sample AS-304 was 2.7 $\mu g/m^3$ and the concentration of PCE in sub slab soil vapor (sample SV-207 Dup) was 3.0 $\mu g/m^3$. During a September 21, 2006 meeting with Church and School representatives, the NYSDEC and NYSDOH indicated that the levels of PCE detected during the August 2006 sampling event do not represent a health risk to building occupants. Analytical results of the December 2006 sampling event are presented in the RI Report.

In the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in New York, the NYSDOH provides decision matrices for evaluating indoor air VOC concentrations. The matrices compares sub-slab soil vapor VOC concentrations with indoor air concentrations.

Based on an evaluation of sub-slab, indoor air, and ambient air concentrations; the current use of all spaces (specifically the Dry Cleaner) and the decision matrix for PCE, the utility room off the Market, was the only sampling location evaluated for potential vapor intrusion. Based on this evaluation and discussions with the NYSDEC and NYSDOH, an area of broken concrete floor in the utility room (a preferential pathway) was repaired.

Based on an evaluation of sub-slab, indoor air, and ambient air concentrations; the current use of all spaces; and the decision matrix for TCE, the indoor air sample AS-303 (School office) was the only sampling location evaluated for potential vapor intrusion. The NYSDOH guidance for the concentration of 0.83 $\mu g/m^3$ of TCE in air sample AS-303 collected in December 2006 and a correlating soil vapor sample of non detect at a detection limit of 16 $\mu g/m^3$ in sample SV-202, suggests that reasonable and practical measures should be taken to identify the sources and reduce the exposure. Based on previous sampling data at this location and other TCE concentrations from the December 2006 sampling event at the School, the detection of TCE in sample AS-303 may simply be an anomalous result that can be confirmed with a future sampling

event if necessary. Note that the high detection limit of TCE in soil vapor sample SV-202 was a result of a high concentration of toluene, a non-Site related compound, in that sample.

6.0 QUALITATIVE EXPOSURE ASSESSMENT

The objective of the qualitative exposure assessment is to describe how human and environmental receptors may be exposed to site contaminants based upon the site-specific conditions and to assess whether there are any complete or potentially complete exposure pathways.

As documented in the prior site investigations, the contaminants of concern (COCs) at the Site include PCE, TCE, 1,1-dichloroethene (1,1 DCE), cis-1,2 DCE, and vinyl chloride. These COCs are all VOCs that have been detected in soil and/or groundwater at concentrations exceeding their respective NYSDEC unrestricted use soil cleanup objectives, NYSDEC commercial restricted use soil cleanup objectives, or NYSDEC AWQSG values for Class GA groundwater. The NYSDEC Class GA AWQSG values were developed to be protective of public health based upon consideration of groundwater as a potential source of drinking water. This exposure scenario is not applicable to the Site given the current land use and the reasonably anticipated land use at the Site. As specified in ECL Article 27-1415(2), the exposure assessment should consider the current conditions, as well as the reasonably anticipated future land use of the site and the affected offsite areas, and the reasonably anticipated future groundwater use.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: (1) a contaminant source; (2) contaminant release and transport mechanisms; (3) a receptor population; (4) a point of exposure; and (5) a route of exposure. The following paragraphs provide an overview discussion of exposure pathways that may potentially exist associated with the Site.

Contaminant Sources

The probable source of VOC contamination in soil and groundwater at the Site was direct discharges to the ground of PCE associated with dry cleaning operations at the site most probably between 1975 and 2000 (the timeframe when a dry cleaner was present onsite and no disposal records are available for review). This resulted in PCE impacts to both onsite and offsite soil and onsite and offsite groundwater. As discussed in Section 4.7, a compliance audit of the current dry cleaning operation suggests that there are no discharges of PCE to the environment.

Contaminant Release and Transport Mechanisms

The VOCs currently being released at the Site exist in the form of residual material adsorbed to soil particles in the saturated and unsaturated zones and compounds dissolved in groundwater. The leaching of contaminants from soil serves as an ongoing source of contamination to groundwater beneath portions of the Site. In addition, VOCs are migrating through volatilization of compounds into soil vapor in the vicinity of groundwater contamination.

Receptor Population

The potential onsite receptors include occupational workers, construction workers, visitors, or trespassers. Future onsite receptors could also include residents if the property was rezoned and the Site use changed. The potential offsite receptors include offsite workers, students, parishioners, visitors, and trespassers.

Potential Points and Routes of Exposure

Contaminated soil is limited to specific areas of the Site and at depths below the immediate surface as indicated by subsurface and surficial soil samples collected as part of the RI. However, there is the potential for direct exposure to contaminated soil by anyone digging in the contaminated area.

The Site and surrounding community are supplied by public sources of drinking water which meets all State and Federal standards for drinking water quality. As such, there is no potential for exposure to site contaminants from the public sources of drinking water. Private non-potable water supply wells are not operated on the Site or by the adjacent Church or School.

In areas where there are Site buildings (or future Site buildings) in the vicinity of groundwater contamination, there is potential for volatilization of VOCs to accumulate beneath the building and migrate into indoor air. If such circumstances occur, Site workers could be exposed to contaminants via the indoor air inhalation route of exposure. PCE was detected in indoor air in the Dry Cleaner, a utility room behind the Market, and in one room of the School at concentrations above outdoor ambient air. During a September 21, 2006 meeting with Church and School representatives, the NYSDEC and NYSDOH indicated that the levels of PCE

detected during the August 2006 sampling event do not represent a health risk to building occupants. Analytical results of the December 2006 sampling event are presented in this RI.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Roux Associates has completed a phased RI and SRI of soil, groundwater, soil vapor, and indoor air quality associated with the release of PCE at the Charming Dry Cleaners in the Coral Island Shopping Center, Staten Island, New York. The RI was performed in September 2005 and the SRI was performed in August 2006. The phased investigation included two rounds of soil and groundwater sampling, during which 44 soil borings were completed and 26 monitoring wells were installed. Four rounds of outdoor and indoor air and soil vapor sampling were performed both onsite in the Dry Cleaners and adjacent businesses, and offsite in the Church and School buildings. The four rounds were performed during the RI, SRI, and during separate sampling events in November 2005 and December 2006 (i.e., during the heating season).

The results of the investigation indicated that shallow soil (i.e., less than five feet deep) in the immediate vicinity of the back of the Dry Cleaners is impacted by concentrations of PCE above NYCRR Sub-part 375.6 restricted commercial soil cleanup objectives. Shallow soil impacted by high concentrations of PCE were also observed in a small area immediately north of the Site on Church property.

Associated with the impacted soil is a plume of relatively high concentrations of dissolved VOCs in underlying groundwater. The plume extends offsite toward the west-northwest beneath Church and School properties. The maximum downgradient extent of the plume is approximately 260 feet. The VOCs detected in groundwater include PCE and high concentrations of associated degradation products TCE, cis and trans-1,2-dischloroethene and vinyl chloride. The presence of significant concentrations of degradation products indicates that natural biodegradation of the VOCs in the plume is occurring. The fact that the Dry Cleaners have been operating since 1975, the presence of PCE degradation products and the relatively limited downgradient extent of the plume probably indicate that the plume is in a stable configuration.

Indoor air sampling in the Church and School indicated that all but one detection of PCE in indoor air were below the outdoor ambient air concentrations collected concurrently with each sampling event. Confirmation sampling suggested that the one deviation was an anomalous result. One indoor air sample for TCE suggests that reasonable and practical measures should be

taken to identify the sources and reduce the exposure. Based on other sampling data, the detection of TCE may simply be an anomalous result that can be confirmed with a future sampling event if necessary.

Roux Associates and WWP Associates believe that the RI is complete and the results are sufficient to prepare a Remedial Action Work Plan under the Brownfields Cleanup Program.

Table 1. Summary of Sampling Locations, Coral Island Shopping Center, Staten Island, New York.

Matrix	Sample Location	Sample Depth (ft)	Sample Date
Air	A-1	na	7/27/2004
Air	A-2	na	7/27/2004
Air	A-3	na	7/27/2004
Air	A-4	na	7/27/2004
Air	AS-101	na	9/21/2005
Air	AS-102	na	9/21/2005
Air	AS-103	na	9/21/2005
Air	AS-103 DUP	na	9/21/2005
Air	AS-104	na	11/1/2005
Air	AS-105	na	11/1/2005
Air	AS-106	na	11/1/2005
Air	AS-107	na	11/1/2005
Air	AS-108	na	11/1/2005
Air	AS-109	na	11/1/2005
Air	AS-110	na	11/3/2005
Air	AS-111	na	11/3/2005
Air	AS-112	na	11/3/2005
Air	AS-113	na	11/3/2005
Air	AS-301	na	8/14/2006
Air	AS-302	na	8/14/2006
Air	AS-302 DUP	na	8/14/2006
Air	AS-303	na	8/14/2006
Air	AS-304	na	8/14/2006
Air	AS-305	na	8/15/2006
Air	AS-306	na	8/15/2006
Air	AS-307	na	8/15/2006
Air	AS-301	na	12/16/2006
Air	AS-302	na	12/16/2006
Air	AS-303	na	12/16/2006
Air	AS-304	na	12/16/2006
Air	AS-305	na	12/1/2006
Air	AS-306	na	12/1/2006
Air	AS-306 DUP	na	12/1/2006
Air	AS-307	na	12/1/2006
Groundwater	MW-101D	13 - 18	09/30/05
Groundwater	MW-101S	5 - 10	09/30/05
Groundwater	MW-102D	13 - 18	09/29/05
Groundwater	MW-102S	5 - 10	09/29/05
Groundwater	MW-103D	19 - 24	09/29/05
Groundwater	MW-104D	18.5 - 23.5	09/29/05
Groundwater	MW-104D DUP	18.5 - 23.5	09/29/05
Groundwater	MW-105D	13.5 - 18.5	09/28/05
Groundwater	MW-106D	14 - 19	09/29/05
Groundwater	MW-107D	22.5 - 27.5	09/29/05
Groundwater	MW-107S	10 - 15	09/29/05

Table 1. Summary of Sampling Locations, Coral Island Shopping Center, Staten Island, New York.

Matrix	Sample Location	Sample Depth (ft)	Sample Date
Groundwater	MW-108D	13 - 18	09/30/05
Groundwater	MW-109D	15 - 20	09/29/05
Groundwater	MW-111D	20.5 - 25.5	09/30/05
Groundwater	MW-112D	19 - 24	09/30/05
Groundwater	MW-112D DUP	19 - 24	09/30/05
Groundwater	MW-113D	11 - 16	09/30/05
Groundwater	MW-113S	3 - 8	09/30/05
Groundwater	MW-126D	18 - 23	09/28/05
Groundwater	MW-201D	13 - 18	8/14/2006
Groundwater	MW-201S	3.5 - 8.5	8/15/2006
Groundwater	MW-202D	13 - 18	8/15/2006
Groundwater	MW-202S	3.5 - 8.5	8/15/2006
Groundwater	MW-203D	24 - 29	8/14/2006
Groundwater	MW-203S	3.5 - 8.5	8/14/2006
Groundwater	MW-204D	13 - 18	8/14/2006
Groundwater	MW-204D DUP	13 - 18	8/14/2006
Groundwater	MW-204S	3.5 - 8.5	8/14/2006
Groundwater	PZ-2	na	08/30/04
Groundwater	PZ-3	na	08/30/04
Groundwater	PZ-4	na	08/30/04
Groundwater	PZ-5	na	08/30/04
Groundwater	PZ-6	11-12	08/30/04
Groundwater	SB-GW-113	na	09/01/05
Groundwater	SB-GW-114	na	09/01/05
Groundwater	SB-GW-115	na	09/01/05
Groundwater	SB-GW-116	na	09/01/05
Groundwater	SB-GW-117	na	09/22/05
Groundwater	SB-GW-118	na	09/22/05
Groundwater	SB-GW-119	na	09/22/05
Groundwater	SB-GW-120	na	09/22/05
Soil	SB-1	1-2	7/29/04
Soil	SB-1	4-5	7/29/04
Soil	SB-1	9-10	7/29/04
Soil	SB-1	18-19	7/29/04
Soil	SB-2	1-2	7/29/04
Soil	SB-2	5-6	7/29/04
Soil	SB-2	9-10	7/29/04
Soil	SB-3	4-5	7/29/04
Soil	SB-4	8-9	7/29/04
Soil	SB-5	8-9	7/29/04
Soil	SB-6	4-5	7/30/04
Soil	SB-6	6-8	7/30/04
Soil	SB-7	6-8	7/30/04
Soil	SB-8	7-8	7/30/04
Soil	SB-9	6-7	7/30/04

Table 1. Summary of Sampling Locations, Coral Island Shopping Center, Staten Island, New York.

Matrix	Sample Location	Sample Depth (ft)	Sample Date
Soil	SB-10	7-8	7/30/04
Soil	SB-101	0.5-2	09/06/05
Soil	SB-101	27.5-30	09/06/05
Soil	SB-101	5-7.5	09/06/05
Soil	SB-102X	0.5-2	09/08/05
Soil	SB-102X	2.5-5	09/08/05
Soil	SB-102X	30-32.5	09/08/05
Soil	SB-103X	0.5-2	09/06/05
Soil	SB-103X	7.5-10	09/06/05
Soil	SB-103X DUP	0.5-2	09/06/05
Soil	SB-104X	0.5-2	09/08/05
Soil	SB-104X	4-6	09/08/05
Soil	SB-104X	7.5-10	09/08/05
Soil	SB-105X	1.5-3	09/07/05
Soil	SB-105X	4.5-6	09/07/05
Soil	SB-107	0.5-2	09/01/05
Soil	SB-107	4-6	09/01/05
Soil	SB-107A	0.5-2	09/14/05
Soil	SB-107A	4-6	09/14/05
Soil	SB-108	0.5-2	09/19/05
Soil	SB-108	2-4	09/19/05
Soil	SB-108	4-6	09/19/05
Soil	SB-109	0.5-2	09/01/05
Soil	SB-109	4-6	09/01/05
Soil	SB-111	0.5-2	09/16/05
Soil	SB-111	4-6	09/16/05
Soil	SB-113	0-2	09/01/05
Soil	SB-114	0-2	09/01/05
Soil	SB-115	0-2	09/01/05
Soil	SB-116	6-8	09/01/05
Soil	SB-117	0.5-2	09/20/05
Soil	SB-127	0-0.17	09/21/05
Soil	SB-128	0-0.17	09/21/05
Soil	SB-201	3-5	8/8/2006
Soil	SB-202	3-5	8/4/2006
Soil	SB-202 DUP	3-5	8/4/2006
Soil	SB-203	3-5	8/4/2006
Soil	SB-204	3-5	8/4/2006
Soil	SB-205	8-10	8/2/2006
Soil	SB-205	12-14	8/2/2006
Soil	SB-206	0-2	8/1/2006
Soil	SB-206	3-5	8/1/2006
Soil	SB-207	0-2	8/1/2006
Soil	SB-207	3-5	8/1/2006
Soil	SB-208	0-2	8/1/2006

Table 1. Summary of Sampling Locations, Coral Island Shopping Center, Staten Island, New York.

Matrix	Sample Location	Sample Depth (ft)	Sample Date
Soil	SB-208	3-5	8/1/2006
Soil	SB-209	0-2	8/1/2006
Soil	SB-209	3-5	8/1/2006
Soil	SB-210	0-2	8/1/2006
Soil	SB-210	3-5	8/1/2006
Soil	SB-211	0-2	8/1/2006
Soil	SB-211	3-5	8/1/2006
Soil	SB-212	0-2	8/1/2006
Soil	SB-212	3-5	8/1/2006
Soil	SB-213	0-2	8/1/2006
Soil	SB-213	3-5	8/1/2006
Soil	SB-214	0-2	8/1/2006
Soil	SB-214	3-5	8/1/2006
Soil	SB-214 DUP	3-5	8/1/2006
Soil	SB-215	0-2	8/1/2006
Soil	SB-215	3-5	8/1/2006
Soil	SB-216	0-2	8/1/2006
Soil	SB-216	3-5	8/1/2006
Soil	SB-217	0-2	8/1/2006
Soil	SB-217	3-5	8/1/2006
Soil	SB-218	0-2	8/1/2006
Soil	SB-218	3-5	8/1/2006
Soil	SB-219	0-2	8/1/2006
Soil	SB-219	3-5	8/1/2006
Soil Vapor	SG-101	10-16 in	9/21/2005
Soil Vapor	SG-102	4-10 in	9/21/2005
Soil Vapor	SG-103	2.5-3	9/21/2005
Soil Vapor	SV-201	4-10 in	8/14/2006
Soil Vapor	SV-202	4-10 in	8/14/2006
Soil Vapor	SV-203	2.5-3	8/15/2006
Soil Vapor	SV-204	4-10 in	8/15/2006
Soil Vapor	SV-204 DUP	4-10 in	8/15/2006
Soil Vapor	SV-205	4-10 in	8/15/2006
Soil Vapor	SV-201	4-10 in	12/16/2006
Soil Vapor	SV-202	4-10 in	12/16/2006
Soil Vapor	SV-204	4-10 in	12/1/2006
Soil Vapor	SV-205	4-10 in	12/1/2006
Soil Vapor	SV-206	4-10 in	12/16/2006
Soil Vapor	SV-206 DUP	4-10 in	12/16/2006

Notes:

in - Inches
DUP - Duplicate
ft - Feet
na - Not applicable

Table 2. Summary of Well Construction Details, Coral Island Shooing Center, Staten Island, New York

Designation	Northing	Easting	Measuring Point Elevation (ft amsl)	Screened Interval (ft bls)
MW-101S	160,977.3	938,957.3	33.25	5.0 - 10.0
MW-101D	160,978.9	938,957.8	32.79	13.0 - 18.0
MW-102S	160,992.5	938,927.9	32.49	5.0 - 10.0
MW-102D	160,990.8	938,928.6	32.60	13.0 - 18.0
MW-103S	161,041.0	938,714.4	33.39	2.0 - 7.0
MW-103D	161,040.8	938,716.0	33.45	19.0 - 24.0
MW-104S	161,053.3	938,602.2	33.53	2.5 - 7.5
MW104D	161,053.6	938,600.7	33.56	18.5 - 23.5
MW-105S	160,933.4	938,567.5	32.61	1.0 - 6.0
MW-105D	160,931.7	938,567.0	32.56	13.5 - 18.5
MW-106S	160,942.2	938,705.2	32.94	1.0 - 6.0
MW-106D	160,942.2	938,703.2	32.80	14.0 - 19.0
MW-107S	160,913.2	938,785.8	32.42	10.0 - 15.0
MW-107D	160,912.4	938,787.8	32.40	22.5 - 27.5
MW-108S	160,912.9	939,137.9	34.83	3.0 - 8.0
MW-108D	160,910.9	939,137.4	34.85	13.0 - 18.0
MW-109S	160,677.4	938,883.8	32.38	6.0 - 1.0
MW-109D	160,676.5	938,885.4	32.25	15.0 - 20.0
MW-111S	160,873.2	938,949.7	33.63	2.5 - 7.5
MW-111D	160,873.8	938,947.4	33.60	20.5 - 25.5
MW-112S	161,125.9	938,698.0	32.61	2.0 - 7.0
MW-112D	161,125.5	938,699.4	32.53	19.0 - 24.0
MW-113S	161,020.4	938,907.1	30.89	3.0 - 8.0
MW-113D	161,022.0	938,907.6	31.04	11.0 - 16.0
MW-126S	160,818.1	938,544.5	33.26	2.5 - 7.5
MW-126D	160,819.7	938,544.9	33.24	18.0 - 23.0
MW-201S	161,289.0	938,435.0	30.25	3.5 - 8.5
MW-201D	161,284.0	938,430.0	30.16	13.0 - 18.0
MW-202S	161,186.0	938,949.0	29.88	3.5 - 8.5
MW-202D	161,191.0	938,943.0	29.92	13.0 - 18.0
MW-203S	161,245.0	938,670.0	31.46	3.5 - 8.5
MW-203D	161,249.0	938,673.0	31.42	24.0 - 29.0
MW-204S	161,363.0	938,805.0	30.81	3.5 - 8.5
MW-204D	161,367.0	938,806.0	30.80	13.0 - 18.0

NOTES:

ft: feet
amsl: above mean sea level
bmp: below measuring point
NA: not applicable

Table 3. Summary of Soil Vapor Screening Data, Coral Island Shopping Center, Staten Island, New York.

Sampling Location	Time of Sample Collection	Peak Concentration (ppm)	1-Minute TWA Concentration (ppm)
Ambient	13:13	0.0	0.0
SVS-1	12:45	0.4	0.1
SVS-2	12:48	0.4	0.0
SVS-3	12:51	0.2	0.0
SVS-4	12:52	0.8	0.4
SVS-5	12:54	1.8	0.5
SVS-6	12:57	0.2	0.0
SVS-7	12:59	0.3	0.0
SVS-8	13:01	0.2	0.0
SVS-9	13:05	0.2	0.1
SVS-10	13:10	0.8	0.0
SVS-11	13:15	0.3	0.0
SVS-12	13:20	0.1	0.0
SVS-13	13:23	0.0	0.0
SVS-14	13:30	0.0	0.0
SVS-15	13:33	0.0	0.0
SVS-16	13:35	0.5	0.2
SVS-17	13:40	6.5	5.0
SVS-18	13:49	1.4	0.8
SVS-19	13:53	0.6	0.0
SVS-20	13:55	0.0	0.0
SVS-21	14:30	0.6	0.2
SVS-22	14:01	0.8	0.1
SVS-23	14:03	0.3	0.0
SVS-24	14:06	0.7	0.0
SVS-25	NS	NS	NS
SVS-26	14:09	0.3	0.0
SVS-27	14:13	0.3	0.0
SVS-28	14:20	1.2	0.8
SVS-29	NS	NS	NS
SVS-30	14:25	0.8	0.6
SVS-31	14:27	0.3	0.3
SVS-32	14:32	0.3	0.0
SVS-33	14:35	0.2	0.0
SVS-34	14:38	0.2	0.0
SVS-35	14:40	0.1	0.0
SVS-36	14:42	0.2	0.0

Table 3. Summary of Soil Vapor Screening Data, Coral Island Shopping Center, Staten Island, New York.

Sampling Location	Time of Sample Collection	Peak Concentration (ppm)	1-Minute TWA Concentration (ppm)
SVS-37	14:45	5.6	3.5
SVS-38	14:47	5.1	3.1
SVS-39	14:50	2.2	1.4
SVS-40	14:52	2.5	1.1
SVS-41	14:55	2.8	0.9
SVS-42	15:59	0.6	0.3
SVS-43	15:00	2.2	0.7
SVS-44	15:10	1.4	0.7
SVS-45	15:30	0.3	0.2
SVS-46	15:35	1.0	0.3
SVS-47	NS	NS	NS
SVS-48	15:41	0.8	0.6
SVS-49	15:43	0.9	0.7
SVS-50	NS	NS	NS
SVS-51	15:45	0.6	0.3
SVS-52	15:47	0.7	0.4
SVS-53	15:49	0.2	0.0
SVS-54	15:54	0.7	0.5
SVS-55	NS	NS	NS
SVS-56	15:57	0.7	0.2
SVS-57	16:03	0.5	0.5
SVS-58	16:09	0.4	0.2
SVS-59	16:12	0.6	0.5
SVS-60	16:15	0.4	0.1

ppm - parts per million
TWA - Time weighted average
NS - Not collected due to water being at the surface

Table 4. Summary of Volatile Organic Compounds Detected in Soil Vapor, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	SG-101	SG-102	SG-103	SV-201	SV-201	SV-202	SV-202	SV-203	SV-204
	Sample Location:	Dry Cleaner	Utility Room Behind Tic-Tac Market	South of Church Gym	School Main Building - Kitchen Closet	School Main Building - Kitchen Closet	School Main Building - Telephone Room	School Main Building - Telephone Room	South of Church Gym	Church -Storage Room off Gym
	Sub-slab/outdoor:	sub-slab	sub-slab	outdoor	sub-slab	sub-slab	sub-slab	sub-slab	outdoor	sub-slab
	Sample Date:	9/21/05	9/21/05	9/21/05	8/14/06	12/16/06	8/14/06	12/16/06	8/15/06	8/15/06
Analyte (concentrations in µg/m^3)	CAS #									
Acetone	67-64-1	8.7	14	48	nr	nr	nr	nr	nr	nr
Benzene	71-43-2	2.4 U	2.8 U	2.5 U	1.3	1.6	1.8	23 U	0.60	0.65
Benzyl chloride	100-44-7	3.8 U	4.6 U	4.1 U	nr	nr	nr	nr	nr	nr
Bromodichloromethane	75-27-4	5.0 U	6.0 U	5.3 U	nr	nr	nr	nr	nr	nr
Bromoform	75-25-2	7.7 U	9.2 U	8.2 U	nr	nr	nr	nr	nr	nr
Bromomethane	74-83-9	2.9 U	3.5 U	3.1 U	nr	nr	nr	nr	nr	nr
1,3-Butadiene	106-99-0	1.6 U	2.0 U	1.7 U	nr	nr	nr	nr	nr	nr
Carbon disulfide	75-15-0	2.8	7.5	6.4	nr	nr	nr	nr	nr	nr
Carbon tetrachloride	56-23-5	4.7 U	5.6 U	5.0 U	nr	nr	nr	nr	nr	nr
Chlorobenzene	108-90-7	3.4 U	4.1 U	3.6 U	nr	nr	nr	nr	nr	nr
Chloroethane	75-00-3	2.1	2.4 U	2.1 U	nr	nr	nr	nr	nr	nr
Chloroform	67-66-3	230	26	3.8 U	nr	nr	nr	nr	nr	nr
Chloromethane	74-87-3	6.2 U	7.4 U	6.5 U	nr	nr	nr	nr	nr	nr
3-Chloropropene	107-05-1	9.3 U	11 U	9.9 U	nr	nr	nr	nr	nr	nr
Cumene	98-82-8	3.7 U	4.4 U	3.9 U	nr	nr	nr	nr	nr	nr
Cyclohexane	110-82-7	5.2	6.0	2.7 U	nr	nr	nr	nr	nr	nr
Dibromochloromethane	124-48-1	6.3 U	7.6 U	6.7 U	nr	nr	nr	nr	nr	nr
1,2-Dibromoethane	106-93-4	5.7 U	6.9 U	6.1 U	nr	nr	nr	nr	nr	nr
1,2-Dichlorobenzene	95-50-1	4.5 U	5.4 U	4.7 U	nr	nr	nr	nr	nr	nr
1,3-Dichlorobenzene	541-73-1	4.5 U	5.4 U	4.8 U	nr	nr	nr	nr	nr	nr
1,4-Dichlorobenzene	106-46-7	4.5 U	5.4 U	4.8 U	nr	nr	nr	nr	nr	nr
Dichlorodifluoromethane	75-71-8	4.6	180	3.9 U	nr	nr	nr	nr	nr	nr
1,1-Dichloroethane	75-34-3	3.0 U	3.6 U	3.2 U	0.13 U	0.13 U	0.26 U	12 U	0.13 U	0.26 U
1,2-Dichlorocthane	107-06-2	3.0 U	3.6 U	3.2 U	0.13 U	0.13 U	0.26 U	12 U	0.13 U	0.26 U
1,1-Dichloroethene	75-35-4	3.0 U	3.5 U	3.1 U	0.063 U	0.063 U	0.12 U	5.8 U	0.065 U	0.12 U
cis-1,2-Dichloroethene	156-59-2	260	3.5 U	19	0.12 U	0.12 U	0.25 U	12 U	0.13 U	0.25 U
trans-1,2-Dichloroethene	156-60-5	6.4	3.5 U	9.3	0.63 U	0.63 U	1.2 U	58 U	0.65 U	1.2 U
1,2-Dichloropropane	78-87-5	3.4 U	4.1 U	3.6 U	nr	nr	nr	nr	nr	nr
cis-1,3-Dichloropropene	10061-01-5	3.4 U	4.1 U	3.6 U	nr	nr	nr	nr	nr	nr
trans-1,3-Dichloropropene	10061-02-6	3.4 U	4.1 U	3.6 U	nr	nr	nr	nr	nr	nr
Dichlorotetrafluoroethane	76-14-2	5.2 U	6.2 U	5.5 U	nr	nr	nr	nr	nr	nr
1,4-Dioxane	123-91-1	11 U	13 U	11 U	nr	nr	nr	nr	nr	nr
Ethanol	64-17-5	5.6 U	6.7 U	6.0 U	nr	nr	nr	nr	nr	nr
Ethylbenzene	100-41-2	6.5	6.5	3.4 U	5.2	21	5.3	32	7.1	7.2
4-Ethyltoluene	622-96-8	3.7 U	4.4 U	3.9 U	nr	nr	nr	nr	nr	nr
Heptane	142-82-5	3.0 U	3.7 U	3.2 U	nr	nr	nr	nr	nr	nr
Hexachlorobutadiene	87-68-3	32 U	38 U	34 U	nr	nr	nr	nr	nr	nr
Hexane	110-54-3	7.4	8.4	2.8 U	nr	nr	nr	nr	nr	nr
Isopropyl alcohol	67-63-0	7.3 U	8.8 U	7.8 U	nr	nr	nr	nr	nr	nr
2-Hexanone	591-78-6	12 U	15 U	13 U	nr	nr	nr	nr	nr	nr
2-Butanone (MEK)	78-93-3	4.6	2.6	13	nr	nr	nr	nr	nr	nr
4-Methyl-2-pentanone	108-10-1	3.0 U	3.7 U	3.2 U	nr	nr	nr	nr	nr	nr

Table 4. Summary of Volatile Organic Compounds Detected in Soil Vapor, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	SG-101	SG-102	SG-103	SV-201	SV-201	SV-202	SV-202	SV-203	SV-204
	Sample Location:	Dry Cleaner	Utility Room Behind Tic-Tac Market	South of Church Gym	School Main Building - Kitchen Closet	School Main Building - Kitchen Closet	School Main Building - Telephone Room	School Main Building - Telephone Room	South of Church Gym	Church -Storage Room off Gym
	Sub-slab/outdoor:	sub-slab	sub-slab	outdoor	sub-slab	sub-slab	sub-slab	sub-slab	outdoor	sub-slab
	Sample Date:	9/21/05	9/21/05	9/21/05	8/14/06	12/16/06	8/14/06	12/16/06	8/15/06	8/15/06
Analyte (concentrations in $\mu g/m^3$)	CAS #									
Methylene chloride	75-09-2	2.6 U	3.1 U	2.7 U	nr	nr	nr	nr	nr	nr
Methyl-t-butyl ether	1634-04-4	2.7 U	3.2 U	2.8 U	0.57 U	0.57 U	1.1 U	53 U	0.59 U	1.1 U
Propylbenzene	103-65-1	3.7 U	4.4 U	3.9 U	nr	nr	nr	nr	nr	nr
Styrene	100-42-5	17	14	4.9	nr	nr	nr	nr	nr	nr
1,1,2,2-Tetrachloroethane	79-34-5	5.1 U	6.1 U	5.4 U	0.22 U	0.22 U	0.43 U	20 U	0.22 UJ	0.43 UJ
Tetrachloroethene	127-18-4	1,300	790	130	45	11	17	20 U	76	12
Tetrahydrofuran	109-99-9	3.4	5.4	2.3 U	nr	nr	nr	nr	nr	nr
Toluene	108-88-3	40	98	6.0	62	74	170	7,200	35	170
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.7 U	6.8 U	6.0 U	nr	nr	nr	nr	nr	nr
1,2,4-Trichlorobenzene	120-82-1	22 U	26 U	23 U	nr	nr	nr	nr	nr	nr
1,1,1-Trichloroethane	71-55-6	4.1 U	4.9 U	4.3 U	1.1	0.56	0.34 U	16 U	0.28	0.34 U
1,1,2-Trichloroethane	79-00-5	4.1 U	4.9 U	4.3 U	0.17 U	0.17 U	0.34 U	16 U	0.18 U	0.34 U
Trichloroethene	79-01-6	220	55	49	4.9	1.7	0.72	16 U	2.9	0.39
Trichlorofluoromethane	75-69-4	4.2 U	5.0 U	4.4 U	nr	nr	nr	nr	nr	nr
1,2,4-Trimethylbenzene	95-63-6	4.1	4.4 U	3.9 U	nr	nr	nr	nr	nr	nr
1,3,5-Trimethylbenzene	108-67-8	3.7 U	4.4 U	3.9 U	nr	nr	nr	nr	nr	nr
2,2,4-Trimethylpentane	540-84-1	3.5 U	4.2 U	3.7 U	nr	nr	nr	nr	nr	nr
Vinyl chloride	75-01-04	3.3	2.3 U	2.0 U	0.040 U	0.040 U	0.081 U	3.7 U	0.042 U	0.081 U
M&p-Xylenes	1330-20-7	22	20	7.2	21	72	22	93	27	27
o-Xylene	95-47-6	13	12	4.3	6.0	26	5.9	26	11	10

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
$\mu g/m^3$ - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 4. Summary of Volatile Organic Compounds Detected in Soil Vapor, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	SV-204 DUP	SV-204	SV-205	SV-205	SV-206	SV-206 DUP
	Sample Location:	Church -Storage Room off Gym	Church -Storage Room off Gym	Church - Small Boileroom	Church - Small Boileroom	School Main Building - Room A-6	School Main Building - Room A-6
	Sub-slab/outdoor:	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
	Sample Date:	8/15/06	12/1/06	8/15/06	12/1/06	12/16/06	12/16/06
Analyte (concentrations in µg/m^3)	CAS #						
Acetone	67-64-1	nr	nr	nr	nr	nr	nr
Benzene	71-43-2	0.62	3.3	1.2	4.7	1.1	1.1
Benzyl chloride	100-44-7	nr	nr	nr	nr	nr	nr
Bromodichloromethane	75-27-4	nr	nr	nr	nr	nr	nr
Bromoform	75-25-2	nr	nr	nr	nr	nr	nr
Bromomethane	74-83-9	nr	nr	nr	nr	nr	nr
1,3-Butadiene	106-99-0	nr	nr	nr	nr	nr	nr
Carbon disulfide	75-15-0	nr	nr	nr	nr	nr	nr
Carbon tetrachloride	56-23-5	nr	nr	nr	nr	nr	nr
Chlorobenzene	108-90-7	nr	nr	nr	nr	nr	nr
Chloroethane	75-00-3	nr	nr	nr	nr	nr	nr
Chloroform	67-66-3	nr	nr	nr	nr	nr	nr
Chloromethane	74-87-3	nr	nr	nr	nr	nr	nr
3-Chloropropene	107-05-1	nr	nr	nr	nr	nr	nr
Cumene	98-82-8	nr	nr	nr	nr	nr	nr
Cyclohexane	110-82-7	nr	nr	nr	nr	nr	nr
Dibromochloromethane	124-48-1	nr	nr	nr	nr	nr	nr
1,2-Dibromoethane	106-93-4	nr	nr	nr	nr	nr	nr
1,2-Dichlorobenzene	95-50-1	nr	nr	nr	nr	nr	nr
1,3-Dichlorobenzene	541-73-1	nr	nr	nr	nr	nr	nr
1,4-Dichlorobenzene	106-46-7	nr	nr	nr	nr	nr	nr
Dichlorodifluoromethane	75-71-8	nr	nr	nr	nr	nr	nr
1,1-Dichloroethane	75-34-3	0.25 U	0.50 U	0.19 U	0.13 U	0.12 U	0.11 U
1,2-Dichloroethane	107-06-2	0.25 U	0.50 U	0.26	0.13 U	0.12 U	0.11 U
1,1-Dichloroethene	75-35-4	0.12 U	0.25 U	0.091 U	0.064 U	0.057 U	0.055 U
cis-1,2-Dichloroethene	156-59-2	0.24 U	0.49 U	0.18 U	0.13 U	0.11 U	0.11 U
trans-1,2-Dichloroethene	156-60-5	1.2 U	2.5 U	0.91 U	0.64 U	0.57 U	0.55 U
1,2-Dichloropropane	78-87-5	nr	nr	nr	nr	nr	nr
cis-1,3-Dichloropropene	10061-01-5	nr	nr	nr	nr	nr	nr
trans-1,3-Dichloropropene	10061-02-6	nr	nr	nr	nr	nr	nr
Dichlorotetrafluoroethane	76-14-2	nr	nr	nr	nr	nr	nr
1,4-Dioxane	123-91-1	nr	nr	nr	nr	nr	nr
Ethanol	64-17-5	nr	nr	nr	nr	nr	nr
Ethylbenzene	100-41-2	7.2	10	9.4	21	20	20
4-Ethyltoluene	622-96-8	nr	nr	nr	nr	nr	nr
Heptane	142-82-5	nr	nr	nr	nr	nr	nr
Hexachlorobutadiene	87-68-3	nr	nr	nr	nr	nr	nr
Hexane	110-54-3	nr	nr	nr	nr	nr	nr
Isopropyl alcohol	67-63-0	nr	nr	nr	nr	nr	nr
2-Hexanone	591-78-6	nr	nr	nr	nr	nr	nr
2-Butanone (MEK)	78-93-3	nr	nr	nr	nr	nr	nr
4-Methyl-2-pentanone	108-10-1	nr	nr	nr	nr	nr	nr

Table 4. Summary of Volatile Organic Compounds Detected in Soil Vapor, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	SV-204 DUP	SV-204	SV-205	SV-205	SV-206	SV-206 DUP
	Sample Location:	Church -Storage Room off Gym	Church -Storage Room off Gym	Church - Small Boileroom	Church - Small Boileroom	School Main Building - Room A-6	School Main Building - Room A-6
	Sub-slab/outdoor:	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
	Sample Date:	8/15/06	12/1/06	8/15/06	12/1/06	12/16/06	12/16/06
Analyte (concentrations in µg/m^3)	CAS #						
Methylene chloride	75-09-2	nr	nr	nr	nr	nr	nr
Methyl-t-butyl ether	1634-04-4	1.1 U	2.2 U	0.83 U	0.58 U	0.52 U	0.50 U
Propylbenzene	103-65-1	nr	nr	nr	nr	nr	nr
Styrene	100-42-5	nr	nr	nr	nr	nr	nr
1,1,2,2-Tetrachloroethane	79-34-5	0.42 UJ	0.85 U	0.32 UJ	0.22 U	0.20 U	0.19 U
Tetrachloroethene	127-18-4	12	9.9	4.2	4.4	2.9	3
Tetrahydrofuran	109-99-9	nr	nr	nr	nr	nr	nr
Toluene	108-88-3	170	300	120	81	34	33
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	nr	nr	nr	nr	nr	nr
1,2,4-Trichlorobenzene	120-82-1	nr	nr	nr	nr	nr	nr
1,1,1-Trichloroethane	71-55-6	0.34 U	0.68 U	0.33	0.18 U	0.16 U	0.15 U
1,1,2-Trichloroethane	79-00-5	0.34 U	0.68 U	0.25 U	0.18 U	0.16 U	0.15 U
Trichloroethene	79-01-6	0.38	1.6	0.70	3	0.15 U	0.15 U
Trichlorofluoromethane	75-69-4	nr	nr	nr	nr	nr	nr
1,2,4-Trimethylbenzene	95-63-6	nr	nr	nr	nr	nr	nr
1,3,5-Trimethylbenzene	108-67-8	nr	nr	nr	nr	nr	nr
2,2,4-Trimethylpentane	540-84-1	nr	nr	nr	nr	nr	nr
Vinyl chloride	75-01-04	0.079 U	0.16 U	0.059 U	0.041 U	0.037 U	0.036 U
M&p-Xylenes	1330-20-7	27	32	32	67	74	73
o-Xylene	95-47-6	11	10	13	23	28	27

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
µg/m^3 - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Sample ID:		A-1	A-2	A-3	A-4	AS-101	AS-102	AS-103	AS-103 DUP	AS-104
Sample Location:		Tic-Tac Market	Dry Cleaner	Stationary	Parking Lot South of Dry Cleaner	Dry Cleaner	Utility Room Behind Tic-Tac Market	South of Church Gym	South of Church Gym	School Modular Unit - Girl's Bathroom
Indoor / Outdoor:		Indoor	Indoor	Indoor	Outdoor	Indoor	Indoor	Outdoor	Outdoor	Indoor
Sample Date:		7/27/2004	7/27/2004	7/27/2004	7/27/2004	09/21/05	09/21/05	09/21/05	09/21/05	11/1/2005
Analyte (concentrations in µg/m^3)	CAS #									
Acetone	67-64-1	14	240 U	14	24	12	28	8.0 U	8.0 U	14
Benzene	71-43-2	1.6 U	32 U	1.6 U	2.2	2.3 U	2.4 U	2.7 U	2.7 U	2 U
Benzyl chloride	100-44-7	nr	nr	nr	nr	3.8 U	3.9 U	4.3 U	4.3 U	3 U
Bromodichloromethane	75-27-4	3.4 U	67 U	3.4 U	3.4 U	4.9 U	5.1 U	5.6 U	5.6 U	3 U
Bromoethene	593-60-2	2.2 U	44 U	2.2 U	2.2 U	nr	nr	nr	nr	2 U
Bromoform	75-25-2	5.2 U	100 U	5.2 U	5.2 U	7.5 U	7.8 U	8.7 U	8.7 U	5 U
Bromomethane	74-83-9	1.9 U	39 U	1.9 U	1.9 U	2.8 U	3.0 U	3.3 U	3.3 U	2 U
1,3-Butadiene	106-99-0	1.1 U	22 U	1.1 U	1.1 U	1.6 U	1.7 U	1.8 U	1.8 U	1 U
tert-Butyl alcohol	75-65-0	15 U	300 U	15 U	15 U	nr	nr	nr	nr	2 U
Carbon disulfide	75-15-0	1.6 U	31 U	1.6 U	4.4	2.3 U	2.4 U	2.6 U	2.6 U	2 U
Carbon tetrachloride	56-23-5	3.1 U	63 U	3.1 U	3.1 U	4.6 U	4.8 U	5.3 U	5.3 U	3 U
Chlorobenzene	108-90-7	2.3 U	46 U	2.3 U	2.3 U	3.4 U	3.5 U	3.9 U	3.9 U	2 U
Chloroethane	75-00-3	1.3 U	26 U	1.3 U	1.3 U	1.9 U	2.0 U	2.2 U	2.2 U	1 U
Chloroform	67-66-3	2.4 U	49 U	2.4 U	2.4 U	3.6 U	3.7 U	4.1 U	4.1 U	2 U
Chloromethane	74-87-3	1.1	21 U	1.4	1.1	6.0 U	6.3 U	6.9 U	6.9 U	1 U
3-Chloropropene	107-05-1	1.6 U	31 U	1.6 U	1.6 U	9.1 U	9.5 U	10 U	10 U	2 U
2-Chlorotoluene	95-49-8	2.6 U	52 U	2.6 U	2.6 U	nr	nr	nr	nr	2.7
Cumene	98-82-8	nr	nr	nr	nr	3.6 U	3.7 U	4.1 U	4.1 U	2 U
Cyclohexane	110-82-7	1.7 U	34 U	1.7 U	1.7 U	2.5 U	2.6 U	2.9 U	2.9 U	2 U
Dibromochloromethane	124-48-1	4.3 U	85 U	4.3 U	4.3 U	6.2 U	6.5 U	7.2 U	7.2 U	4 U
1,2-Dibromoethane	106-93-4	3.8 U	77 U	3.8 U	3.8 U	5.6 U	5.8 U	6.4 U	6.4 U	4 U
1,2-Dichlorobenzene	95-50-1	3.0 U	60 U	3.0 U	3.0 U	4.4 U	4.6 U	5.0 U	5.0 U	3 U
1,3-Dichlorobenzene	541-73-1	3.0 U	60 U	3.0 U	3.0 U	4.4 U	4.6 U	5.0 U	5.0 U	3 U
1,4-Dichlorobenzene	106-46-7	3.0 U	60 U	3.0 U	3.0 U	4.4 U	4.6 U	5.0 U	5.0 U	3 U
Dichlorodifluoromethane	75-71-8	11	49 U	2.7	2.8	10	23	4.2 U	4.2 U	2 U
1,1-Dichloroethane	75-34-3	2.0 U	40 U	2.0 U	2.0 U	3.0 U	3.1 U	3.4 U	3.4 U	2 U
1,2-Dichloroethane	107-06-2	2.0 U	40 U	2.0 U	2.0 U	3.0 U	3.1 U	3.4 U	3.4 U	2 U
1,1-Dichloroethene	75-35-4	2.0 U	40 U	2.0 U	2.0 U	2.9 U	3.0 U	3.3 U	3.3 U	2 U
cis-1,2-Dichloroethene	156-59-2	2.0 U	40 U	2.0 U	2.0 U	2.9 U	3.0 U	3.3 U	3.3 U	2 U
trans-1,2-Dichloroethene	156-60-5	2.0 U	40 U	2.0 U	2.0 U	2.9 U	3.0 U	3.3 U	3.3 U	2 U
1,2-Dichloropropane	78-87-5	2.3 U	46 U	2.3 U	2.3 U	3.4 U	3.5 U	3.9 U	3.9 U	2 U
cis-1,3-Dichloropropene	10061-01-5	2.3 U	45 U	2.3 U	2.3 U	3.3 U	3.4 U	3.8 U	3.8 U	2 U
trans-1,3-Dichloropropene	10061-02-6	2.3 U	45 U	2.3 U	2.3 U	3.3 U	3.4 U	3.8 U	3.8 U	2 U
Dichlorotetrafluoroethane	76-14-2	nr	nr	nr	nr	5.1 U	5.3 U	5.9 U	5.9 U	3 U
1,4-Dioxane	123-91-1	18 U	360 U	18 U	18 U	10 U	11 U	12 U	12 U	2 U
Ethanol	64-17-5	nr	nr	nr	nr	170	80	6.3 U	6.3 U	3.2
Ethyl acetate	141-78-6	nr	nr	nr	nr	nr	nr	nr	nr	2 U
Ethylbenzene	100-41-2	2.2 U	43 U	2.2 U	3.0	3.2 U	3.3 U	3.6 U	3.6 U	2 U
4-Ethyltoluene	622-96-8	2.5 U	49 U	2.5 U	2.5 U	3.6 U	3.7 U	4.1 U	4.1 U	2 U
Heptane	142-82-5	2.0 U	41 U	2.0 U	2.0 U	3.0 U	3.1 U	3.4 U	3.4 U	2 U
Hexachlorobutadiene	87-68-3	5.3 U	110 U	5.3 U	5.3 U	31 U	32 U	36 U	36 U	5 U
Hexane	110-54-3	2.2	35 U	2.3	3.5	2.6 U	2.7 U	3.0 U	3.0 U	2 U

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	A-1	A-2	A-3	A-4	AS-101	AS-102	AS-103	AS-103 DUP	AS-104
	Sample Location:	Tic-Tac Market	Dry Cleaner	Stationary	Parking Lot South of Dry Cleaner	Dry Cleaner	Utility Room Behind Tic-Tac Market	South of Church Gym	South of Church Gym	School Modular Unit - Girl's Bathroom
	Indoor / Outdoor:	Indoor	Indoor	Indoor	Outdoor	Indoor	Indoor	Outdoor	Outdoor	Indoor
	Sample Date:	7/27/2004	7/27/2004	7/27/2004	7/27/2004	09/21/05	09/21/05	09/21/05	09/21/05	11/1/2005
Analyte (concentrations in µg/m^3)	CAS #									
Isopropyl alcohol	67-63-0	14	250 U	12 U	12 U	7.2 U	53	8.2 U	8.2 U	1.5
2-Hexanone	591-78-6	2.0 U	41 U	2.0 U	2.0 U	12 U	12 U	14 U	14 U	2 U
2-Butanone (MEK)	78-93-3	1.5 U	29 U	1.5 U	2.6	2.2 U	7.9	2.5 U	2.5 U	1 U
4-Methyl-2-pentanone	108-10-1	2.0 U	41 U	2.0 U	2.0 U	3.0 U	3.1 U	3.4 U	3.4 U	2 U
Methylene chloride	75-09-2	1.7 U	35 U	1.7 U	1.7 U	2.5 U	2.6 U	2.9 U	2.9 U	2 U
Methyl-t-butyl ether	1634-04-4	1.8 U	36 U	1.8 U	1.8 U	2.6 U	2.7 U	3.0 U	3.0 U	2 U
Propene	115-07-1	nr	nr	nr	nr	nr	nr	nr	nr	2.4
Propylbenzene	103-65-1	nr	nr	nr	nr	3.6 U	3.7 U	4.1 U	4.1 U	nr
Styrene	100-42-5	2.1 U	43 U	2.1 U	2.1 U	3.1 U	3.2 U	3.6 U	3.6 U	2 U
1,1,2,2-Tetrachloroethane	79-34-5	3.4 U	69 U	3.4 U	3.4 U	5.0 U	5.2 U	5.8 U	5.8 U	3 U
Tetrachloroethene	127-18-4	3.4 U	3,900	3.4 U	33	710	42	5.7 U	5.7 U	3 U
Tetrahydrofuran	109-99-9	15 U	290 U	15 U	15 U	2.2 U	2.2 U	2.6	2.5 U	1 U
Toluene	108-88-3	2.9	38 U	15	15	2.8 U	4.1	3.2 U	3.2 U	12
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	nr	nr	nr	nr	5.6 U	5.8 U	6.4 U	6.4 U	4 U
1,2,4-Trichlorobenzene	120-82-1	3.7 U	74 U	3.7 U	3.7 U	22 U	22 U	25 U	25 U	4 U
1,1,1-Trichloroethane	71-55-6	2.7 U	55 U	2.7 U	2.7 U	4.0 U	4.1 U	4.6 U	4.6 U	3 U
1,1,2-Trichloroethane	79-00-5	2.7 U	55 U	2.7 U	2.7 U	4.0 U	4.1 U	4.6 U	4.6 U	3 U
Trichloroethene	79-01-6	2.7 U	91	2.7 U	2.7 U	8.9	4.1 U	4.5 U	4.5 U	3 U
Trichlorofluoromethane	75-69-4	2.8 U	56 U	2.8 U	2.8 U	4.1 U	4.3 U	4.7 U	4.7 U	3 U
1,2,4-Trimethylbenzene	95-63-6	2.5 U	49 U	2.5 U	2.5 U	3.6 U	3.7 U	4.1 U	4.1 U	2 U
1,3,5-Trimethylbenzene	108-67-8	2.5 U	49 U	2.5 U	2.5 U	3.6 U	3.7 U	4.1 U	4.1 U	2 U
2,2,4-Trimethylpentane	540-84-1	2.3 U	47 U	2.3 U	2.6	3.4 U	3.6 U	3.9 U	3.9 U	2 U
Vinyl acetate	108-05-4	nr	nr	nr	nr	nr	nr	nr	nr	3.9
Vinyl chloride	75-01-04	1.3 U	26 U	1.3 U	1.3 U	1.9 U	1.9 U	2.1 U	2.1 U	1 U
M&p-Xylenes	1330-20-7	2.2 U	43 U	2.2 U	9.1	3.2 U	3.3 U	9.8	9.3	2 U
o-Xylene	95-47-6	2.2 U	43 U	2.2 U	2.7	3.2 U	3.3 U	5.4	5.9	2 U

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
µg/m^3 - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Sample ID:		AS-105	AS-106	AS-107	AS-108	AS-109	AS-110	AS-111	AS-112	AS-113
Sample Location:		School Modular Unit - Room M-7	School Modular Unit - Room M-10	School Outdoor Ambient Air - South of Modular Unit	School Main Building - Cafeteria/ Kitchen	School Administration Building - Room CV-5	Church - Gym	Church - Storage Room off Gym	Church - General Purpose Room	Church Outdoor Ambient Air - South of Gym
Indoor / Outdoor:		Indoor	Indoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor
Sample Date:		11/1/2005	11/1/2005	11/1/2005	11/1/2005	11/1/2005	11/2/2005	11/2/2005	11/2/2005	11/2/2005
Analyte (concentrations in µg/m^3)	CAS #									
Acetone	67-64-1	16	13	3.9	7.7	8.3	5.7	8.6	3.4	1.7
Benzene	71-43-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Benzyl chloride	100-44-7	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Bromodichloromethane	75-27-4	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Bromoethene	593-60-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromoform	75-25-2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	74-83-9	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Butadiene	106-99-0	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butyl alcohol	75-65-0	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	75-15-0	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	56-23-5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	108-90-7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloroethane	75-00-3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	67-66-3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chloromethane	74-87-3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
3-Chloropropene	107-05-1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	95-49-8	3.3	2.9	3 U	5.6	4	3 U	4.4	3 U	3 U
Cumene	98-82-8	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Cyclohexane	110-82-7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibromochloromethane	124-48-1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dibromoethane	106-93-4	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2-Dichlorobenzene	95-50-1	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
1,3-Dichlorobenzene	541-73-1	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
1,4-Dichlorobenzene	106-46-7	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Dichlorodifluoromethane	75-71-8	2 U	2.6	2.5	2.6	2.5	2 U	2.6	2 U	2.5
1,1-Dichloroethane	75-34-3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloroethane	107-06-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	75-35-4	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	156-59-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	156-60-5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichloropropane	78-87-5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
cis-1,3-Dichloropropene	10061-01-5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	10061-02-6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dichlorotetrafluoroethane	76-14-2	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
1,4-Dioxane	123-91-1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethanol	64-17-5	5.4	4.2	1 U	15	2.7	5.3	9.6	1.5	1 U
Ethyl acetate	141-78-6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethylbenzene	100-41-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Ethyltoluene	622-96-8	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Heptane	142-82-5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorobutadiene	87-68-3	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexane	110-54-3	2.4	2.3	2 U	2.4	2 U	2 U	2 U	2 U	2 U

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Analyte (concentrations in µg/m^3)	CAS #	**Sample ID:** AS-105	AS-106	AS-107	AS-108	AS-109	AS-110	AS-111	AS-112	AS-113
		Sample Location: School Modular Unit - Room M-7	School Modular Unit - Room M-10	School Outdoor Ambient Air - South of Modular Unit	School Main Building - Cafeteria/ Kitchen	School Administration Building - Room CV-5	Church - Gym	Church - Storage Room off Gym	Church - General Purpose Room	Church Outdoor Ambient Air - South of Gym
		Indoor / Outdoor: Indoor	Indoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor
		Sample Date: 11/1/2005	11/1/2005	11/1/2005	11/1/2005	11/1/2005	11/2/2005	11/2/2005	11/2/2005	11/2/2005
Isopropyl alcohol	67-63-0	3.6	2.7	1 U	2	1 U	3.2	4.2	1.6	1 U
2-Hexanone	591-78-6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Butanone (MEK)	78-93-3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	108-10-1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methylene chloride	75-09-2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-t-butyl ether	1634-04-4	2.2	2	2 U	1.9	2 U	2 U	2 U	2 U	2 U
Propene	115-07-1	3.4	3.1	1.3	2.7	2.3	2.1	2.4	1.1	1
Propylbenzene	103-65-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Styrene	100-42-5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	79-34-5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Tetrachloroethene	127-18-4	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Tetrahydrofuran	109-99-9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	108-88-3	10	9.8	5.5	6.7	14	6.4	3.5	3.7	2.6
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,2,4-Trichlorobenzene	120-82-1	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
1,1,1-Trichloroethane	71-55-6	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
1,1,2-Trichloroethane	79-00-5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Trichloroethene	79-01-6	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Trichlorofluoromethane	75-69-4	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
1,2,4-Trimethylbenzene	95-63-6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,3,5-Trimethylbenzene	108-67-8	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,2,4-Trimethylpentane	540-84-1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl acetate	108-05-4	4.4	5	2 U	3.6	2.6	2 U	2 U	2 U	2 U
Vinyl chloride	75-01-04	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
M&p-Xylenes	1330-20-7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	95-47-6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
µg/m^3 - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Sample ID:	AS-301	AS-301	AS-302	AS-302 DUP	AS-302	AS-303	AS-303	AS-304	AS-304
Sample Location:	School Outdoor Ambient Air - South of Cafeteria	School Outdoor Ambient Air - South of Cafeteria	School Main Building - Kitchen	School Main Building - Kitchen	School Main Building - Kitchen	School Main Building - Office	School Main Building - Office	School Main Building - Room A-6	School Main Building - Room A-6
Indoor / Outdoor:	Outdoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date:	8/14/2006	12/16/2006	8/14/2006	8/14/2006	12/16/2006	8/14/2006	12/16/2006	8/14/2006	12/16/2006
Analyte (concentrations in µg/m^3)	CAS #								
Acetone	67-64-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Benzene	71-43-2	0.80	0.77	6.7	7.1	1.3	1.3	1.3	1.2	1
Benzyl chloride	100-44-7	nr	nr	nr	nr	nr	nr	nr	nr	nr
Bromodichloromethane	75-27-4	nr	nr	nr	nr	nr	nr	nr	nr	nr
Bromoethene	593-60-2	nr	nr	nr	nr	nr	nr	nr	nr	nr
Bromoform	75-25-2	nr	nr	nr	nr	nr	nr	nr	nr	nr
Bromomethane	74-83-9	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,3-Butadiene	106-99-0	nr	nr	nr	nr	nr	nr	nr	nr	nr
tert-Butyl alcohol	75-65-0	nr	nr	nr	nr	nr	nr	nr	nr	nr
Carbon disulfide	75-15-0	nr	nr	nr	nr	nr	nr	nr	nr	nr
Carbon tetrachloride	56-23-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
Chlorobenzene	108-90-7	nr	nr	nr	nr	nr	nr	nr	nr	nr
Chloroethane	75-00-3	nr	nr	nr	nr	nr	nr	nr	nr	nr
Chloroform	67-66-3	nr	nr	nr	nr	nr	nr	nr	nr	nr
Chloromethane	74-87-3	nr	nr	nr	nr	nr	nr	nr	nr	nr
3-Chloropropene	107-05-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
2-Chlorotoluene	95-49-8	nr	nr	nr	nr	nr	nr	nr	nr	nr
Cumene	98-82-8	nr	nr	nr	nr	nr	nr	nr	nr	nr
Cyclohexane	110-82-7	nr	nr	nr	nr	nr	nr	nr	nr	nr
Dibromochloromethane	124-48-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,2-Dibromoethane	106-93-4	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,2-Dichlorobenzene	95-50-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,3-Dichlorobenzene	541-73-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,4-Dichlorobenzene	106-46-7	nr	nr	nr	nr	nr	nr	nr	nr	nr
Dichlorodifluoromethane	75-71-8	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,1-Dichloroethane	75-34-3	0.13 U	0.12 U	0.13 U	0.14 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U
1,2-Dichloroethane	107-06-2	0.13 U	0.12 U	0.13 U	0.14 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U
1,1-Dichloroethene	75-35-4	0.064 U	0.061 U	0.065 U	0.069 U	0.058 U	0.058 U	0.064 U	0.064 U	0.058 U
cis-1,2-Dichloroethene	156-59-2	0.13 U	0.12 U	0.13 U	0.14 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U
trans-1,2-Dichloroethene	156-60-5	0.64 U	0.61 U	0.65 U	0.69 U	0.58 U	0.58 U	0.64 U	0.64 U	0.58 U
1,2-Dichloropropane	78-87-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
cis-1,3-Dichloropropene	10061-01-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
trans-1,3-Dichloropropene	10061-02-6	nr	nr	nr	nr	nr	nr	nr	nr	nr
Dichlorotetrafluoroethane	76-14-2	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,4-Dioxane	123-91-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Ethanol	64-17-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
Ethyl acetate	141-78-6	nr	nr	nr	nr	nr	nr	nr	nr	nr
Ethylbenzene	100-41-2	2.7	0.71	5.0	5.7	0.7	1.2	1.2	0.98	0.43
4-Ethyltoluene	622-96-8	nr	nr	nr	nr	nr	nr	nr	nr	nr
Heptane	142-82-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
Hexachlorobutadiene	87-68-3	nr	nr	nr	nr	nr	nr	nr	nr	nr
Hexane	110-54-3	nr	nr	nr	nr	nr	nr	nr	nr	nr

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Sample ID:	AS-301	AS-301	AS-302	AS-302 DUP	AS-302	AS-303	AS-303	AS-304	AS-304
Sample Location:	School Outdoor Ambient Air - South of Cafeteria	School Outdoor Ambient Air - South of Cafeteria	School Main Building - Kitchen	School Main Building - Kitchen	School Main Building - Kitchen	School Main Building - Office	School Main Building - Office	School Main Building - Room A-6	School Main Building - Room A-6
Indoor / Outdoor:	Outdoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date:	8/14/2006	12/16/2006	8/14/2006	8/14/2006	12/16/2006	8/14/2006	12/16/2006	8/14/2006	12/16/2006
Analyte (concentrations in µg/m^3)	CAS #								
Isopropyl alcohol	67-63-0	nr	nr	nr	nr	nr	nr	nr	nr	nr
2-Hexanone	591-78-6	nr	nr	nr	nr	nr	nr	nr	nr	nr
2-Butanone (MEK)	78-93-3	nr	nr	nr	nr	nr	nr	nr	nr	nr
4-Methyl-2-pentanone	108-10-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Methylene chloride	75-09-2	nr	nr	nr	nr	nr	nr	nr	nr	nr
Methyl-t-butyl ether	1634-04-4	0.58 U	0.56 U	0.59 U	0.63 U	0.53 U	0.54	0.58 U	0.86	0.53 U
Propene	115-07-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Propylbenzene	103-65-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Styrene	100-42-5	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,1,2,2-Tetrachloroethane	79-34-5	0.22 U	0.21 U	0.22 U	0.24 U	0.20 U	0.20 U	0.22 U	0.22 U	0.20 U
Tetrachloroethene	127-18-4	0.64	0.21 U	0.59	0.54	1.1	0.43	1.6	18	2.7
Tetrahydrofuran	109-99-9	nr	nr	nr	nr	nr	nr	nr	nr	nr
Toluene	108-88-3	17	2.8	25	28	13	7.8	19	31	8.8
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,2,4-Trichlorobenzene	120-82-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,1,1-Trichloroethane	71-55-6	0.18 U	0.17 U	0.18 U	0.19 U	0.16 U	0.16 U	0.18 U	0.18 U	0.16 U
1,1,2-Trichloroethane	79-00-5	0.18 U	0.17 U	0.18 U	0.19 U	0.16 U	0.16 U	0.18 U	0.18 U	0.16 U
Trichloroethene	79-01-6	0.34	0.17 U	0.18 U	0.19 U	0.16 U	0.16 U	0.83	0.17 U	0.16 U
Trichlorofluoromethane	75-69-4	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,2,4-Trimethylbenzene	95-63-6	nr	nr	nr	nr	nr	nr	nr	nr	nr
1,3,5-Trimethylbenzene	108-67-8	nr	nr	nr	nr	nr	nr	nr	nr	nr
2,2,4-Trimethylpentane	540-84-1	nr	nr	nr	nr	nr	nr	nr	nr	nr
Vinyl acetate	108-05-4	nr	nr	nr	nr	nr	nr	nr	nr	nr
Vinyl chloride	75-01-04	0.041 U	0.040 U	0.042 U	0.045 U	0.037 U	0.037 U	0.041 U	0.041 U	0.037 U
M&p-Xylenes	1330-20-7	11	2.4	16	19	2.2	3.5	3.1	2.6	1.3
o-Xylene	95-47-6	3.0	0.86	6.6	7.7	0.85	1.6	1.2	1.0	0.49

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
µg/m^3 - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

Sample ID:		AS-305	AS-305	AS-306	AS-306	AS-306 DUP	AS-307	AS-307
Sample Location:		Church Outdoor Ambient Air - South of Gym	Church Outdoor Ambient Air - South of Gym	Church - Gym	Church - Gym	Church - Gym	Church - Classroom	Church - Classroom
Indoor / Outdoor:		Outdoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor
Sample Date:		8/15/2006	12/1/2006	8/15/2006	12/1/2006	12/1/2006	8/15/2006	12/1/2006
Analyte (concentrations in µg/m^3)	CAS #							
Acetone	67-64-1	nr	nr	nr	nr	nr	nr	nr
Benzene	71-43-2	0.76	4.8	1.8	4.4	4.5	0.78	1.4
Benzyl chloride	100-44-7	nr	nr	nr	nr	nr	nr	nr
Bromodichloromethane	75-27-4	nr	nr	nr	nr	nr	nr	nr
Bromoethene	593-60-2	nr	nr	nr	nr	nr	nr	nr
Bromoform	75-25-2	nr	nr	nr	nr	nr	nr	nr
Bromomethane	74-83-9	nr	nr	nr	nr	nr	nr	nr
1,3-Butadiene	106-99-0	nr	nr	nr	nr	nr	nr	nr
tert-Butyl alcohol	75-65-0	nr	nr	nr	nr	nr	nr	nr
Carbon disulfide	75-15-0	nr	nr	nr	nr	nr	nr	nr
Carbon tetrachloride	56-23-5	nr	nr	nr	nr	nr	nr	nr
Chlorobenzene	108-90-7	nr	nr	nr	nr	nr	nr	nr
Chloroethane	75-00-3	nr	nr	nr	nr	nr	nr	nr
Chloroform	67-66-3	nr	nr	nr	nr	nr	nr	nr
Chloromethane	74-87-3	nr	nr	nr	nr	nr	nr	nr
3-Chloropropene	107-05-1	nr	nr	nr	nr	nr	nr	nr
2-Chlorotoluene	95-49-8	nr	nr	nr	nr	nr	nr	nr
Cumene	98-82-8	nr	nr	nr	nr	nr	nr	nr
Cyclohexane	110-82-7	nr	nr	nr	nr	nr	nr	nr
Dibromochloromethane	124-48-1	nr	nr	nr	nr	nr	nr	nr
1,2-Dibromoethane	106-93-4	nr	nr	nr	nr	nr	nr	nr
1,2-Dichlorobenzene	95-50-1	nr	nr	nr	nr	nr	nr	nr
1,3-Dichlorobenzene	541-73-1	nr	nr	nr	nr	nr	nr	nr
1,4-Dichlorobenzene	106-46-7	nr	nr	nr	nr	nr	nr	nr
Dichlorodifluoromethane	75-71-8	nr	nr	nr	nr	nr	nr	nr
1,1-Dichloroethane	75-34-3	0.13 U	0.12 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U
1,2-Dichloroethane	107-06-2	0.13 U	0.12 U	0.31	0.12 U	0.13 U	0.13 U	0.12 U
1,1-Dichloroethene	75-35-4	0.063 U	0.059 U	0.059 U	0.059 U	0.064 U	0.065 U	0.061 U
cis-1,2-Dichloroethene	156-59-2	0.12 U	0.12 U	0.12 U	0.12 U	0.13 U	0.13 U	0.12 U
trans-1,2-Dichloroethene	156-60-5	0.63 U	0.59 U	0.59 U	0.59 U	0.64 U	0.65 U	0.61 U
1,2-Dichloropropane	78-87-5	nr	nr	nr	nr	nr	nr	nr
cis-1,3-Dichloropropene	10061-01-5	nr	nr	nr	nr	nr	nr	nr
trans-1,3-Dichloropropene	10061-02-6	nr	nr	nr	nr	nr	nr	nr
Dichlorotetrafluoroethane	76-14-2	nr	nr	nr	nr	nr	nr	nr
1,4-Dioxane	123-91-1	nr	nr	nr	nr	nr	nr	nr
Ethanol	64-17-5	nr	nr	nr	nr	nr	nr	nr
Ethyl acetate	141-78-6	nr	nr	nr	nr	nr	nr	nr
Ethylbenzene	100-41-2	2.2	0.8	1.6	0.91	1	0.92	0.86
4-Ethyltoluene	622-96-8	nr	nr	nr	nr	nr	nr	nr
Heptane	142-82-5	nr	nr	nr	nr	nr	nr	nr
Hexachlorobutadiene	87-68-3	nr	nr	nr	nr	nr	nr	nr
Hexane	110-54-3	nr	nr	nr	nr	nr	nr	nr

Table 5. Summary of Volatile Organic Compounds Detected in Air, Coral Island Shopping Center, Staten Island, New York.

	Sample ID:	AS-305	AS-305	AS-306	AS-306	AS-306 DUP	AS-307	AS-307
	Sample Location:	Church Outdoor Ambient Air - South of Gym	Church Outdoor Ambient Air - South of Gym	Church - Gym	Church - Gym	Church - Gym	Church - Classroom	Church - Classroom
	Indoor / Outdoor:	Outdoor	Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor
	Sample Date:	8/15/2006	12/1/2006	8/15/2006	12/1/2006	12/1/2006	8/15/2006	12/1/2006
Analyte (concentrations in $\mu g/m^3$)	CAS #							
Isopropyl alcohol	67-63-0	nr	nr	nr	nr	nr	nr	nr
2-Hexanone	591-78-6	nr	nr	nr	nr	nr	nr	nr
2-Butanone (MEK)	78-93-3	nr	nr	nr	nr	nr	nr	nr
4-Methyl-2-pentanone	108-10-1	nr	nr	nr	nr	nr	nr	nr
Methylene chloride	75-09-2	nr	nr	nr	nr	nr	nr	nr
Methyl-t-butyl ether	1634-04-4	0.57 U	0.54 U	0.54 U	0.54 U	0.58 U	0.59 U	0.56 U
Propene	115-07-1	nr	nr	nr	nr	nr	nr	nr
Propylbenzene	103-65-1	nr	nr	nr	nr	nr	nr	nr
Styrene	100-42-5	nr	nr	nr	nr	nr	nr	nr
1,1,2,2-Tetrachloroethane	79-34-5	0.22 U	0.20 U	0.27 J	0.20 U	0.22 U	0.22 UJ	0.21 U
Tetrachloroethene	127-18-4	3.0	32	1.7	27	27	2.7	2
Tetrahydrofuran	109-99-9	nr	nr	nr	nr	nr	nr	nr
Toluene	108-88-3	16	3.8	3.9	4.6	4.9	4.6	4.2
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	nr	nr	nr	nr	nr	nr	nr
1,2,4-Trichlorobenzene	120-82-1	nr	nr	nr	nr	nr	nr	nr
1,1,1-Trichloroethane	71-55-6	0.17 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.17 U
1,1,2-Trichloroethane	79-00-5	0.17 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.17 U
Trichloroethene	79-01-6	0.42	0.27	0.16 U	0.16 U	0.17 U	0.18 U	0.17 U
Trichlorofluoromethane	75-69-4	nr	nr	nr	nr	nr	nr	nr
1,2,4-Trimethylbenzene	95-63-6	nr	nr	nr	nr	nr	nr	nr
1,3,5-Trimethylbenzene	108-67-8	nr	nr	nr	nr	nr	nr	nr
2,2,4-Trimethylpentane	540-84-1	nr	nr	nr	nr	nr	nr	nr
Vinyl acetate	108-05-4	nr	nr	nr	nr	nr	nr	nr
Vinyl chloride	75-01-04	0.040 U	0.038 U	0.038 U	0.038 U	0.041 U	0.042 U	0.040 U
M&p-Xylenes	1330-20-7	9.4	2.6	4.5	2.9	3.1	2.6	2.5
o-Xylene	95-47-6	2.3	0.77	1.2	0.87	1	0.81	0.97

NOTES:

CAS # - Chemical Abstract System Number
DUP - Duplicate sample
J - Estimated concentration
nr - Not reported
U - Not detected above reporting limit shown
$\mu g/m^3$ - Micrograms per cubic meter
Samples collected in August 2006 and December 2006 were analyzed using TO-15 SIM that has a shorter

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-1 7/29/04 1-2 onsite	SB-1 7/29/04 4-5 onsite	SB-1 7/29/04 9-10 onsite	SB-1 7/29/04 18-19 onsite	SB-2 7/29/04 1-2 onsite	SB-2 7/29/04 5-6 onsite	SB-2 7/29/04 9-10 onsite	SB-3 7/29/04 4-5 onsite
Acetone	50	500,000		28 U	240	31 U	30 U	3800 U	29 U	28 U	150 U
Benzene	60	44,000		1.1 U	1.2 U	1.3 U	1.2 U	150 U	1.2 U	1.1 U	6.2 U
Bromodichloromethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Bromoform	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Bromomethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
2-Butanone (MEK)	120	500,000		28 U	29 U	31 U	30 U	3800 U	29 U	28 U	150 U
Carbon disulfide	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Carbon tetrachloride	760	22,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Chlorobenzene	1,100	500,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Chloroethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Chloroform	370	350,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Chloromethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Dibromochloromethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,1-Dichloroethane	270	240,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,2-Dichloroethane	20	30,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,1-Dichloroethene	330	500,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
cis-1,2-Dichloroethene	250	500,000		5.7 U	5.8 U	6.3 U	1.4 J	3,100	5.9 U	87	87
trans-1,2-Dichloroethene	190	500,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,2-Dichloropropane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
cis-1,3-Dichloropropene	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
trans-1,3-Dichloropropene	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Ethylbenzene	1,000	390,000		1.1 U	1.2 U	1.3 U	1.2 U	150 U	1.2 U	1.1 U	6.2 U
2-Hexanone	--	--		23 U	23 U	25 U	24 U	3000 U	24 U	23 U	120 U
4-Methyl-2-pentanone				23 U	23 U	25 U	24 U	3000 U	24 U	23 U	120 U
Methylene chloride	50	500,000		9.5 B	10 B	11 B	11 B	760 U	21 B	9.9 B	110 B
Styrene	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,1,2,2-Tetrachloroethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Tetrachloroethene	1,300	150,000		5.7 U	5.8 U	6.3 U	6.1 U	2,000	5.9 U	5.7 U	920
Toluene	700	500,000		5	14	7	1.2 U	150 U	1.2 U	1.3	31
1,1,1-Trichloroethane	680	500,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
1,1,2-Trichloroethane	--	--		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	5.7 U	31 U
Trichloroethene	470	200,000		5.7 U	5.8 U	6.3 U	6.1 U	1,300	5.9 U	5.7 U	66
Vinyl chloride	20	13,000		5.7 U	5.8 U	6.3 U	6.1 U	760 U	5.9 U	4.1 J	31 U
M&p-Xylenes	260	500,000		2.3 U	2.3 U	2.5 U	2.4 U	300 U	2.4 U	2.3 U	12 U
o-Xylene	260	500,000		1.1 U	1.2 U	1.3 U	1.2 U	150 U	1.2 U	1.1 U	6.2 U
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-4 7/29/04 8-9 onsite	SB-5 7/29/04 8-9 onsite	SB-6 7/30/04 4-5 onsite	SB-6 7/30/04 6-8 onsite	SB-7 7/30/04 6-8 onsite	SB-8 7/30/04 7-8 onsite	SB-9 7/30/04 6-7 onsite	SB-10 7/30/04 7-8 onsite
Acetone	50	500,000		31 U	30 U	29 U	29 U	29 U	29 U	30 U	30 U
Benzene	60	44,000		1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Bromodichloromethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Bromoform	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Bromomethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
2-Butanone (MEK)	120	500,000		31 U	30 U	100	50	46	79	72	81
Carbon disulfide	--	--		6.3 U	6 U	2.1 J	5.8 U	5.8 U	5.8 U	6 U	6 U
Carbon tetrachloride	760	22,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Chlorobenzene	1,100	500,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Chloroethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Chloroform	370	350,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Chloromethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Dibromochloromethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,1-Dichloroethane	270	240,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,2-Dichloroethane	20	30,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,1-Dichloroethene	330	500,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
cis-1,2-Dichloroethene	250	500,000		24	6 U	39	180	98	5.8 U	6 U	6 U
trans-1,2-Dichloroethene	190	500,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,2-Dichloropropane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
cis-1,3-Dichloropropene	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
trans-1,3-Dichloropropene	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Ethylbenzene	1,000	390,000		1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2-Hexanone	--	--		25 U	24 U	24 U	23 U	23 U	23 U	24 U	24 U
4-Methyl-2-pentanone				25 U	24 U	24 U	23 U	23 U	23 U	24 U	24 U
Methylene chloride	50	500,000		11 B	11 B	12 B	13 B	22 B	24 B	27 B	26 B
Styrene	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,1,2,2-Tetrachloroethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Tetrachloroethene	1,300	150,000		37	6 U	15	23	5.8 U	5.8 U	6 U	6 U
Toluene	700	500,000		1.3 U	1.8	7.4	3.4	2.1	1.3	1.2 U	2.7
1,1,1-Trichloroethane	680	500,000		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
1,1,2-Trichloroethane	--	--		6.3 U	6 U	5.9 U	5.8 U	5.8 U	5.8 U	6 U	6 U
Trichloroethene	470	200,000		12	6 U	3.8 J	16	5.8 U	5.8 U	6 U	6 U
Vinyl chloride	20	13,000		6.3 U	6 U	2.6 J	3.6 J	5.8 U	5.8 U	6 U	6 U
M&p-Xylenes	260	500,000		2.5 U	2.4 U	2.4 U	2.3 U	2.3 U	2.3 U	2.4 U	2.4 U
o-Xylene	260	500,000		1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:**	SB-101	SB-101	SB-101	SB-102X	SB-102X	SB-102X	SB-103X	SB-103X
			Sample Date:	09/06/05	09/06/05	09/06/05	09/08/05	09/08/05	09/08/05	09/06/05	09/06/05
			Sample Depth (ft bls):	0.5-2	5-7.5	27.5-30	0.5-2	2.5-5	30-32.5	0.5-2	7.5-10
			Onsite/Offsite:	onsite	onsite	onsite	onsite	onsite	onsite	onsite	onsite
Acetone	50	500,000		79,000 U	46	130 J	90 J	36,000 U	24 J	37,000 U	26 J
Benzene	60	44,000		3,200 U	1.2 U	5.9 U	5.6 U	1,500 U	1.1 U	1,500 U	1.1 U
Bromodichloromethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Bromoform	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Bromomethane	--	--		16,000 U	12 U	59 U	28 U	7,300 U	5.7 U	7,400 U	11 U
2-Butanone (MEK)	120	500,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Carbon disulfide	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Carbon tetrachloride	760	22,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Chlorobenzene	1,100	500,000		16,000 U	1.2 U	5.9 U	28 U	7,300 U	5.7 U	7,400 U	1.1 U
Chloroethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Chloroform	370	350,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Chloromethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Dibromochloromethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,1-Dichloroethane	270	240,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,2-Dichloroethane	20	30,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,1-Dichloroethene	330	500,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
cis-1,2-Dichloroethene	250	500,000		16,000 U	34	130	240	7,300 U	19	7,400 U	1.2 J
trans-1,2-Dichloroethene	190	500,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,2-Dichloropropane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
cis-1,3-Dichloropropene	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
trans-1,3-Dichloropropene	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Ethylbenzene	1,000	390,000		3,200 U	1.2 U	5.9 U	5.6 U	1,500 U	1.1 U	1,500 U	1.1 U
2-Hexanone	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
4-Methyl-2-pentanone				16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Methylene chloride	50	500,000		10,000 JB	41 B	210 B	84 B	2,400 JB	18 B	7,400 U	32 B
Styrene	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,1,2,2-Tetrachloroethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Tetrachloroethene	1,300	150,000		**390,000**	110	280	1100	**500,000**	2.7 J	88,000	5.7 U
Toluene	700	500,000		3,200 U	1.2 U	5.9 U	5.6 U	1,500 U	1.1 U	1,500 U	1.1 U
1,1,1-Trichloroethane	680	500,000		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
1,1,2-Trichloroethane	--	--		16,000 U	5.8 U	29 U	28 U	7,300 U	5.7 U	7,400 U	5.7 U
Trichloroethene	470	200,000		18,000	22	19 J	50	2,100 J	5.7 U	3,500 J	5.7 U
Vinyl chloride	20	13,000		16,000 U	5.8 U	5.9 J	55	7,300 U	5.7 U	7,400 U	5.7 U
M&p-Xylenes	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr
o-Xylene	260	500,000		3,200 U	1.2 U	5.9 U	5.6 U	1,500 U	1.1 U	1,500 U	1.1 U
Xylenes (total)	260	500,000		6,300 U	2.3 U	12 U	11 U	2,900 U	2.3 U	3,000 U	2.3 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-103X DUP 09/06/05 0.5-2 onsite	SB-104X 09/08/05 0.5-2 onsite	SB-104X 09/08/05 4-6 onsite	SB-104X 09/08/05 7.5-10 onsite	SB-105X 09/07/05 1.5-3 onsite	SB-105X 09/07/05 4.5-6 onsite	SB-107 09/01/05 0.5-2 onsite	SB-107 09/01/05 4-6 onsite
Acetone	50	500,000		38,000 U	59	64	29 U	28 U	52	28	19 J
Benzene	60	44,000		1,500 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromodichloromethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Bromoform	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Bromomethane	--	--		7,500 U	6 U	6.1 U	5.7 U	11 U	11 U	11 U	11 U
2-Butanone (MEK)	120	500,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Carbon disulfide	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Carbon tetrachloride	760	22,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Chlorobenzene	1,100	500,000		7,500 U	6 U	6.1 U	5.7 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloroethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Chloroform	370	350,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Chloromethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Dibromochloromethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,1-Dichloroethane	270	240,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,2-Dichloroethane	20	30,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,1-Dichloroethene	330	500,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
cis-1,2-Dichloroethene	250	500,000		3,200 J	6 U	49	49	5.7 U	5.7 U	5.4 U	5.4 U
trans-1,2-Dichloroethene	190	500,000		7,500 U	6 U	3.7 J	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,2-Dichloropropane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
cis-1,3-Dichloropropene	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
trans-1,3-Dichloropropene	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Ethylbenzene	1,000	390,000		1,500 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Hexanone	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
4-Methyl-2-pentanone				7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Methylene chloride	50	500,000		8,200 B	20 B	24 B	19 B	27 B	28 B	24 B	25 B
Styrene	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,1,2,2-Tetrachloroethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Tetrachloroethene	1,300	150,000		**180,000**	3.7 J	6.1 U	5.7 U	1.3 J	5.7 U	1.1 J	5.4 U
Toluene	700	500,000		1500 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,1-Trichloroethane	680	500,000		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
1,1,2-Trichloroethane	--	--		7,500 U	6 U	6.1 U	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Trichloroethene	470	200,000		4,800 J	6 U	3.1 J	5.7 U	5.7 U	5.7 U	5.4 U	5.4 U
Vinyl chloride	20	13,000		7,500 U	6 U	6.1 U	5.7 U	1.7 J	5.7 U	5.4 U	5.4 U
M&p-Xylenes	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr
o-Xylene	260	500,000		1,500 U	1.2 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Xylenes (total)	260	500,000		3,000 U	2.4 U	2.4 U	2.3 U	2.3 U	2.3 U	2.2 U	2.2 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** / **Sample Date:** / **Sample Depth (ft bls):** / **Onsite/Offsite:**	SB-107A 09/14/05 0.5-2 onsite	SB-107A 09/14/05 4-6 onsite	SB-108 09/19/05 0.5-2 onsite	SB-108 09/19/05 2-4 onsite	SB-108 09/19/05 4-6 onsite	SB-109 09/01/05 0.5-2 onsite	SB-109 09/01/05 4-6 onsite	SB-111 09/16/05 0.5-2 onsite
Acetone	50	500,000		99	30 U	63	100	52	24 J	51	35
Benzene	60	44,000		1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromodichloromethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Bromoform	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Bromomethane	--	--		11 U	12 U	11 U	12 U	11 U	11 U	11 U	11 U
2-Butanone (MEK)	120	500,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Carbon disulfide	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Carbon tetrachloride	760	22,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Chlorobenzene	1,100	500,000		1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Chloroethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Chloroform	370	350,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Chloromethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Dibromochloromethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,1-Dichloroethane	270	240,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,2-Dichloroethane	20	30,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,1-Dichloroethene	330	500,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
cis-1,2-Dichloroethene	250	500,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
trans-1,2-Dichloroethene	190	500,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,2-Dichloropropane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
cis-1,3-Dichloropropene	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
trans-1,3-Dichloropropene	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Ethylbenzene	1,000	390,000		3.9	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Hexanone	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
4-Methyl-2-pentanone				5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Methylene chloride	50	500,000		12 B	17 B	30 B	32 B	34 B	23 B	31 B	24 B
Styrene	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,1,2,2-Tetrachloroethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Tetrachloroethene	1,300	150,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Toluene	700	500,000		1.1 U	1.2 U	1.1 U	2.7	1.1 U	1.1 U	1.1 U	1.3
1,1,1-Trichloroethane	680	500,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
1,1,2-Trichloroethane	--	--		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Trichloroethene	470	200,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
Vinyl chloride	20	13,000		5.3 U	6 U	5.6 U	5.8 U	5.7 U	5.6 U	5.7 U	5.3 U
M&p-Xylenes	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr
o-Xylene	260	500,000		6.4	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U
Xylenes (total)	260	500,000		16	2.4 U	2.2 U	2.3 U	2.3 U	2.2 U	2.3 U	2.1 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-111 09/16/05 4-6 onsite	SB-113 09/01/05 0-2 onsite	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite	SB-127 09/21/05 0-0.17 offsite	SB-128 09/21/05 0-0.17 offsite
Acetone	50	500,000		53	28 U	27 U	27 U	20 J	55	31 U	26 U
Benzene	60	44,000		1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
Bromodichloromethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Bromoform	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Bromomethane	--	--		12 U	11 U	11 U	11 U	12 U	11 U	12 U	11 U
2-Butanone (MEK)	120	500,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Carbon disulfide	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	1.9 J	6.2 U	5.3 U
Carbon tetrachloride	760	22,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Chlorobenzene	1,100	500,000		1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
Chloroethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Chloroform	370	350,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Chloromethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Dibromochloromethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,1-Dichloroethane	270	240,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,2-Dichloroethane	20	30,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,1-Dichloroethene	330	500,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
cis-1,2-Dichloroethene	250	500,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	3 J	5.3 U
trans-1,2-Dichloroethene	190	500,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,2-Dichloropropane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
cis-1,3-Dichloropropene	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
trans-1,3-Dichloropropene	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Ethylbenzene	1,000	390,000		1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
2-Hexanone	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
4-Methyl-2-pentanone				6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Methylene chloride	50	500,000		31 B	27 B	25 B	23 B	28 B	30 B	27 B	32 B
Styrene	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,1,2,2-Tetrachloroethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Tetrachloroethene	1,300	150,000		6 U	1.2 J	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Toluene	700	500,000		2.1	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
1,1,1-Trichloroethane	680	500,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
1,1,2-Trichloroethane	--	--		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Trichloroethene	470	200,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
Vinyl chloride	20	13,000		6 U	5.6 U	5.4 U	5.5 U	5.8 U	5.5 U	6.2 U	5.3 U
M&p-Xylenes	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr
o-Xylene	260	500,000		1.2 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U
Xylenes (total)	260	500,000		2.4 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	2.5 U	2.1 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-201 8/8/2006 3-5 onsite	SB-202 8/4/2006 3-5 onsite	SB-202 DUP 8/4/2006 3-5 onsite	SB-203 8/4/2006 3-5 onsite	SB-204 8/4/2006 3-5 onsite	SB-205 8/2/2006 8-10 onsite	SB-205 8/2/2006 12-14 onsite	SB-206 8/1/2006 0-2 offsite
Acetone	50	500,000		370,000 U	30 U	30 U	29 U	30 U	29 U	29 U	28 U
Benzene	60	44,000		15,000 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U
Bromodichloromethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Bromoform	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Bromomethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
2-Butanone (MEK)	120	500,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Carbon disulfide	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Carbon tetrachloride	760	22,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Chlorobenzene	1,100	500,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Chloroethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Chloroform	370	350,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Chloromethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Dibromochloromethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,1-Dichloroethane	270	240,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,2-Dichloroethane	20	30,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,1-Dichloroethene	330	500,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
cis-1,2-Dichloroethene	250	500,000		74,000 U	6 U	6 U	5.9 U	6 U	9.7	5.3 J	5.7 U
trans-1,2-Dichloroethene	190	500,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,2-Dichloropropane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
cis-1,3-Dichloropropene	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
trans-1,3-Dichloropropene	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Ethylbenzene	1,000	390,000		15,000 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U
2-Hexanone	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
4-Methyl-2-pentanone				74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Methylene chloride	50	500,000		74,000 U	14 B	13 B	19 B	17 B	11 B	9.8 B	9.6 B
Styrene	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,1,2,2-Tetrachloroethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Tetrachloroethene	1,300	150,000		**2,200,000**	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	8.7
Toluene	700	500,000		15,000 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U
1,1,1-Trichloroethane	680	500,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
1,1,2-Trichloroethane	--	--		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Trichloroethene	470	200,000		65,000 J	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
Vinyl chloride	20	13,000		74,000 U	6 U	6 U	5.9 U	6 U	5.8 U	5.7 U	5.7 U
M&p-Xylenes	260	500,000		30000 U	2.4 U	2.4 U	2.4 U	2.4 U	2.3 U	2.3 U	2.3 U
o-Xylene	260	500,000		15,000 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-206 8/1/2006 3-5 offsite	SB-207 8/1/2006 0-2 offsite	SB-207 8/1/2006 3-5 offsite	SB-208 8/1/2006 0-2 offsite	SB-208 8/1/2006 3-5 offsite	SB-209 8/1/2006 0-2 offsite	SB-209 8/1/2006 3-5 offsite	SB-210 8/1/2006 0-2 offsite
Acetone	50	500,000		30 U	28 U	29 U	28 U	28 U	29 U	45	33 U
Benzene	60	44,000		1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U
Bromodichloromethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Bromoform	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Bromomethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
2-Butanone (MEK)	120	500,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Carbon disulfide	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	2.3 J	6.6 U
Carbon tetrachloride	760	22,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Chlorobenzene	1,100	500,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Chloroethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Chloroform	370	350,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Chloromethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Dibromochloromethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,1-Dichloroethane	270	240,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,2-Dichloroethane	20	30,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,1-Dichloroethene	330	500,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
cis-1,2-Dichloroethene	250	500,000		3.6 J	5.7 U	5.8 U	2.2 J	5.7 U	7.5	14	6.9
trans-1,2-Dichloroethene	190	500,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,2-Dichloropropane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
cis-1,3-Dichloropropene	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
trans-1,3-Dichloropropene	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Ethylbenzene	1,000	390,000		1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U
2-Hexanone	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
4-Methyl-2-pentanone				6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Methylene chloride	50	500,000		19 B	13 B	14 B	16 B	13 B	14 B	14 B	10 B
Styrene	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,1,2,2-Tetrachloroethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Tetrachloroethene	1,300	150,000		6 U	6.6	5.8 U	12	5.7 U	310	55	38
Toluene	700	500,000		1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U
1,1,1-Trichloroethane	680	500,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
1,1,2-Trichloroethane	--	--		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	5.8 U	6.6 U
Trichloroethene	470	200,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	24	25	6.6 U
Vinyl chloride	20	13,000		6 U	5.7 U	5.8 U	5.7 U	5.7 U	5.8 U	1.5 J	6.6 U
M&p-Xylenes	260	500,000		2.4 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.6 U
o-Xylene	260	500,000		1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-210 8/1/2006 3-5 offsite	SB-211 8/1/2006 0-2 offsite	SB-211 8/1/2006 3-5 offsite	SB-212 8/1/2006 0-2 offsite	SB-212 8/1/2006 3-5 offsite	SB-213 8/1/2006 0-2 offsite	SB-213 8/1/2006 3-5 offsite	SB-214 8/1/2006 0-2 offsite
Acetone	50	500,000		**90**	28 J	30 U	21 J	29 U	25 J	29 U	30 U
Benzene	60	44,000		1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	1.2 U
Bromodichloromethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Bromoform	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Bromomethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
2-Butanone (MEK)	120	500,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Carbon disulfide	--	--		1.7 J	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Carbon tetrachloride	760	22,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Chlorobenzene	1,100	500,000		10	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Chloroethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Chloroform	370	350,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Chloromethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Dibromochloromethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
1,1-Dichloroethane	270	240,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
1,2-Dichloroethane	20	30,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
1,1-Dichloroethene	330	500,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	1.8 J
cis-1,2-Dichloroethene	250	500,000		1.3 J	2.6 J	3.2 J	5.7 U	5.8 U	20	5.7 U	570
trans-1,2-Dichloroethene	190	500,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	3.6 J
1,2-Dichloropropane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
cis-1,3-Dichloropropene	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
trans-1,3-Dichloropropene	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Ethylbenzene	1,000	390,000		1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	1.2 U
2-Hexanone	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
4-Methyl-2-pentanone				6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Methylene chloride	50	500,000		15 B	13 B	14 B	13 B	14 B	15 B	13 B	12 B
Styrene	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
1,1,2,2-Tetrachloroethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Tetrachloroethene	1,300	150,000		6.1 U	20	130	4.9 J	3.4 J	74	5.7 U	**1,600,000**
Toluene	700	500,000		1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	1.2 U
1,1,1-Trichloroethane	680	500,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
1,1,2-Trichloroethane	--	--		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	6.1 U
Trichloroethene	470	200,000		6.1 U	4.1 J	9.3	5.7 U	5.8 U	16	5.7 U	**15,000 J**
Vinyl chloride	20	13,000		6.1 U	6 U	6 U	5.7 U	5.8 U	6 U	5.7 U	1.3 J
M&p-Xylenes	260	500,000		2.4 U	2.4 U	2.4 U	2.3 U	2.3 U	2.4 U	2.3 U	2.4 U
o-Xylene	260	500,000		1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	6.5
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:**	SB-214	SB-214 DUP	SB-215	SB-215	SB-216	SB-216	SB-217	SB-217
			Sample Date:	8/1/2006	8/1/2006	8/1/2006	8/1/2006	8/1/2006	8/1/2006	8/1/2006	8/1/2006
			Sample Depth (ft bls):	3-5	3-5	0-2	3-5	0-2	3-5	0-2	3-5
			Onsite/Offsite:	offsite	offsite	offsite	offsite	offsite	offsite	offsite	offsite
Acetone	50	500,000		29 U	150 U	30 U	35	28 U	18 J	29 U	29 J
Benzene	60	44,000		1.2 U	6 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U
Bromodichloromethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Bromoform	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Bromomethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
2-Butanone (MEK)	120	500,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Carbon disulfide	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Carbon tetrachloride	760	22,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Chlorobenzene	1,100	500,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Chloroethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Chloroform	370	350,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Chloromethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Dibromochloromethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
1,1-Dichloroethane	270	240,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
1,2-Dichloroethane	20	30,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
1,1-Dichloroethene	330	500,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
cis-1,2-Dichloroethene	250	500,000		120	30 U	6 U	6 U	5.7 U	6 U	21	6 U
trans-1,2-Dichloroethene	190	500,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	1.9 J	6 U
1,2-Dichloropropane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
cis-1,3-Dichloropropene	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
trans-1,3-Dichloropropene	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Ethylbenzene	1,000	390,000		1.2 U	6 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U
2-Hexanone	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
4-Methyl-2-pentanone				5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Methylene chloride	50	500,000		12 B	**79 B**	15 B	16 B	16 B	16 B	13 B	16 B
Styrene	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
1,1,2,2-Tetrachloroethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Tetrachloroethene	1,300	150,000		**11,000**	1,300	6 U	6 U	2.5 J	6 U	52	1.6 J
Toluene	700	500,000		1.2 U	6 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	680	500,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
1,1,2-Trichloroethane	--	--		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
Trichloroethene	470	200,000		390	8.8 J	6 U	6 U	5.7 U	6 U	11	6 U
Vinyl chloride	20	13,000		5.8 U	30 U	6 U	6 U	5.7 U	6 U	5.8 U	6 U
M&p-Xylenes	260	500,000		2.3 U	12 U	2.4 U	2.4 U	2.3 U	2.4 U	2.3 U	2.4 U
o-Xylene	260	500,000		1.2 U	6 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U
Xylenes (total)	260	500,000		nr	nr	nr	nr	nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 6. Summary of Volatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Unrestricted Residential (offsite)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-218 8/1/2006 0-2 offsite	SB-218 8/1/2006 3-5 offsite	SB-219 8/1/2006 0-2 offsite	SB-219 8/1/2006 3-5 offsite
Acetone	50	500,000		31 U	29 U	30 U	29 U
Benzene	60	44,000		1.2 U	1.2 U	1.2 U	1.2 U
Bromodichloromethane	--	--		6.2 U	5.9 U	6 U	5.9 U
Bromoform	--	--		6.2 U	5.9 U	6 U	5.9 U
Bromomethane	--	--		6.2 U	5.9 U	6 U	5.9 U
2-Butanone (MEK)	120	500,000		6.2 U	5.9 U	6 U	5.9 U
Carbon disulfide	--	--		6.2 U	5.9 U	6 U	5.9 U
Carbon tetrachloride	760	22,000		6.2 U	5.9 U	6 U	5.9 U
Chlorobenzene	1,100	500,000		6.2 U	5.9 U	6 U	5.9 U
Chloroethane	--	--		6.2 U	5.9 U	6 U	5.9 U
Chloroform	370	350,000		6.2 U	5.9 U	6 U	5.9 U
Chloromethane	--	--		6.2 U	5.9 U	6 U	5.9 U
Dibromochloromethane	--	--		6.2 U	5.9 U	6 U	5.9 U
1,1-Dichloroethane	270	240,000		6.2 U	5.9 U	6 U	5.9 U
1,2-Dichloroethane	20	30,000		6.2 U	5.9 U	6 U	5.9 U
1,1-Dichloroethene	330	500,000		6.2 U	5.9 U	6 U	5.9 U
cis-1,2-Dichloroethene	250	500,000		6.2 U	5.9 U	6 U	5.9 U
trans-1,2-Dichloroethene	190	500,000		6.2 U	5.9 U	6 U	5.9 U
1,2-Dichloropropane	--	--		6.2 U	5.9 U	6 U	5.9 U
cis-1,3-Dichloropropene	--	--		6.2 U	5.9 U	6 U	5.9 U
trans-1,3-Dichloropropene	--	--		6.2 U	5.9 U	6 U	5.9 U
Ethylbenzene	1,000	390,000		1.2 U	1.2 U	1.2 U	1.2 U
2-Hexanone	--	--		6.2 U	5.9 U	6 U	5.9 U
4-Methyl-2-pentanone				6.2 U	5.9 U	6 U	5.9 U
Methylene chloride	50	500,000		17 B	17 B	19 B	17 B
Styrene	--	--		6.2 U	5.9 U	6 U	5.9 U
1,1,2,2-Tetrachloroethane	--	--		6.2 U	5.9 U	6 U	5.9 U
Tetrachloroethene	1,300	150,000		6.2 U	5.9 U	6 U	5.9 U
Toluene	700	500,000		1.2 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	680	500,000		6.2 U	5.9 U	6 U	5.9 U
1,1,2-Trichloroethane	--	--		6.2 U	5.9 U	6 U	5.9 U
Trichloroethene	470	200,000		6.2 U	5.9 U	6 U	5.9 U
Vinyl chloride	20	13,000		6.2 U	5.9 U	6 U	5.9 U
M&p-Xylenes	260	500,000		2.5 U	2.4 U	2.4 U	2.4 U
o-Xylene	260	500,000		1.2 U	1.2 U	1.2 U	1.2 U
Xylenes (total)	260	500,000		nr	nr	nr	nr

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 7. Summary of Semivolatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:**	SB-101	SB-107	SB-107	SB-107A	SB-108	SB-109	SB-113
		Sample Date:	09/06/05	09/01/05	09/01/05	09/14/05	09/19/05	09/01/05	09/01/05
		Sample Depth (ft bls):	0.5-2	0.5-2	4-6	0.5-2	2-4	0.5-2	0-2
		Onsite/Offsite:	onsite	onsite	onsite	onsite	onsite	onsite	onsite
Acenaphthene	500,000		120 J	52 J	360 U	52 J	390 U	410	71 J
Acenaphthylene	500,000		93 J	910 U	910 U	350 U	390 U	930 U	930 U
Anthracene	500,000		390 J	150 J	360 U	120 J	970 U	750	200 J
Benzo(a)anthracene	5,600		1,800	500	88 J	510	390 U	2,400	770
Benzo(a)pyrene	1,000		1,000	520	71 J	700	390 U	**2,100**	750
Benzo(b)fluoranthene	5,600		1,300	620	110 J	890	46 J	2,700	900
Benzo(g,h,i)perylene	50,000		770	440	75 J	780	390 U	1,400	550
Benzo(k)fluoranthene	56,000		490	220 J	38 J	230 J	390 U	640	390
Bis(2-chloroethoxy)methane	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Bis(2-chloroethyl)ether	--		420 U	910 U	910 U	350 U	390 U	930 U	930 U
Bis(2-ethylhexyl)phthalate	--		250 J	190 JB	190 JB	110 J	390 U	520 B	5,300 B
4-Bromophenyl phenyl ether	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Butyl benzylphthalate	--		420 U	360 U	360 U	350 U	390 U	490	370 U
Carbazole	--		220 J	48 J	360 U	55 J	970 U	300 J	87 J
4-Chloroaniline	--		420 U	910 U	910 U	890 U	390 U	930 U	930 U
2-Chloronaphthalene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2-Chlorophenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
4-Chlorophenyl phenyl ether	--		420 U	910 U	910 U	350 U	970 U	930 U	930 U
2,2-oxybis (1-chloropropane)	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Chrysene	56,000		1700	540	73 J	530	390 U	2,100	750
Dibenzo(a h)anthracene	560		190 J	120 J	360 U	160 J	390 U	**580**	170 J
Dibenzofuran	--		68 J	360 U	360 U	350 U	390 U	160 J	47 J
1,2-Dichlorobenzene	500,000		420 U	910 U	910 U	350 U	390 U	930 U	930 U
1,3-Dichlorobenzene	280,000		420 U	360 U	360 U	350 U	390 U	370 U	370 U
1,4-Dichlorobenzene	130,000		420 U	360 U	360 U	350 U	390 U	370 U	370 U
3,3-Dichlorobenzidine	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2,4-Dichlorophenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Diethyl phthalate	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Dimethyl phthalate	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2,4-Dimethylphenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Di-n-butyl phthalate	--		46 J	360 U	360 U	350 U	970 U	58 JB	40 JB
2,4-Dinitrophenol	--		2,100 U	910 U	910 U	1,800 U	970 U	930 U	930 U
2,4-Dinitrotoluene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2,6-Dinitrotoluene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Di-n-octyl phthalate	--		51 J	360 U	360 U	350 U	390 U	370 U	370 U
Fluoranthene	500,000		1,600	770	120 J	880	47 J	3700	1100
Fluorene	500,000		150 J	41 J	910 U	36 J	390 U	290 J	59 J
Hexachlorobenzene	6,000		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Hexachlorobutadiene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Hexachlorocyclopentadiene	--		420 U	910 U	910 U	890 U	970 U	930 U	930 U
Hexachloroethane	--		420 U	360 U	360 U	890 U	390 U	370 U	370 U

Table 7. Summary of Semivolatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-101 09/06/05 0.5-2 onsite	SB-107 09/01/05 0.5-2 onsite	SB-107 09/01/05 4-6 onsite	SB-107A 09/14/05 0.5-2 onsite	SB-108 09/19/05 2-4 onsite	SB-109 09/01/05 0.5-2 onsite	SB-113 09/01/05 0-2 onsite
Indeno(1,2,3-cd)pyrene	5,000		750	310 J	46 J	540	390 U	1200	460
Isophorone	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2-Methylnaphthalene	--		420 U	910 U	910 U	890 U	390 U	82 J	930 U
2-Methylphenol	500,000		420 U	360 U	360 U	350 U	390 U	370 U	370 U
4,6-Dinitro-2-methylphenol	--		2,100 U	910 U	910 U	890 U	970 U	930 U	930 U
4-Chloro-3-methylphenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
4-Methylphenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Naphthalene	500,000		51 J	360 U	360 U	350 U	390 U	110 J	370 U
2-Nitroaniline	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
3-Nitroaniline	--		420 U	910 U	910 U	350 U	390 U	930 U	930 U
4-Nitroaniline			420 U	360 U	360 U	350 U	390 U	370 U	370 U
Nitrobenzene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2-Nitrophenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
4-Nitrophenol			1,100 U	360 U	360 U	350 U	390 U	370 U	370 U
n-Nitroso-di-n-propylamine	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
n-Nitrosodiphenylamine	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Pentachlorophenol	6,700		1,100 U	910 U	910 U	1,800 U	970 U	930 U	930 U
Phenanthrene	500,000		1100	560 J	910 U	550	970 U	3000	860 J
Phenol	500,000		420 U	360 U	360 U	350 U	390 U	370 U	370 U
Pyrene	500,000		2,900	1,300	140 J	1,000	46 J	5,400	1,900
1,2,4-Trichlorobenzene	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2,4,5-Trichlorophenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U
2,4,6-Trichlorophenol	--		420 U	360 U	360 U	350 U	390 U	370 U	370 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 7. Summary of Semivolatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite
Acenaphthene	500,000		220 J	370 U	390 U	490 J
Acenaphthylene	500,000		910 U	82 J	390 U	1,100 U
Anthracene	500,000		630	180 J	390 U	870 J
Benzo(a)anthracene	5,600		1,700	1,300	390 U	1,800
Benzo(a)pyrene	1,000		**1,500**	**1,300**	390 U	1,000 J
Benzo(b)fluoranthene	5,600		1,900	1,800	390 U	1,500
Benzo(g,h,i)perylene	50,000		1,100	1,000	390 U	740 J
Benzo(k)fluoranthene	56,000		610	450	390 U	390 J
Bis(2-chloroethoxy)methane	--		360 U	370 U	390 U	1,100 U
Bis(2-chloroethyl)ether	--		910 U	920 U	390 U	1,100 U
Bis(2-ethylhexyl)phthalate	--		390 B	320 JB	63 J	190 J
4-Bromophenyl phenyl ether	--		360 U	370 U	390 U	1,100 U
Butyl benzylphthalate	--		360 U	98 J	390 U	1,100 U
Carbazole	--		220 J	140 J	390 U	2,700 U
4-Chloroaniline	--		910 U	920 U	390 U	1,100 U
2-Chloronaphthalene	--		360 U	370 U	390 U	1,100 U
2-Chlorophenol	--		360 U	370 U	390 U	1,100 U
4-Chlorophenyl phenyl ether	--		910 U	920 U	390 U	2,700 U
2,2-oxybis (1-chloropropane)	--		360 U	370 U	390 U	1,100 U
Chrysene	56,000		1,500	1,400	390 U	1,900
Dibenzo(a h)anthracene	560		450	380	390 U	1,100 U
Dibenzofuran	--		120 J	370 U	390 U	270 J
1,2-Dichlorobenzene	500,000		910 U	920 U	390 U	1,100 U
1,3-Dichlorobenzene	280,000		360 U	370 U	390 U	1,100 U
1,4-Dichlorobenzene	130,000		360 U	370 U	390 U	1,100 U
3,3-Dichlorobenzidine	--		360 U	370 U	390 U	1,100 U
2,4-Dichlorophenol	--		360 U	370 U	390 U	1,100 U
Diethyl phthalate	--		360 U	370 U	390 U	1,100 U
Dimethyl phthalate	--		360 U	370 U	390 U	1,100 U
2,4-Dimethylphenol	--		360 U	370 U	390 U	1,100 U
Di-n-butyl phthalate	--		39 JB	370 U	390 U	2,700 U
2,4-Dinitrophenol	--		910 U	920 U	970 U	2,700 U
2,4-Dinitrotoluene	--		360 U	370 U	390 U	1,100 U
2,6-Dinitrotoluene	--		360 U	370 U	390 U	1,100 U
Di-n-octyl phthalate	--		360 U	370 U	390 U	1,100 U
Fluoranthene	500,000		2200	2,000	390 U	2,700
Fluorene	500,000		220 J	59 J	390 U	470 J
Hexachlorobenzene	6,000		360 U	370 U	390 U	1,100 U
Hexachlorobutadiene	--		360 U	370 U	390 U	1,100 U
Hexachlorocyclopentadiene	--		910 U	920 U	390 U	2,700 U
Hexachloroethane	--		360 U	370 U	390 U	1,100 U

Table 7. Summary of Semivolatile Organic Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite
Indeno(1,2,3-cd)pyrene	5,000		940	790	390 U	680 J
Isophorone	--		360 U	370 U	390 U	1,100 U
2-Methylnaphthalene	--		200 J	920 U	390 U	770 J
2-Methylphenol	500,000		360 U	370 U	390 U	1,100 U
4,6-Dinitro-2-methylphenol	--		910 U	920 U	970 U	2,700 U
4-Chloro-3-methylphenol	--		360 U	370 U	390 U	1,100 U
4-Methylphenol	--		360 U	370 U	390 U	1100 U
Naphthalene	500,000		130 J	37 J	390 U	250 J
2-Nitroaniline	--		360 U	370 U	390 U	1,100 U
3-Nitroaniline	--		910 U	920 U	390 U	1,100 U
4-Nitroaniline			360 U	370 U	390 U	1,100 U
Nitrobenzene	--		360 U	370 U	390 U	1,100 U
2-Nitrophenol	--		360 U	370 U	390 U	1,100 U
4-Nitrophenol			360 U	370 U	390 U	1,100 U
n-Nitroso-di-n-propylamine	--		360 U	370 U	390 U	1,100 U
n-Nitrosodiphenylamine	--		360 U	370 U	390 U	1,100 U
Pentachlorophenol	6,700		910 U	920 U	970 U	2,700 U
Phenanthrene	500,000		2100	940	390 U	3,000
Phenol	500,000		360 U	370 U	390 U	1,100 U
Pyrene	500,000		4,200	2,900	390 U	5600
1,2,4-Trichlorobenzene	--		360 U	370 U	390 U	1,100 U
2,4,5-Trichlorophenol	--		360 U	370 U	390 U	1,100 U
2,4,6-Trichlorophenol	--		360 U	370 U	390 U	1,100 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
B - Analyte detected in laboratory blank
Bold - analyte was detected above the NYSDEC Standard
DUP - Duplicate
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
J - Estimated value
nr - Not reported
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 8. Summary of Metals Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in mg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** / **Sample Date:** / **Sample Depth (ft bls):** / **Onsite/Offiste:**	SB-101 09/06/05 0.5-2 onsite	SB-107 09/01/05 0.5-2 onsite	SB-107 09/01/05 4-6 onsite	SB-107A 09/14/05 0.5-2 onsite	SB-108 09/19/05 2-4 onsite	SB-109 09/01/05 0.5-2 onsite
Aluminum	--		4,600	4,600	3,700	6,000	4,900	7,700
Antimony	--		2.5 U	4.9	2.2 U	2.1 U	2.3 U	2.2 U
Arsenic	16		6.3	4.5	2.4	2.3	2.6	5.3
Barium	400		86	57	22	26	62	89
Beryllium	590		0.76 U	0.65 U	0.65 U	0.64 U	0.7 U	0.67 U
Cadmium	9.3		0.76 U	0.65 U	0.65 U	0.64 U	0.7 U	0.67 U
Calcium	--		2,300	42,000	2,600	13,000	1,200 U	28,000
Chromium	1,500		13	18	12	11	10	20
Cobalt	--		3.7	7.5	3.1	9.7	2.9 U	7.5
Copper	270		71	58	16	110	30	48
Cyanide Total	27		0.32 U	0.27 U	0.27 U	0.26 U	0.29 U	0.3
Iron	--		8,000	9,100	8,300	19,000	5,000	14,000
Lead	1000		91	150	12	29	47	110
Magnesium	--		1,500	15,000	2,500	6,000	2,400	6,700
Manganese	10,000		89	150	40	170	76	230
Mercury	2.8		0.11 U	0.23	0.091 U	0.089 U	0.097 U	0.12
Nickel	310		27	20	20	19	34	29
Potassium	--		630 U	820	560	790	580 U	1,800
Selenium	1,500		2.6	2 U	2 U	2.9	2.1 U	2 U
Silver	1,500		3.2 U	2.7 U	2.7 U	2.7 U	2.9 U	2.8 U
Sodium	--		630 U	540 U	540 U	1,300	580 U	900
Thallium	--		1.5 U	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U
Vanadium	--		24	19	15	38	12 U	27
Zinc	10,000		41	300	26	54	30	160

Notes:

-- - No NYSDEC standard available
mg/kg Milligrams per kilogram
Bold - analyte was detected above the NYSDEC Standard
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 8. Summary of Metals Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in mg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offiste:**	SB-113 09/01/05 0-2 onsite	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite
Aluminum	--		6,600	7,300	6,400	5,800	5,000
Antimony	--		2.2 U	2.2 U	2.2 U	2.3 U	2.2 U
Arsenic	16		5.7	5.9	7.6	2.6	3.4
Barium	400		95	92	140	24	46
Beryllium	590		0.67 U	0.65 U	0.66 U	0.7 U	0.66 U
Cadmium	9.3		0.67 U	0.65 U	0.66 U	0.7 U	0.66 U
Calcium	--		33,000	30,000	6,500	1,200 U	9,800
Chromium	1,500		22	26	17	12	48
Cobalt	--		7	7.9	4.8	2.9 U	22
Copper	270		36	40	50	6.5	35
Cyanide Total	27		0.34	0.72	0.27 U	0.29 U	0.27 U
Iron	--		13,000	17,000	12,000	8,000	15,000
Lead	1000		120	140	290	5.8 U	38
Magnesium	--		6,500	5,900	2,200	1,400	9,200
Manganese	10,000		280	280	160	43	330
Mercury	2.8		0.14	0.24	0.43	0.097 U	0.092 U
Nickel	310		37	40	21	9.3	300
Potassium	--		1,300	1,800	760	650	710
Selenium	1,500		2 U	2.1	2 U	2.1 U	2 U
Silver	1,500		2.8 U	2.7 U	2.7 U	2.9 U	2.7 U
Sodium	--		560 U	540 U	550 U	580 U	550 U
Thallium	--		1.3 U	1.3 U	1.3 U	1.4 U	1.3 U
Vanadium	--		21	26	20	12	24
Zinc	10,000		120	130	180	22	44

Notes:

-- - No NYSDEC standard available
mg/kg Milligrams per kilogram
Bold - analyte was detected above the NYSDEC Standard
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 9. Summary of Polychlorinated Biphenyl Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** / **Sample Date:** / **Sample Depth (ft bls):** / **Onsite/Offsite:**	SB-101 09/06/05 0.5-2 onsite	SB-107 09/01/05 0.5-2 onsite	SB-107 09/01/05 4-6 onsite	SB-107A 09/14/05 0.5-2 onsite	SB-108 09/19/05 2-4 onsite	SB-109 09/01/05 0.5-2 onsite
Aroclor-1016	1,000		32 U	27 U	27 U	27 U	29 U	28 U
Aroclor-1221	1,000		32 U	27 U	27 U	27 U	29 U	28 U
Aroclor-1232	1,000		32 U	27 U	27 U	27 U	29 U	28 U
Aroclor-1242	1,000		32 U	27 U	27 U	27 U	29 U	28 U
Aroclor-1248	1,000		32 U	27 U	27 U	27 U	29 U	28 U
Aroclor-1254	1,000		32 U	100	27 U	27 U	29 U	28 U
Aroclor-1260	1,000		32 U	27 U	27 U	27 U	29 U	61
Total PCBs:	1,000		ND	100	ND	ND	ND	61

Notes:

µg/kg - Micrograms per kilogram
Bold - analyte was detected above the NYSDEC Standard
ft bls - Feet below land surface
ND - Not detected
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown
PCBs - Polychlorinated Biphenyl Compounds

Table 9. Summary of Polychlorinated Biphenyl Compounds Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** / **Sample Date:** / **Sample Depth (ft bls):** / **Onsite/Offsite:**	SB-113 09/01/05 0-2 onsite	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite
Aroclor-1016	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1221	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1232	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1242	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1248	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1254	1,000		28 U	27 U	27 U	29 U	27 U
Aroclor-1260	1,000		130	160	27 U	29 U	27 U
Total PCBs:	1,000		130	160	ND	ND	ND

Notes:

µg/kg - Micrograms per kilogram
Bold - analyte was detected above the NYSDEC Standard
ft bls - Feet below land surface
ND - Not detected
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown
PCBs - Polychlorinated Biphenyl Compounds

Table 10. Summary of Pesticides and Herbicides Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte entrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-101 09/06/05 0.5-2 onsite	SB-107 09/01/05 0.5-2 onsite	SB-107 09/01/05 4-6 onsite	SB-107A 09/14/05 0.5-2 onsite	SB-108 09/19/05 2-4 onsite	SB-109 09/01/05 0.5-2 onsite
2,4,5-T	--		5.1 U	4.3 U	4.3 U	4.3 U	4.7 U	4.4 U
2,4,5-TP (Silvex)	500,000		5.1 U	4.3 U	4.3 U	4.3 U	4.7 U	4.4 U
2,4-D	--		5.1 U	4.3 U	4.3 U	4.3 U	4.7 U	4.4 U
4,4'-DDD	62,000		120	5.4 U	16	5.3 U	5.8 U	5.6 U
4,4'-DDE	47,000		15	11	5.4 U	5.3 U	5.8 U	13
4,4'-DDT	92,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Aldrin	680		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
alpha-BHC	3,400		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
beta-BHC	3,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Chlordane	24,000		13 U	44	11 U	11 U	12 U	180
delta-BHC	500,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Dicamba	--		5.1 U	4.3 U	4.3 U	4.3 U	4.7 U	4.4 U
Dieldrin	1,400		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endosulfan I	200,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endosulfan II	200,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endosulfan sulfate	200,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endrin	89,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endrin aldehyde	--		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Endrin Ketone	--		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
gamma-BHC (Lindane)	9,200		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Heptachlor	15,000		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Heptachlor epoxide	--		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Methoxychlor	--		6.3 U	5.4 U	5.4 U	5.3 U	5.8 U	5.6 U
Toxaphene	--		32 U	27 U	27 U	27 U	29 U	28 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
Bold - analyte was detected above the NYSDEC Standard
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 10. Summary of Pesticides and Herbicides Detected in Soil, Coral Island Shopping Center, Staten Island, New York

Analyte entrations in µg/kg)	NYSDEC Restricted Commercial (onsite)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):** **Onsite/Offsite:**	SB-113 09/01/05 0-2 onsite	SB-114 09/01/05 0-2 onsite	SB-115 09/01/05 0-2 onsite	SB-116 09/01/05 6-8 onsite	SB-117 09/20/05 0.5-2 onsite
2,4,5-T	--		4.4 U	4.3 U	4.4 U	4.7 U	4.4 U
2,4,5-TP (Silvex)	500,000		4.4 U	4.3 U	4.4 U	4.7 U	4.4 U
2,4-D	--		4.4 U	4.3 U	4.4 U	4.7 U	4.4 U
4,4'-DDD	62,000		5.6 U	5.4 U	5.5 U	5.8 U	31
4,4'-DDE	47,000		10	9.7	5.5 U	5.8 U	8.8
4,4'-DDT	92,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Aldrin	680		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
alpha-BHC	3,400		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
beta-BHC	3,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Chlordane	24,000		310	240 E	59	12 U	11 U
delta-BHC	500,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Dicamba	--		4.4 U	4.3 U	4.4 U	4.7 U	4.4 U
Dieldrin	1,400		19	34	5.5 U	5.8 U	5.5 U
Endosulfan I	200,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Endosulfan II	200,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Endosulfan sulfate	200,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Endrin	89,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Endrin aldehyde	--		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Endrin Ketone	--		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
gamma-BHC (Lindane)	9,200		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Heptachlor	15,000		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Heptachlor epoxide	--		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Methoxychlor	--		5.6 U	5.4 U	5.5 U	5.8 U	5.5 U
Toxaphene	--		28 U	27 U	27 U	29 U	27 U

Notes:

-- - No NYSDEC standard available
µg/kg - Micrograms per kilogram
Bold - analyte was detected above the NYSDEC Standard
E - Result exceeded calibration range, secondary dilution required
ft bls - Feet below land surface
NYSDEC - New York State Department of Environmental Conservation
U - Analyte not detected at the detection limit shown

Table 11. Summary of Water Levels, Coral Island Shopping Center, Staten Island, New York.

Well Designation	Elevation of Measuring Point (ft amsl)	09/28/05		08/14/06	
		Depth To Water (ft bmp)	Water Table Elevation (ft amsl)	Depth To Water (ft bmp)	Water Table Elevation (ft amsl)
MW-101D	32.79	6.56	26.23	5.64	27.15
MW-101S	33.25	5.59	27.66	5.11	28.14
MW-102D	32.60	8.15	24.45	6.55	26.05
MW-102S	32.49	6.74	25.75	5.75	26.74
MW-103D	33.45	9.65	23.80	8.38	25.07
MW-103S	33.39	dry	--	6.49	26.90
MW104D	33.56	10.34	23.22	8.70	24.86
MW-104S	33.53	dry	--	dry	--
MW-105D	32.56	9.17	23.39	8.11	24.45
MW-105S	32.61	dry	--	5.06	27.55
MW-106D	32.80	8.70	24.10	7.59	25.21
MW-106S	32.94	dry	--	dry	--
MW-107D	32.40	9.31	23.09	7.25	25.15
MW-107S	32.42	7.86	24.56	7.41	25.01
MW-108D	34.85	10.34	24.51	8.89	25.96
MW-108S	34.83	dry	--	dry	--
MW-109D	32.25	8.67	23.58	6.42	25.83
MW-109S	32.38	dry	--	5.10	27.28
MW-111D	33.60	10.33	23.27	7.67	25.93
MW-111S	33.63	6.72	26.91	5.21	28.42
MW-112D	32.53	8.84	23.69	7.09	25.44
MW-112S	32.61	dry	--	dry	--
MW-113D	31.04	6.53	24.51	4.99	26.05
MW-113S	30.89	6.05	24.84	4.86	26.03
MW-126D	33.24	9.78	23.46	7.89	25.35
MW-126S	33.26	dry	--	dry	--
MW-201D	30.16	NA	NA	7.47	22.69
MW-201S	30.25	NA	NA	7.48	22.77
MW-202D	29.92	NA	NA	4.08	25.84
MW-202S	29.88	NA	NA	4.13	25.75
MW-203D	31.42	NA	NA	7.30	24.12
MW-203S	31.46	NA	NA	6.69	24.77
MW-204D	30.80	NA	NA	5.59	25.21
MW-204S	30.81	NA	NA	6.06	24.75

NOTES:

-- : not calculated, well dry
amsl: above mean sea level
bmp: below measuring point
ft: feet
NA: not applicable, well not installed

Table 12. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** / **Sample Date:**	MW-101D 09/30/05	MW-101S 09/30/05	MW-102D 09/29/05	MW-102S 09/29/05	MW-103D 09/29/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-105D 09/28/05
Acetone	50		2,500 U	2,500 U	2,500 U	2,500 U	25 U	25 U	25 U	25 U
Benzene	1		100 U	100 U	100 U	100 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Bromoform	50		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Bromomethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)	50		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Carbon disulfide	60		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Chlorobenzene	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Chloroethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Chloroform	7		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Chloromethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Dibromochloromethane	50		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5		500 U	**220**	500 U	500 U	1.3	5 U	5 U	5 U
cis-1,2-Dichloroethene	5		**19,000**	**31,000**	**7,800**	**11,000**	**220**	**69**	**84**	5 U
trans-1,2-Dichloroethene	5		500 U	500 U	500 U	500 U	1.5	5 U	5 U	5 U
1,2-Dichloropropane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Ethylbenzene	5		100 U	100 U	100 U	100 U	1 U	1 U	1 U	1 U
2-Hexanone	50		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	--		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Methylene chloride	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Styrene	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5		**17,000**	**3,500**	500 U	**1,200**	5 U	5 U	5 U	5 U
Toluene	5		100 U	100 U	100 U	100 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	5		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	1		500 U	500 U	500 U	500 U	5 U	5 U	5 U	5 U
Trichloroethene	5		**6,700**	**9,900**	**670**	**3,200**	**9.6**	5 U	5 U	5 U
Vinyl chloride	2		**1,500**	**2,800**	**660**	**610**	**15**	**16**	**26**	1.2
M&p-Xylenes	5		200 U	200 U	200 U	200 U	2 U	2 U	2 U	2 U
o-Xylene	5		100 U	100 U	100 U	100 U	1 U	1 U	1 U	1 U

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

- - No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table 12. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** / **Sample Date:**	MW-106D 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05	MW-109D 09/29/05	MW-111D 09/30/05	MW-112D 09/30/05	MW-112D DUP 09/30/05
Acetone	50		25 U	25 U	25 U	25 U	25 U	25 U	500 U	250 U
Benzene	1		1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U
Bromodichloromethane	50		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Bromoform	50		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Bromomethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
2-Butanone (MEK)	50		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Carbon disulfide	60		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Carbon tetrachloride	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Chlorobenzene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Chloroethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Chloroform	7		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Chloromethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Dibromochloromethane	50		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,1-Dichloroethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,2-Dichloroethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,1-Dichloroethene	5		5 U	1.2	5 U	5 U	5 U	5 U	100 U	50 U
cis-1,2-Dichloroethene	5		5 U	**380**	**21**	5 U	5 U	**17**	**760**	**1,100**
trans-1,2-Dichloroethene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,2-Dichloropropane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
cis-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
trans-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Ethylbenzene	5		1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U
2-Hexanone	50		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
4-Methyl-2-pentanone	--		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Methylene chloride	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Styrene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,1,2,2-Tetrachloroethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Tetrachloroethene	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Toluene	5		1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U
1,1,1-Trichloroethane	5		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
1,1,2-Trichloroethane	1		5 U	5 U	5 U	5 U	5 U	5 U	100 U	50 U
Trichloroethene	5		5 U	5 U	5 U	5 U	5 U	5 U	**20**	**38**
Vinyl chloride	2		5 U	**300**	**63**	5 U	5 U	**4.6**	**44**	50 U
M&p-Xylenes	5		2 U	2 U	2 U	2 U	2 U	2 U	40 U	20 U
o-Xylene	5		1 U	1 U	1 U	1 U	1 U	1 U	20 U	10 U

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

- - No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table 12. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	MW-113D 09/30/05	MW-113S 09/30/05	MW-126D 09/28/05	MW-201D 8/14/2006	MW-201S 8/15/2006	MW-202D 8/15/2006	MW-202S 8/15/2006	MW-203D 8/14/2006
Acetone	50		1,200 U	2,500 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzene	1		50 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	50		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)	50		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	60		250 U	500 U	5 U	5 U	1.5 J	5 U	5 U	5 U
Carbon tetrachloride	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	7		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	50		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5		**2,700**	**11,000**	5 U	1.9	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5		50 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	50		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	--		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5		250 U	500 U	5 U	1.2 B	1 B	5 U	5 U	1.6 B
Styrene	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5		**250**	**150**	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5		50 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	5		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	1		250 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5		**780**	**1,600**	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	2		**52**	**380**	5 U	5 U	5 U	5 U	5 U	5 U
M&p-Xylenes	5		100 U	200 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	5		50 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

- - No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table 12. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	MW-203S 8/14/2006	MW-204D 8/14/2006	MW-204D DUP 8/14/2006	MW-204S 8/14/2006	PZ-2 08/30/04	PZ-3 08/30/04	PZ-4 08/30/04	PZ-5 08/30/04
Acetone	50		25 U	25 U	25 U	25 U	2.8 U	2.8 U	140 U	280 U
Benzene	1		1 U	1 U	1 U	1 U	0.41 U	0.41 U	21 U	41 U
Bromodichloromethane	50		5 U	5 U	5 U	5 U	0.52 U	0.52 U	26 U	52 U
Bromoform	50		5 U	5 U	5 U	5 U	0.36 U	0.36 U	18 U	36 U
Bromomethane	5		5 U	5 U	5 U	5 U	0.9 U	0.9 U	45 U	90 U
2-Butanone (MEK)	50		5 U	5 U	5 U	5 U	12 U	12 U	610 U	1,200 U
Carbon disulfide	60		5 U	5 U	5 U	5 U	0.53 U	0.53 U	26 U	53 U
Carbon tetrachloride	5		5 U	5 U	5 U	5 U	0.52 U	0.52 U	26 U	52 U
Chlorobenzene	5		5 U	5 U	5 U	5 U	0.55 U	0.55 U	28 U	55 U
Chloroethane	5		5 U	5 U	5 U	5 U	1.3 U	1.3 U	66 U	130 U
Chloroform	7		5 U	5 U	5 U	5 U	1.2 U	1.2 U	59 U	120 U
Chloromethane	5		5 U	5 U	5 U	5 U	1.1 U	1.1 U	56 U	110 U
Dibromochloromethane	50		5 U	5 U	5 U	5 U	0.49 U	0.49 U	25 U	49 U
1,1-Dichloroethane	5		5 U	5 U	5 U	5 U	0.89 U	0.89 U	44 U	89 U
1,2-Dichloroethane	5		5 U	5 U	5 U	5 U	0.69 U	0.69 U	35 U	69 U
1,1-Dichloroethene	5		5 U	5 U	5 U	5 U	0.69 U	0.69 U	35 U	**150**
cis-1,2-Dichloroethene	5		5 U	5 U	5 U	5 U	**38**	0.69 U	**3,900**	**12,000**
trans-1,2-Dichloroethene	5		5 U	5 U	5 U	5 U	0.69 U	0.69 U	35 U	44 U
1,2-Dichloropropane	5		5 U	5 U	5 U	5 U	0.44 U	0.44 U	22 U	44 U
cis-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	0.51 U	0.51 U	26 U	51 U
trans-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	0.62 U	0.62 U	31 U	62 U
Ethylbenzene	5		1 U	1 U	1 U	1 U	0.87 U	0.87 U	44 U	**360**
2-Hexanone	50		5 U	5 U	5 U	5 U	0.45 U	0.45 U	22 U	45 U
4-Methyl-2-pentanone	--		5 U	5 U	5 U	5 U	0.44 U	0.44 U	22 U	44 U
Methylene chloride	5		2 B	1 B	5 U	5 U	3.7	2.6	**390**	**660**
Styrene	5		5 U	5 U	5 U	5 U	0.44 U	0.44 U	22 U	44 U
1,1,2,2-Tetrachloroethane	5		5 U	5 U	5 U	5 U	0.63 U	0.63 U	32 U	63 U
Tetrachloroethene	5		5 U	5 U	5 U	5 U	**46**	0.63 U	**7,500**	**630**
Toluene	5		1 U	1 U	1 U	1 U	2.1	1.5	**110**	**1,900**
1,1,1-Trichloroethane	5		5 U	5 U	5 U	5 U	0.64 U	0.64 U	32 U	64 U
1,1,2-Trichloroethane	1		5 U	5 U	5 U	5 U	0.43 U	0.43 U	21 U	43 U
Trichloroethene	5		5 U	5 U	5 U	5 U	**11**	0.43 U	**2,200**	**680**
Vinyl chloride	2		5 U	5 U	5 U	5 U	1.2	0.43 U	21 U	**2,200**
M&p-Xylenes	5		2 U	2 U	1.1 J	1.3 J	1.1 U	1.1 U	**100**	**1,800**
o-Xylene	5		1 U	1 U	1 U	1 U	0.72 U	0.72 U	36 U	**770**

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

- - No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table 12. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	PZ-6 (11-12) 08/30/04	SB-GW-113 09/01/05	SB-GW-114 09/01/05	SB-GW-115 09/01/05	SB-GW-116 09/01/05	SB-GW-117 09/22/05	SB-GW-118 09/22/05	SB-GW-119 09/22/05
Acetone	50		2.8 U	25 U	25 U	25 U	25 U	35	25 U	25 U
Benzene	1		0.41 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50		0.52 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	50		0.36 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5		0.9 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone (MEK)	50		12 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	60		0.53 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5		0.52 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5		0.55 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5		1.3 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	7		1.2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	5		1.1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	50		0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5		0.89 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5		0.69 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5		0.44 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5		4.9	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5		0.44 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5		0.44 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5		0.51 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	5		0.62 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5		0.87 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	50		0.45 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	--		0.44 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5		2.9	2.4 B	5 U	1.6	5 U	5 U	5 U	5 U
Styrene	5		0.44 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5		0.63 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5		2.3	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5		1.7	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	5		0.64 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	1		0.43 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5		1	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	2		0.43 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
M&p-Xylenes	5		1.1 U	2 U	2 U	2 U	2 U	2 U	1.1 J	2 U
o-Xylene	5		0.72 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

- - No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table I2. Summary of Volatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	SB-GW-120 09/22/05	FB-081406 8/14/2006	FB-081506 8/15/2006	TB 8/9/2006	Trip blank 08/30/04
Acetone	50		25 U	25 U	25 U	25 U	2.8 U
Benzene	1		1 U	1 U	1 U	1 U	0.41 U
Bromodichloromethane	50		5 U	5 U	5 U	5 U	0.52 U
Bromoform	50		5 U	5 U	5 U	5 U	0.36 U
Bromomethane	5		5 U	5 U	5 U	5 U	0.9 U
2-Butanone (MEK)	50		5 U	5 U	5 U	5 U	12 U
Carbon disulfide	60		5 U	5 U	5 U	5 U	0.53 U
Carbon tetrachloride	5		5 U	5 U	5 U	5 U	0.52 U
Chlorobenzene	5		5 U	5 U	5 U	5 U	0.55 U
Chloroethane	5		5 U	5 U	5 U	5 U	1.3 U
Chloroform	7		5 U	5 U	5 U	5 U	1.2 U
Chloromethane	5		5 U	5 U	5 U	5 U	1.1 U
Dibromochloromethane	50		5 U	5 U	5 U	5 U	0.49 U
1,1-Dichloroethane	5		5 U	5 U	5 U	5 U	0.89 U
1,2-Dichloroethane	5		5 U	5 U	5 U	5 U	0.69 U
1,1-Dichloroethene	5		5 U	5 U	5 U	5 U	0.69 U
cis-1,2-Dichloroethene	5		5 U	5 U	5 U	5 U	0.69 U
trans-1,2-Dichloroethene	5		5 U	5 U	5 U	5 U	0.69 U
1,2-Dichloropropane	5		5 U	5 U	5 U	5 U	0.44 U
cis-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	0.51 U
trans-1,3-Dichloropropene	5		5 U	5 U	5 U	5 U	0.62 U
Ethylbenzene	5		1 U	1 U	1 U	1 U	0.87 U
2-Hexanone	50		5 U	5 U	5 U	5 U	0.45 U
4-Methyl-2-pentanone	--		5 U	5 U	5 U	5 U	0.44 U
Methylene chloride	5		5 U	1.9 B	1.9 B	2 B	1 U
Styrene	5		5 U	5 U	5 U	5 U	0.44 U
1,1,2,2-Tetrachloroethane	5		5 U	5 U	5 U	5 U	0.63 U
Tetrachloroethene	5		5 U	5 U	5 U	5 U	0.69 U
Toluene	5		1 U	1 U	1 U	1 U	0.63 U
1,1,1-Trichloroethane	5		5 U	5 U	5 U	5 U	0.64 U
1,1,2-Trichloroethane	1		5 U	5 U	5 U	5 U	0.43 U
Trichloroethene	5		5 U	5 U	5 U	5 U	0.43 U
Vinyl chloride	2		5 U	5 U	5 U	5 U	0.43 U
M&p-Xylenes	5		2.1	2 U	2 U	2 U	1.1 U
o-Xylene	5		1.1	1 U	1 U	1 U	0.72 U

Notes:

New York State Department of Environmental Conservation (NYSDEC)

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

µg/L -Micrograms per liter

B - Analyte detected in laboratory blank

J - Estimated Value

U - Analyte was analyzed for but not detected at the detection limit shown

-- No NYSDEC AWQSGV available

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

Table 13. Summary of Semivolatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** / **Sample Date:**	MW-101D 10/03/05	MW-101S 10/03/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05
Acenaphthene	20		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Acenaphthylene	20		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Anthracene	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Benzo(a)anthracene	0.002		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Benzo(a)pyrene	ND		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Benzo(b)fluoranthene	0.002		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Benzo(g,h,i)perylene	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Benzo(k)fluoranthene	0.002		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Bis(2-chloroethoxy)methane	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Bis(2-chloroethyl)ether	1		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Bis(2-ethylhexyl)phthalate	5		10 U	1.3 J	11 U	11 U	11 U	14 U	10 U
4-Bromophenyl phenyl ether	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Butyl benzylphthalate	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Carbazole	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4-Chloroaniline	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Chloronaphthalene	10		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Chlorophenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4-Chlorophenyl phenyl ether	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,2-oxybis (1-chloropropane)	0		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Chrysene	0.002		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Dibenzo(a h)anthracene	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Dibenzofuran	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
1,2-Dichlorobenzene	3		10 U	10 U	11 U	11 U	11 U	14 U	10 U
1,3-Dichlorobenzene	3		10 U	10 U	11 U	11 U	11 U	14 U	10 U
1,4-Dichlorobenzene	3		10 U	10 U	11 U	11 U	11 U	14 U	10 U
3,3-Dichlorobenzidine	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,4-Dichlorophenol	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Diethyl phthalate	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Dimethyl phthalate	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,4-Dimethylphenol	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Di-n-butyl phthalate	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,4-Dinitrophenol	10		25 U	25 U	27 U	27 U	29 U	34 U	25 U
2,4-Dinitrotoluene	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,6-Dinitrotoluene	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Di-n-octyl phthalate	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Fluoranthene	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Fluorene	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Hexachlorobenzene	0.04		10 U	10 U	11 U	11 U	11 U	14 U	10 U

Table 13. Summary of Semivolatile Organic Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	MW-101D 10/03/05	MW-101S 10/03/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05
Hexachlorobutadiene	0.5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Hexachlorocyclopentadiene	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Hexachloroethane	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Indeno(1,2,3-cd)pyrene	0.002		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Isophorone	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Methylnaphthalene	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Methylphenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4,6-Dinitro-2-methylphenol	--		25 U	25 U	27 U	27 U	29 U	34 U	25 U
4-Chloro-3-methylphenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4-Methylphenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Naphthalene	10		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Nitroaniline	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
3-Nitroaniline	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4-Nitroaniline	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Nitrobenzene	0.4		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2-Nitrophenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
4-Nitrophenol	--		25 U	25 U	11 U	11 U	11 U	14 U	25 U
n-Nitroso-di-n-propylamine	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
n-Nitrosodiphenylamine	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Pentachlorophenol	--		25 U	25 U	27 U	27 U	29 U	34 U	25 U
Phenanthrene	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Phenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
Pyrene	50		10 U	10 U	11 U	11 U	11 U	14 U	10 U
1,2,4-Trichlorobenzene	5		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,4,5-Trichlorophenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U
2,4,6-Trichlorophenol	--		10 U	10 U	11 U	11 U	11 U	14 U	10 U

Notes:

- - No NYSDEC AWQSGV available

µg/L -Micrograms per liter

Ambient Water-Quality Standards and Guidance Values (AWQSGVs)

Bold data indicates that analyte was detected above the NYSDEC AWQSGVs

DUP - Duplicate

J - Estimated Value

New York State Department of Environmental Conservation (NYSDEC)

U - Analtye was analyzed for but not detected at the detection limit shown

Table 14. Summary of Metals Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** / **Sample Date:**	MW-101D 10/03/05	MW-101S 10/03/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05
Aluminum	--		180 U	180 U	520	180 U	180 U	180 U	180 U
Antimony	3		6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic	25		7.5 U	7.5 U	7.5 U	7.5 U	8.7	7.5 U	7.5 U
Barium	1,000		150	120	150	130	180	140	50 U
Beryllium	3		4 U	4 U	4 U	4 U	4 U	4 U	4 U
Cadmium	5		3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Calcium	--		130,000	57,000	30,000	35,000	79,000	38,000	35,000
Chromium	50		50 U	50 U	50 U	50 U	50 U	50 U	50 U
Cobalt	--		20 U	20 U	20 U	20 U	20 U	20 U	20 U
Copper	200		50 U	50 U	50 U	50 U	50 U	50 U	50 U
Cyanide Total	200		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Iron	300		280 U	**540**	**31,000**	**34,000**	**87,000**	**7,100**	**4,300**
Lead	25		4 U	4 U	4.3	4 U	4 U	4 U	4 U
Magnesium	35,000		22,000	10,000	**37,000**	**39,000**	22,000	19,000	25,000
Manganese	300		**3,100**	**940**	**970**	**990**	**2,200**	**1,700**	**5,100**
Mercury	0.7		0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Nickel	100		50 U	**120**	50 U	50 U	50 U	50 U	50 U
Potassium	--		5,000 U	10,000	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U
Selenium	10		40 U	40 U	40 U	40 U	40 U	40 U	40 U
Silver	50		20 U	20 U	20 U	20 U	20 U	20 U	20 U
Sodium	20,000		**26,000**	20,000	**42,000**	**41,000**	**31,000**	17,000	**190,000**
Thallium	12		10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	--		50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	2,000		50 U	50 U	50 U	50 U	50 U	50 U	64

Notes:
New York State Department of Environmental Conservation (NYSDEC)
Ambient Water-Quality Standards and Guidance Values (AWQSGVs)
µg/L -Micrograms per liter
U - Analyte was analyzed for but not detected at the detection limit shown
- - No NYSDEC AWQSGV available
Bold data indicates that analyte was detected above the NYSDEC AWQSGVs
DUP - Duplicate

Table 15. Summary of Polychlorinated Biphenyl Compounds Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

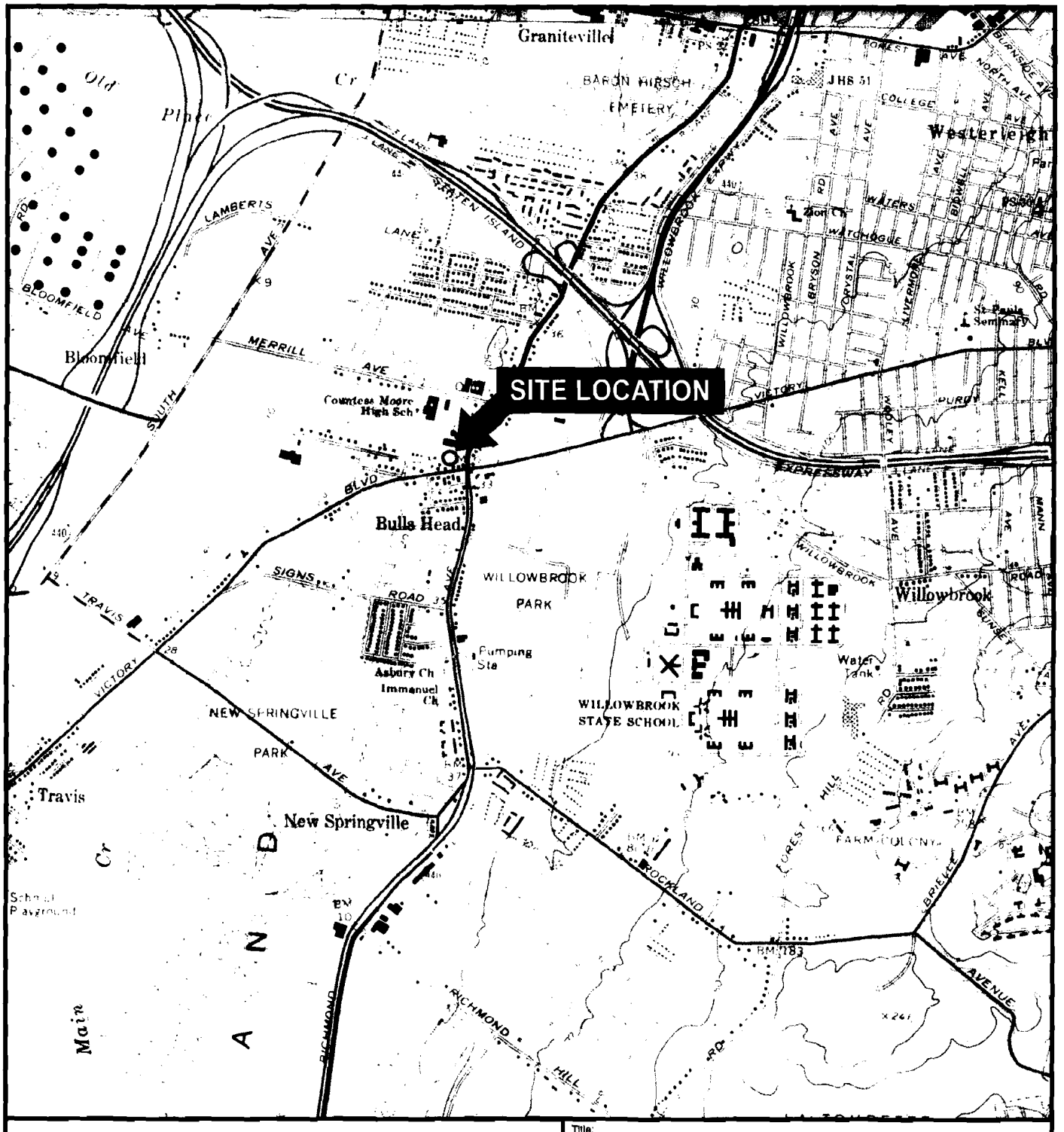
Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:**	MW-101D 10/03/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05
Aroclor-1016	(1)		0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1221			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1232			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1242			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1248			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1254			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Aroclor-1260			0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U
Total PCBs:	0.09		ND	ND	ND	ND	ND	ND

Notes:
(1) The NYSDEC AWQSGV for Total PCBs (sum of the Aroclors) is 0.09 µg/L
µg/L - Micrograms per liter
U - Indicates that the analyte was analyzed for but not detected at the detection limit shown
NYSDEC - New York State Department of Environmental Conservation
AWQSGVs - Ambient Water - Quality Standards and Guidance Values
Bold data indicates that analyte was detected above the NYSDEC AWQSGVs
PCBs - Polychlorinated Biphenyl Compounds
ND - Non-detectable concetration

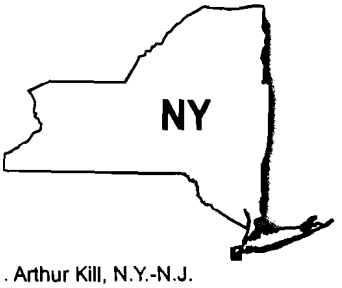
Table 16. Summary of Pesticides and Herbicides Detected in Groundwater, Coral Island Shopping Center, Staten Island, New York

Analyte (Concentrations in µg/L)	NYSDEC AWQSGVs (µg/L)	**Sample Location:** **Sample Date:** **Sample Depth (ft bls):**	MW-101D 10/03/05	MW-104D 09/29/05	MW-104D DUP 09/29/05	MW-107D 09/29/05	MW-107S 09/29/05	MW-108D 09/30/05
2,4,5-T	--		0.24 U	0.22 U	0.25 U	0.24 U	0.22 U	0.22 U
2,4,5-TP (Silvex)	0.26		0.24 U	0.22 U	0.25 U	0.24 U	0.22 U	0.22 U
2,4-D	50		0.24 U	0.22 U	0.25 U	0.24 U	0.22 U	0.22 U
4,4'-DDD	0.3		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
4,4'-DDE	0.2		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
4,4'-DDT	0.2		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Aldrin	0		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
alpha-BHC	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
beta-BHC	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Chlordane	0.05		0.12 U	0.11 U	0.12 U	0.13 U	0.11 U	0.13 U
delta-BHC	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Dicamba	--		0.24 U	0.22 U	0.25 U	0.24 U	0.22 U	0.22 U
Dieldrin	0.004		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endosulfan I	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endosulfan II	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endosulfan sulfate	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endrin	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endrin aldehyde	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Endrin Ketone	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
gamma-BHC (Lindane)	--		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Heptachlor	0.04		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Heptachlor epoxide	0.03		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Methoxychlor	35		0.06 U	0.056 U	0.062 U	0.063 U	0.057 U	0.064 U
Toxaphene	0.06		0.3 U	0.28 U	0.31 U	0.32 U	0.28 U	0.32 U

Notes:
New York State Department of Environmental Conservation (NYSDEC)
Ambient Water-Quality Standards and Guidance Values (AWQSGVs)
µg/L -Micrograms per liter
U - Analyte was analyzed for but not detected at the detection limit shown
- - No NYSDEC AWQSGV available
Bold data indicates that analyte was detected above the NYSDEC AWQSGVs
DUP - Duplicate



QUADRANGLE LOCATION



N

0 2000'

SOURCE:
USGS; 1981. Arthur Kill, N.Y.-N.J.
7.5 Minute Topographic Quadrangle

Title:

SITE LOCATION PLAN

CORAL ISLAND SHOPPING CENTER
STATEN ISLAND, NEW YORK

Prepared for:
WWP ASSOCIATES, LLP

ROUX ASSOCIATES, INC. Environmental Consulting & Management	Compiled by: M.R.	Date: 05JAN07	FIGURE 1
	Prepared by: M.R.	Scale: AS SHOWN	
	Project Mgr.: M.R.	Office: NY	
	File No.: RRA0112509.CDR	Project No.: 125801Y	

N:\PROJECTS\RRA\125801Y\RRA01Y\125\RRA0112509.CDR

APPENDIX A

Compliance Audit of Charming Cleaners

February 23, 2007

DRAFT
ENVIRONMENTAL COMPLIANCE AUDIT REPORT

Charming Cleaners
Coral Island Shopping Center
1650 Richmond Avenue
Staten Island, New York

Prepared for

WWP ASSOCIATES, LLC
Raleigh, North Carolina

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

ROUX *209 Shafter Street, Islandia, New York 11749 ♦ 631-232-2600*

TABLE OF CONTENTS

1.0 INTRODUCTION

Roux Associates, Inc. (Roux Associates) was contracted by WWP Associates, LLC to conduct an environmental compliance audit (the audit) of the Charming Cleaners dry cleaning facility located in the Coral Ridge shopping center at 1650 Richmond Avenue, Staten Island, New York.

Roux Associates conducted the audit on September 1, 2005 and performed an update audit on January 26, 2007. The audit was comprised of two components: an environmental records review and a site inspection. Unless otherwise stated, the information in this report was obtained during the audit.

The following persons attended the records review and the site inspections on September 1, 2005 and January 26, 2007:

- Mr. Gwy H. Min, Manager/Owner, Charming Cleaners
- Ms. Monica McHugh, P.G., Senior Hydrogeologist, Roux Associates

2.0 ENVIRONMENTAL REGULATORY COMPLIANCE AUDIT

2.1 Background

Site operations at the Charming Cleaners dry cleaning facility (the facility) consist of stain removal, dry cleaning, steam pressing, and tailoring. The facility has one fourth-generation perchloroethene dry cleaning machine (closed-loop refrigerated machine with a drying sensor and an integral carbon adsorber) installed in 1998. No other solvents or wet cleaning operations are conducted. The facility operates under Standard Industrial Classification (SIC) Code 7216 assigned for dry cleaning plants.

The following environmental regulatory programs were reviewed during the audit:

- Tanks (aboveground/underground);
- Hazardous Waste;
- Universal Waste;
- Medical Waste;
- Emergency Planning and Community Right to Know (EPCRA);
- Oil/Used Oil
- Stormwater;
- Wastewater;
- Air Emissions - 6 NYCCRR Part 232, Perchloroethylene Dry Cleaning Facilities
- Toxic Substances Control Act; and
- Drinking Water.

The audit finding for each regulatory program is discussed in the paragraphs to follow.

2.2 Tanks

2.2.1 Current Conditions

The facility has one 50-gallon aboveground storage tank (AST) for storage of perchloroethene. There are no known underground storage tanks (USTs) at the facility.

2.2.2 Regulatory Requirements

The NYSDEC regulates bulk storage ASTs with a capacity of 185 gallons or greater under 6 NYCRR Part 596 (Hazardous Substance Storage Tank Regulations). These regulations do not apply based on the capacity of the onsite AST (50 gallons). In addition, Spill Prevention Control and Countermeasures plan requirements do not apply since there is no oil stored at the facility.

2.2.3 Findings

There are no findings with respect to storage tanks.

2.3 Hazardous Waste

2.3.1 Current Conditions

The manufacturing facility is a conditionally exempt small quantity generator (CESQG) of hazardous waste consisting of spent perchloroethene (liquid) and perchloroethene-contaminated solids (residues/still bottoms and spent carbon from the carbon adsorber and from the wastewater treatment filter). The liquid and perchloroethene-contaminated solids are stored in two 13-gallon plastic drums inside the facility adjacent to the dry cleaning machine.

At the time of each site inspection, there was one full 13-gallon drum and one partially full 13-gallon drum stored adjacent to the dry cleaning machine within the machine enclosure. At the time of the January 26, 2007 inspection, each drum had a hazardous waste sticker with no accumulation start date on the full drum. Roux Associates instructed Mr. Min to date the drums when they become full and Mr. Min dated the full drum December 15, 2006.

Files maintained at the facility included historical manifests or bills of lading. The facility contracts Safety Kleen Systems, Inc. to remove and dispose of the waste. During the September 1, 2005 inspection, it was noted that some copies of land ban paperwork and signed disposal facility manifest copies were noted, but not for each shipment. During the January 26, 2006 inspection, it was noted that all manifests from 2005 and 2006 included the land ban paperwork and the most recent manifest included a signed disposal facility manifest copy. In 2004, a total of five 13-gallon drums were shipped offsite. In 2005, a total of four 13-gallon drums were shipped offsite. In 2006, a total of two 13-gallon drums were shipped offsite (last shipment was August 4, 2006).

2.3.2 Regulatory Requirements

Under the NYSDEC Hazardous Waste regulations (6 NYCRR 371.1(f)), a generator is a CESQG and exempt from certain requirements such as record keeping if that generator:

- Does not generate in a calendar month more than 100 kilograms of hazardous waste or 1 kilogram of acutely hazardous waste (perchloroethene is not acutely hazardous waste);
- Does not accumulate, at any one time, hazardous waste in quantities exceeding 1,000 kilograms;

The requirements that apply to CESQs include identification of hazardous wastes generated and ensuring the waste is sent to an approved treatment, storage or disposal (TSD) facility.

2.3.3 Findings

The facility should continue to request copies of land ban certifications and signed disposal facility manifest copies from the hazardous waste disposal vendor for each hazardous waste shipment. This will better fulfill the requirement of ensuring the waste is sent to an approved TSD facility.

The facility should mark accumulation start dates on full hazardous waste drums and assure that all drums are labeled as hazardous waste and that the labels are readily visible as required by Hazard Communications regulations.

These findings were communicated to Mr. Min on January 26, 2007.

2.4 Universal Wastes

The facility does not generate or handle universal wastes such as fluorescent lamps and batteries. Light fixtures are replaced by the landlord.

2.5 Medical Wastes

The facility does not generate or handle medical wastes.

2.6 Emergency Planning and Community Right to Know (EPCRA)

The facility does not store extremely hazardous substances (EHS) that exceed the threshold planning quantities (TPQ), and the facility does not store 10,000 pounds or more of a hazardous substance.

Roux Associates noted that the facility submits a Right to Know Facility Inventory Form Tier annually to the city of New York and the form accounted for perchloroethene use/storage at the facility.

2.7 Oil/Used Oil

The facility does not use or store oil at the facility or generate used oil.

2.8 Stormwater

The facility operates under SIC Code 7216. According to 40 CFR 122.26(b)14, this SIC Code is not applicable to stormwater permitting.

2.9 Wastewater

2.9.1 Current Conditions

There are no floor drains in the facility. The facility does not conduct clothes washing in machines other than the dry cleaning machine. There is currently one wastewater stream generated at the site besides sanitary waste which is condensate water from the dry cleaning machine that is separated from perchloroethene, treated through carbon, and evaporated.

Approximately 3 gallons of water resulting from condensation within the dry cleaning machine are generated each week. This wastewater is separated from perchloroethene by a separator ancillary to the dry cleaning machine and discharged through a hose to a 5-gallon container located on the floor adjacent to the machine. Approximately once per week, the operator pours the water from the bucket through a double cartridge carbon filtration device located adjacent to the dry cleaning machine and collects the filtered water in a second 5-gallon container. The water is then transferred from the second container to a pot that is equipped with a heating coil and air discharge hose. The water is boiled in the pot and the resulting steam is discharged to the

atmosphere through the air discharge hose. The facility does not discharge this wastewater stream onsite or to the public sewer system as it is completely evaporated.

The carbon in the double carbon filtration device is changed every 3 to 4 months. The spent carbon is placed in the hazardous waste drums discussed in Section 2.3.1. In 2004, the facility placed the wastewater directly from the separator into the hazardous waste drums. During the January 2004 annual compliance inspection, the inspector indicated that boiling the water after separation without filtration, as the facility had been doing previously, was not in compliance, so the separated water was collected as hazardous waste until the double cartridge carbon filtration unit was installed later in 2004.

2.9.2 Regulatory Requirements

According to 6 NYCRR 232.9, perchloroethene-contaminated wastewater that is evaporated must be treated by physical separation (water separator) and double carbon filtration prior to evaporation. According to Mr. Min, the facility manager, the water is separated and treated through a double cartridge carbon treatment device prior to evaporation via steam boiling. The dry cleaning machine condensate wastewater treatment described above is covered under the facility's air permit discussed in Section 2.10.

2.10 Air Emissions – 6 NYCRR Part 232 Perchloroethylene Dry Cleaning Facilities

2.10.1 Current Conditions

As described above, the facility has one fourth-generation dry cleaning machine. The manager, Gwy H. Min, is a trained operator (certification #1337920203) and performs weekly leak inspections and self monitoring. The records are maintained for at least 5 years in log books. The facility is permitted by the NYSDEC Division of Air Resources per 6 NYCRR Part 201-4 (Identification #2-6403-00110) and is inspected annually for compliance by a third party certified inspector. The dry cleaning machine has one emission point equipped with a carbon adsorber. The last compliance inspection report was dated January 5, 2006 and the facility was found to be in compliance. The facility was last inspected on January 5, 2007 and Mr. Min is awaiting a copy of the report. According to Mr. Min, the inspector indicated that the facility was in compliance.

2.10.2 Regulatory Requirements

According to the last annual compliance inspection report and audit observations, the facility appears to be in compliance with air emission registration requirements under 6 NYCRR 201-4 (Minor Facility Registration) and the following 6 NYCRR 232 (Perchloroethylene Dry Cleaning Facilities) requirements:

- Sections 232.1 through 232.3 contain general information (applicability, definitions, and variances).

- 232.4 Prohibitions – the facility does not operate dry-to-dry vented or nonvented equipment as a transfer machine; there are no self-service dry cleaning machines; the facility does not use an immersion heater to evaporate solvent from the untreated effluent of a water separator (this is what the facility had done prior to the 2004 inspection as discussed in Section 2.9); the facility has not constructed, modified, or operated a dry cleaning facility without obtaining a permit/registration; and the facility does not vent perchloroethene emissions into the workroom or facility.

- 232.5 Pre-Permitting Requirements for Existing Facilities – the facility met the pre-permitting requirements listed in this subpart prior to the issuance of its current minor source air emissions registration (Identification #2-6403-00110).

- 232.6 Equipment Standards and Specification – the facility's general exhaust ventilation system, primary emission control system (refrigerated condenser with drying sensor), secondary emission control system (integral carbon adsorber), and spill containment are present in accordance with the specification for fourth-generation machines as indicated in the annual compliance inspection reports.

- 232.7 Leak Inspections and Self Monitoring Requirements – the facility's certified operator, Mr. Min, conducts leak checks weekly with a halogenated-hydrocarbon detector and checks for liquid leaks and the temperature of the vapor stream on the inlet and outlet side of the refrigerated condenser is recorded weekly. The weekly measurements are maintained in log books that are kept onsite.

- 232.8 Operation and Maintenance Requirements – the components of the dry cleaning machine are operated in accordance with the manufacturer's specifications and Mr. Min performs weekly operation and maintenance, the checklists for which are maintained in a logbook onsite.

- 232.9 Perc-Contaminated Wastewater Management – as indicated in Section 2.9 of this report, the facility treats the wastewater from the dry cleaning machine via physical separation (water separator) and double carbon filtration prior to evaporation in accordance with 232.9(b).

- 232.10 Hazardous Waste Management – All perchloroethene-contaminated wastes (liquid and solid) are handled in accordance with state and federal hazardous waste management regulations, except as noted in Section 2.3.3 of this report (manifest and

labeling recommendations). All perchloroethene-contaminated wastes are stored in tightly sealed containers that are kept closed except when adding waste. Records showing the date and volume of waste shipments are retained for at least five years.

- 232.11 Emergency Response – the dry cleaning machine is equipped with secondary containment and has an empty drum and rags on hand for spill response. According to Mr. Min, there has never been a release or spill since his ownership of the facility in 1991.

- 232.12 Reporting and Recordkeeping – the facility maintains the required records (e.g., maintenance log, hazardous waste shipment log, carbon cartridge change-out log, perchloroethene purchase log, inspection checklists, operations and maintenance checklists) onsite for at least five years and has equipment operating manuals onsite.

- 232.13 Equipment Testing and Certification – this section is not applicable (applies to installation of new equipment).

- 232.14 Owner/Manager Operator Training and Certification – The manager, Gwy H. Min, is a trained operator (certification #1337920203) and is the only person who operates the dry cleaning machine and his certification is current (expires 2/28/09).

- 232.15 Permitting and Compliance – The facility is permitted by the NYSDEC Division of Air Resources (Identification #2-6403-00110).

- 232.16 Compliance Inspections – the facility is inspected annually by a registered inspector and the inspector submits the reports to the NYSDEC and the facility. Copies of the annual inspection reports are maintained onsite and available upon request to interested individuals for review.

- 232.17 Equivalency – this section is not applicable (applies to use of alternative equipment).

- 232.18 Posting Notice – the facility has a NYSDEC notice regarding perchloroethene posted in a conspicuous location.

2.10.3 Findings

There are no findings with respect to air emissions and Part 232 regulations for perchloroethene dry cleaning facilities.

2.11 Toxic Substances Control Act (TSCA)

The facility does not handle TSCA-regulated substances or wastes.

2.12 Drinking Water

The facility does not have wells associated with potable or drinking water.

3.0 SUMMARY OF FINDINGS

In conclusion, the following summarizes the findings of this audit conducted at the Charming Cleaners dry cleaning facility located in Staten Island, New York.

Tanks

No findings.

Hazardous Wastes

The facility should continue to request copies of land ban certifications and signed disposal facility manifest copies from the hazardous waste disposal vendor for each hazardous waste shipment. This will better fulfill the requirement of ensuring the waste is sent to an approved TSD facility.

The facility should mark accumulation start dates on full hazardous waste drums and assure that all drums are labeled as hazardous waste and that the labels are readily visible.

These findings were communicated to Mr. Min on January 26, 2007.

Universal Wastes

The facility does not generate or handle universal wastes.

Medical Wastes

The facility does not generate or handle medical wastes.

Emergency Planning and Community Right to Know (EPCRA)

No findings.

Oil/Used Oil

The facility does not use or store oil at the facility or generate used oil.

Stormwater

The facility operates under SIC Code 7216. According to 40 CFR 122.26(b)14, this SIC Code is not applicable to stormwater permitting.

Wastewater

No findings.

Air Emissions – 6 NYCRR Part 232 Perchloroethylene Dry Cleaning Facilities

No findings.

Toxic Substances Control Act (TSCA)

The facility does not handle TSCA-regulated substances or wastes.

Drinking Water

The facility does not have wells associated with potable or drinking water.

4.0 REPORT LIMITATIONS

This report describes the results of Roux Associates' Environmental Compliance Audit of the environmental programs affecting the Charming Cleaners dry cleaning facility located in Staten Island, New York. The conclusions stated herein represent the application of a variety of engineering and technical disciplines to material facts and conditions associated with the site and relevant environmental laws and regulations. Some of these facts, conditions, and regulations are subject to change over time; accordingly, the conclusions must be considered within this context. The environmental compliance audit inspections of the facility took place on September 1, 2005 and January 26, 2007.

Roux Associates has performed this compliance review in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent consultants practicing in the field. Roux Associates shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed during the conduct of the audit.

This compliance audit and report does not constitute a judgment on the part of Roux Associates regarding the environmental compliance of operations at the Charming Cleaners facility. This report has been prepared for the exclusive use of WWP Associates, LLC and any third party use of this report is the sole responsibility of WWP Associates, LLC.

APPENDIX B

Soil Boring and Monitoring Well Construction Logs

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **P-1**	NORTHING: **Not Measured**	EASTING: **Not Measured**		
PROJECT NO./NAME: **122601Y / WWP Associates, LLC**		LOCATION: **Coral Island Shopping Center**		
APPROVED BY: **M. Roux**	LOGGED BY: **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Aquifer Drilling andTesting / Andrea Babel**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **2-inches**	DRILLING EQUIPMENT/METHOD: **6610DT / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **7/29/04-7/29/04**
CASING MAT./DIA.: **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN: **/**	GRAVEL PACK SIZES: **None**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown- light brown, fine to coarse SAND, little Silt, little Clay, trace Gravel; moist			PVC screen was pulled from ground and borehole was backfilled with bentonite.
5		Reddish Brown SILT and CLAY, trace Sand, trace Gravel; wet at 5 feet			Sample groundwater from P-1 for VOC's.
10					Bottom of boring at 10 ft bls.
15					
20					
25					
30					

GROUND WATER LEVEL 7/30/04

1" PVC Screen

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **P-2**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **122601Y / WWP Associates, LLC**		LOCATION **Coral Island Shopping Center**		
APPROVED BY **M. Roux**	LOGGED BY **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling andTesting / Andrea Babel**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6610DT / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/29/04-7/29/04**
CASING MAT./DIA. **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0ft**	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **None**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, fine to coarse SAND, some Silt, little Gravel; wet at 4 feet			
	GROUND WATER LEVEL 7/30/04				PVC screen was pulled from ground and borehole was backfilled with bentonite. Sample groundwater from P-2 for VOC's.
	1" PVC Screen				
5					Bottom of boring at 5 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **P-3**	NORTHING: **Not Measured**	EASTING: **Not Measured**		
PROJECT NO./NAME: **122601Y / WWP Associates, LLC**		LOCATION: **Coral Island Shopping Center**		
APPROVED BY: **M. Roux**	LOGGED BY: **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / M. Roux**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **/**	BOREHOLE DIAMETER: **8-inches**	DRILLING EQUIPMENT/METHOD: **Hand Tools / Post Hole Digger**	SAMPLING METHOD:	START-FINISH DATE: **7/29/04-7/29/04**
CASING MAT./DIA.: **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **5.2** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN: **/**	GRAVEL PACK SIZES: **None**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Coarse GRAVEL over landscape fabric			
		Brown fine to coarse SAND, little Silt, little fine Garvel; moist to wet at 5 feet.			
		GROUND WATER LEVEL 7/30/04			PVC screen was pulled from ground and borehole was backfilled with bentonite.
		1" PVC Screen			
5		Gray to brown CLAY, little Silt; moist			Sample groundwater from P-3 for VOC's. Bottom of boring at 5.2 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-1	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6610DT / Geoprobe	2" Macro-Core	7/29/04-7/29/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Reddish Brown fine to coarse SAND, some Gravel, trace Silt; moist		0	Sample soils for VOC's (1-2')
		Brown, fine to coarse SAND, little Gravel, little Silt		0	
5		Brownish Gray CLAY, little fine Sand, little Silt; wet			Sample soils for VOC's (4-5')
		Light Brownish Gray fine SAND and SILT, trace Clay; wet		0	
10		Brown fine SAND and SILT; wet		0	Sample soils for VOC's (9-10')
15		Brown fine SAND and SILT; wet		0	
		Brown CLAY; wet		0	Sample soils for VOC's (18-19')
20		Brown GRAVEL; wet Brown CLAY, little Gravel; moist		0	
25		Brown medium to coarse SAND, some Gravel; wet Brown fine SAND and SILT, some Gravel, little Clay; moist		0	
30		Brown fine SAND and SILT, some Clay, little Gravel; moist		0	Bottom of boring at 30 ft bls. Borehole backfilled with bentonite.

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
SB-10	Not Measured	Not Measured

PROJECT NO./NAME	LOCATION
122601Y / WWP Associates, LLC	Coral Island Shopping Center

APPROVED BY	LOGGED BY	
M. Roux	M. Kroll	1650 Richmond Ave, Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Aquifer Drilling andTesting / Andrea Babel	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	7/30/04-7/30/04

LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL
Not Measured	Not Measured	Bentonite

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Silt; moist		0	
		Brown fine to medium SAND, some Silt, trace Clay; moist		0	
5		Tan fine SAND and SILT, trace Gravel; moist to wet		0	
		Tannish Brown fine SAND and SILT; wet at 7 feet		0	Sample soils for VOC's (7-8')
		Brown CLAY, some Silt, trace Sand; moist		0	Bottom of boring at 9 ft bls. Borehole was backfilled with bentonite.
10					
15					
20					
25					
30					

GROUND WATER LEVEL 7/30/04

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **SB-11/P-6**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **122601Y / WWP Associates, LLC**		LOCATION **Coral Island Shopping Center**		
APPROVED BY **M. Roux**	LOGGED BY **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling andTesting / Andrea Babel**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **5400 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/30/04-7/30/04**
CASING MAT./DIA. **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **None**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, little Gravel, little Concrete; moist			
		Brown fine to coarse SAND, little Silt, trace Gravel; moist			
5		Brown CLAY, little Silt; moist to wet			Installed piezometer was dry. PVC screen was pulled from ground and borehole was backfilled with bentonite.
		Gray fine SAND and SILT, trace Clay; moist			
		Gray fine SAND and SILT; wet			
10		Brown fine SAND and SILT; wet			
		Brown CLAY; moist			Sample groundwater GW-1 for VOC's (11-12').
					Bottom of boring at 14 ft bls.
15					
20					
25					
30					

1" PVC Screen

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-2	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6610DT / Geoprobe	2" Macro-Core	7/29/04-7/29/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Silt, trace Concrete, trace Wood; moist		612	Sample soil for VOC's (1-2')
				16.2	
5		Gray fine to medium SAND; moist			
		Grayish Brown fine SAND and SILT; wet			Sample soil for VOC's (5-6')
		Brown SILT and CLAY, little fine Sand, trace Gravel; moist		19.7	
				25.3	Sample soil for VOC's (9-10')
10		Brown CLAY; moist Brown CLAY, trace Gravel, trace Silt; moist			
				25.1	
				20.5	Bottom of boring at 15 ft bls. Borehole was backfilled with bentonite.
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-3	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6610DT / Geoprobe	2" Macro-Core	7/29/04-7/29/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brownish Red fine to coarse SAND, some Silt, some Gravel; moist		6	
		Grayish Tan fine SAND and SILT, trace Clay; moist to wet		18.4	
5		Brown CLAY, trace fine Sand; wet to moist			Sample soils for VOC's (4-5')
					Bottom of boring at 6 ft bls. Borehole was backfilled with bentonite.
10					
15					
20					
25					
30					

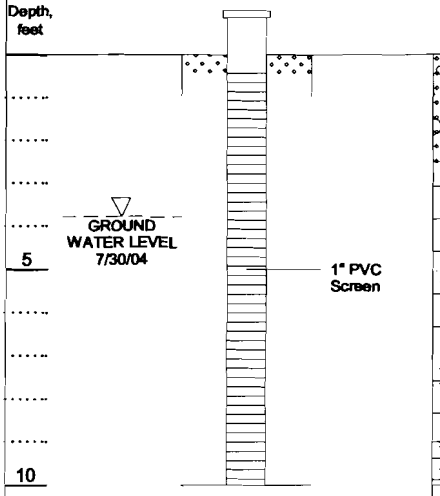
BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **SB-4/P-4**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **122601Y / WWP Associates, LLC**		LOCATION **Coral Island Shopping Center**		
APPROVED BY **M. Roux**	LOGGED BY **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling andTesting / Andrea Babel**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6610DT / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/29/04-7/29/04**
CASING MAT./DIA. **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **10.0**ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **None**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Silt; moist		10.4	
		Brownish Tan fine SAND, some Silt; moist		30.5	PVC screen was pulled from ground and borehole was backfilled with bentonite
5		Brownish Gray fine SAND and SILT; wet		0	5
		Brown fine SAND and SILT; wet		158	Sample soils for VOC's (8-9'). Sample groundwater from P-4 for VOC's.
10		Brown CLAY; wet			10 Bottom of boring at 10 ft bls
15					15
20					20
25					25
30					30

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-5	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6610DT / Geoprobe	2" Macro-Core	7/29/04-7/29/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, trace Concrete; moist		0	
		Tannish Brown fine SAND and SILT, trace Clay; moist		0	
5		Brown fine SAND and SILT, little Clay; wet		0	
		Brown fine SAND and SILT; wet		0	Sample soils for VOC's (8-9')
10		Brown CLAY; moist			Bottom of boring at 10 ft bls. Borehole was backfilled with bentonite.
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-6	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	7/30/04-7/30/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Silt, trace Clay, trace Gravel; moist		3.1	
		Brownish Tan fine SAND and SILT, trace Clay; moist		21.1	
5		Brownish Gray fine SAND, some Silt; wet		36.3	Sample soils for VOC's (4-5')
		Brown CLAY and SILT, trace Gravel; moist		319	Sample soils for VOC's (6-8')
10					Bottom of boring at 8 ft bls. Borehole was backfilled with bentonite.
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **SB-7/P-5**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **122601Y / WWP Associates, LLC**		LOCATION **Coral Island Shopping Center**		
APPROVED BY **M. Roux**	LOGGED BY **M. Kroll**	**1650 Richmond Ave, Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Aquifer Drilling andTesting / Andrea Babel**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **5400 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/30/04-7/30/04**
CASING MAT./DIA. **SCH 40 PVC / 1-inch**	SCREEN: TYPE **Slotted**	MAT. **SCH 40 PVC** TOTAL LENGTH **8.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **None**

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Silt, little Gravel; moist		87.2	PVC screen was pulled from ground and borehole was backfilled with bentonite.
		Brown fine to coarse SAND, some Silt, little Clay; moist		6.2	Slight organic odor
	1"PVC Screen				
5		Grayish Brown fine to medium SAND, little Silt, trace Clay; wet		12.5	
		Grayish Brown fine to medium SAND, little Silt; wet			
		Brown CLAY and SILT, trace Gravel; moist		109	Sample soils for VOC's (6-8'). Sample groundwater from P-5 for VOC's.
					Bottom of boring at 8 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-8	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	7/30/04-7/30/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, trace Silt; moist		0	
		Brown, fine to coarse SAND, some Silt, little Clay; moist		0	
5		Brownish Gray fine SAND and SILT; wet		0	
	▽ GROUND WATER LEVEL 7/30/04	Gray fine SAND and SILT; wet		0	
		Brown CLAY and SILT, trace Gravel; moist		0	Sample soils for VOC's (7-8')
10					Bottom of boring at 10 ft bls. Borehole was backfilled with bentonite.
15					
20					
25					
30					

BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-9	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
122601Y / WWP Associates, LLC		Coral Island Shopping Center		
APPROVED BY	LOGGED BY	1650 Richmond Ave, Staten Island, New York		
M. Roux	M. Kroll			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Aquifer Drilling andTesting / Andrea Babel				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	7/30/04-7/30/04
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	Not Measured	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Silt; trace Wood; moist		0	
		Dark Grayish Brown fine to medium SAND, some Silt, trace Gravel; moist		0	
5		Gray fine SAND and SILT, little Clay; moist to wet		0	
	▽ GROUND WATER LEVEL 7/30/04	Gray fine SAND and SILT, little Clay; wet			
		Brown CLAY, some Silt; moist		0	Sample soils for VOC's (6-7')
					Bottom of boring at 8 ft bls. Borehole was backfilled with bentonite.
10					
15					
20					
25					
30					

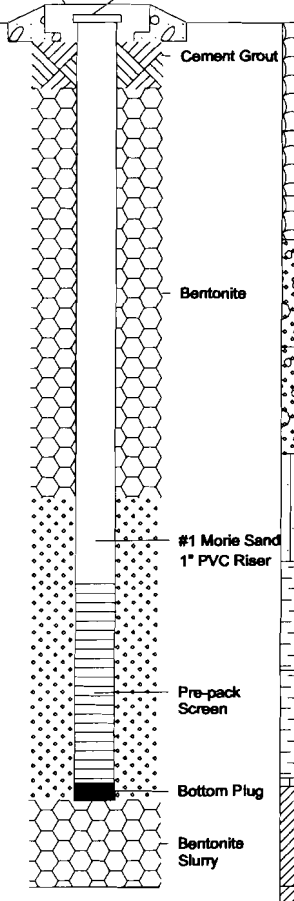
BORING/FEET 122601Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-101D**	NORTHING **160978.9**	EASTING **938957.8**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/26/05-8/26/05**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **33.16**	TOP OF WELL CASING **32.79**	TOP & BOTTOM SCREEN **20.2 / 15.2**	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, coarse to fine SAND, little Gravel, little Silt, trace Brick, trace Glass; moist (fill)		725	Lithology data was obtained from SB-101. Hand excavated to 5ft bls as part of utility clearance.
		Dark brown to black, coarse to fine SAND, little organics (Weeds, Roots); moist (fill)	G	13.3	Sampled 0.5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
5		Grey, medium to fine SAND, trace Silt, trace Brick; moist/wet (fill)			5
		Grey to brown, coarse to fine SAND, some Gravel, trace Silt; wet		248	Sampled groundwater for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses. Sampled 5 to 7.5 ft. interval for VOC analysis.
		Brown, coarse to fine SAND, some Gravel, little Silt; wet		20.7	
10		Brown, SILT, some medium to fine Sand, little Gravel; wet			10
				43.5	
		Brown, SILT, little Clay, trace Gravel; moist/wet		71.1	
15		Brown, SILT, little Clay, trace Gravel; moist/wet			15
				84.5	
		Brown, crushed Rock, little Gravel, little Silt; moist/dry			
		Brown, SILT, some Clay, trace Gravel; moist		208	
20		Brown, SILT, little Clay; moist			20
				42.4	
		Brown, SILT, some Clay; moist		34.7	
25		Brown, SILT, some Clay, little fine Sand; moist			25
				27.3	
		Brown, SILT, some Clay, little fine Sand, little crushed Rock; moist		22.5	Sampled 27.5 to 30 ft. interval for VOC analysis.
30					Bottom of soil boring at 30 ft bls. 30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-101S	160977.3	938957.3

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

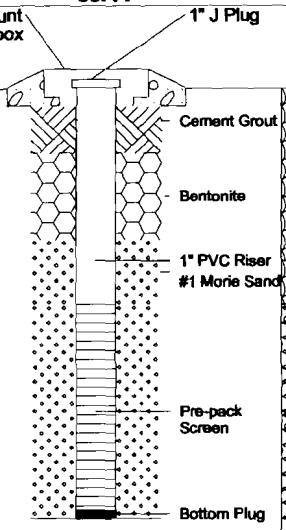
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	8/26/05-8/26/06

CASING MAT./DIA.	SCREEN:				
PVC / 1-inch	TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH 5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	33.44	33.25	28.4 / 23.4	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, coarse to fine SAND, little Gravel, little Silt, trace Brick, trace Glass; moist (fill)			Lithology data was obtained from SB-101.
				725	Hand excavated to 5ft bls as part of utility clearance
		Dark brown to black, coarse to fine SAND, little organics (Weeds, Roots); moist (fill)	G	13.3	Sampled 0.5 to 2 ft. interval for VOC analysis.
5		Grey, medium to fine SAND, trace Silt, trace Brick; moist/wet (fill)			5
		Grey to brown, coarse to fine SAND, some Gravel, trace Silt; wet			Sampled groundwater for VOC, SVOC, TAL Metals, and CN analysis.
				248	Sampled 5 to 7.5 ft. interval for VOC analysis.
		Brown, coarse to fine SAND, some Gravel, little Silt; wet			
				20.7	
10					Bottom of soil boring at 10 ft bls. 10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-102D	160999.8	938928.6

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

APPROVED BY	LOGGED BY
DRAFT	J. Sakellis

Staten Island, New York

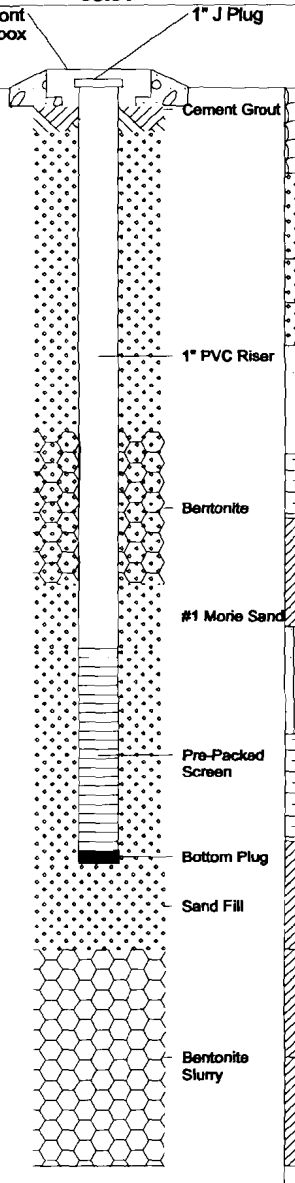
DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	8/24/05-8/24/05

CASING MAT./DIA. PVC / 1-inch

SCREEN: TYPE Pre-Packed MAT. PVC TOTAL LENGTH 5.0 ft DIA. 1-inch SLOT SIZE 20-Slot

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	33.01	32.60	20.0 / 15.0	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan, coarse to fine SAND, little Gravel, trace Glass, trace Plastic; dry (fill)	G	0.5	
		Dark brown to black, medium to fine SAND, some organic material, trace Gravel; moist	G	2.2	
5		Grey, medium to fine SAND; moist	G	12.0	
		Brown, medium to fine SAND, trace Silt; wet			Sampled groundwater for VOC analysis.
		Brown, fine SAND, little Silt, trace Gravel; wet		17.9	
		Brown, SILT, little Clay, trace Gravel; moist		6.5	
10		Brown, SILT, some Clay, trace Gravel; moist		2.3	
		Brown, SILT, some fine Sand, trace Gravel; wet		10.4	
15		Brown, SILT, little Clay, trace Gravel; moist		6.6	
		Brown, SILT, some Clay, trace Gravel; moist		17.4	
20		Brown, SILT, some Clay, trace fine Sand; moist		65.5	
		Brown, SILT, some Clay, trace fine Sand; moist		77.9	
25					
30					

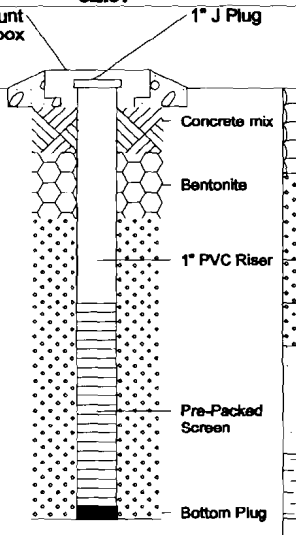
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: MW-102S	NORTHING: 160922.5	EASTING: 938927.9			
PROJECT NO./NAME: 125801Y / Coral Island Shopping Center		LOCATION: 1650 Richmond Avenue			
APPROVED BY: DRAFT	LOGGED BY: J. Sakellis	Staten Island, New York			
DRILLING CONTRACTOR/DRILLER: Roux Associates / J. Veiss		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE: 2-in. / Drive Sampler	BOREHOLE DIAMETER: 3.25-inches	DRILLING EQUIPMENT/METHOD: 6620 / Geoprobe	SAMPLING METHOD: 2" Macro-Core	START-FINISH DATE: 8/24/05-8/24/05	
CASING MAT./DIA.: PVC / 1-inch	SCREEN: TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH 5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot
ELEVATION OF: (Feet)	GROUND SURFACE: 32.97	TOP OF WELL CASING: 32.49	TOP & BOTTOM SCREEN: 28.0 / 23.0	GRAVEL PACK SIZES: Morie #1	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown to tan, coarse to fine SAND, little Gravel, trace Glass, trace Plastic; dry (fill)			
		Dark brown to black, medium to fine SAND, some organic material, trace Gravel; moist			Sampled 0.5 to 2 ft. interval for VOC analysis. Sampled 2.5 to 5 ft. interval for VOC analysis.
5		Grey, medium to fine SAND; moist			
		Brown, medium to fine SAND, trace Silt; wet			Sampled groundwater for VOC analysis.
		Brown, fine SAND, little Silt, trace Gravel; wet			
10		Brown, SILT, little Clay, trace Gravel; moist			
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-103D	161040.8	938716

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

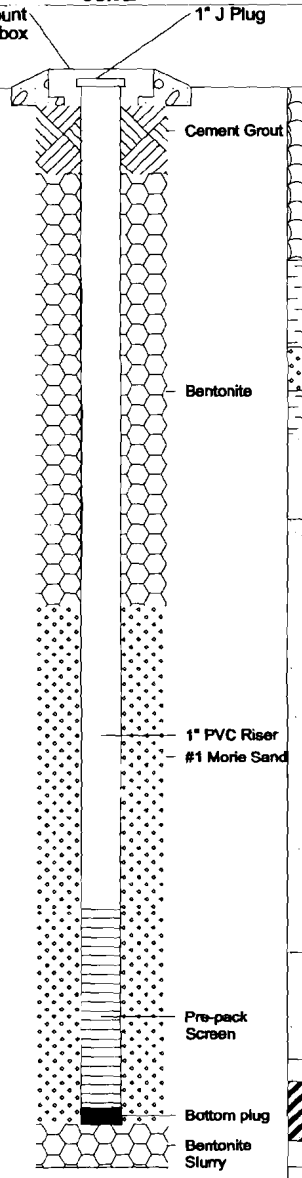
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	8/25/05-8/25/05

CASING MAT./DIA.	SCREEN:				
PVC / 1-inch	TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH 5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	33.72	33.45	14.7 / 9.7	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, medium to fine SAND, some Gravel, little cobbles, trace plactic, metal wire and brick, dry.	G	0.6	
				0.3	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Dark Brown, course to fine SAND, some Gravel, trace silt, trace brick, organic material, moist.	G		
		Grey SILT, little fine sand, moist.		0.5	
5			G		Sampled groundwater for VOC analysis.
		Dark Brown to black, medium to fine SAND, some Silt, little organic material, moist.		0.4	
		Gray SILT, little clay, little fine sand, moist/wet.		0.6	Sampled 7.5 to 10 ft. interval for VOC analysis.
		Brown, fine SAND, little silt, wet.			
10		Brown, fine SAND, trace silt, wet.		1.0	
				1.2	
15		Brown, fine sand, trace silt, wet		1.6	
				1.7	
20		Brown, fine SAND, little silt, wet.		1.6	
		Brown, fine SAND, some Silt, wet.		0.9	
		Brown, medium to high plasticity clay, wet.			
25		Brown, medium to fine SAND, some Silt, some Gravel, wet.			
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-103S	161041	938714.4

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

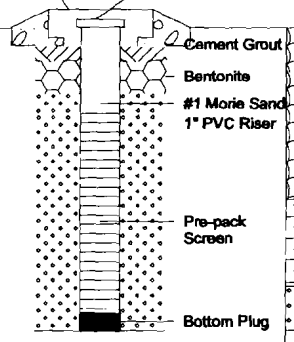
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	8/25/05-8/25/05

CASING MAT./DIA. PVC / 1-inch
SCREEN: TYPE Pre-Packed MAT. PVC TOTAL LENGTH 5.0 ft DIA. 1-inch SLOT SIZE 20-Slot

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	33.73	33.39	31.7 / 26.7	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown, medium to fine SAND, some Gravel, little cobbles, trace plactic, metal wire and brick, dry.			Sampled 0.5 to 2 ft. interval for VOC analysis.
		Dark Brown, course to fine SAND, some Gravel, trace silt, trace brick, organic material, moist.			
5		Grey SILT, little fine sand, moist.			
		Dark Brown to black, medium to fine SAND, some Silt, little organic material, moist.			Sampled 7.5 to 10 ft. interval for VOC analysis.
10					
15					
20					
25					
30					

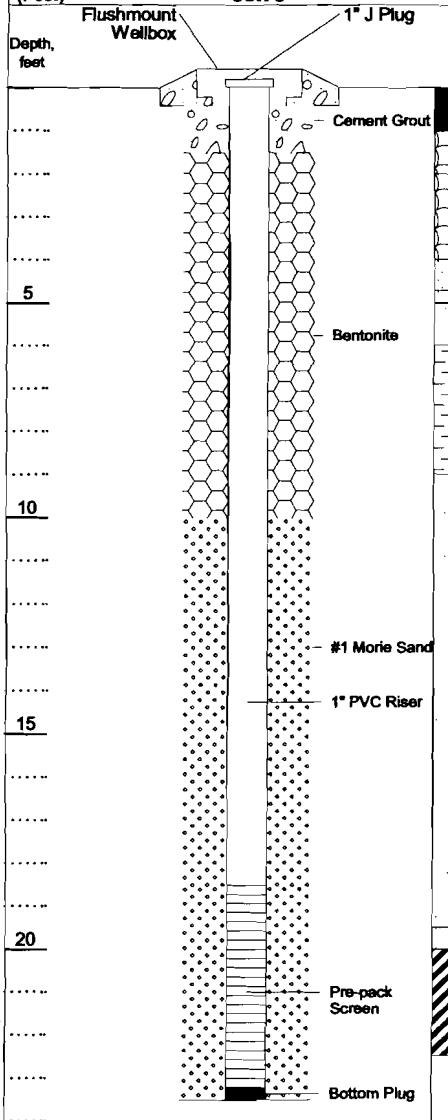
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-104D**	NORTHING: **161053.6**	EASTING: **938600.7**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/30/05-9/9/05**
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE: **33.75**	TOP OF WELL CASING: **33.56**	TOP & BOTTOM SCREEN: **10.3 / 15.3**	GRAVEL PACK SIZES: **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, course to fine SAND, some Gravel, trace Brick, trace Concrete, trace organic material (Lumber), moist. (fill)		0.3	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Brown, course to fine SAND, little gravel, little organic material (Lumber), trace Brick trace Concrete, moist. (fill)		9.3	
5		Grey, fine SAND, little silt, moist.		0.1	Sampled 4 to 6 ft. interval for VOC analysis.
		Brown to black, fine SAND, little Silt, little organic material (Roots, Weeds), moist.			Sampled groundwater for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Grey to black, fine SAND, some Silt, little black organic material, moist.		0.2	
		Grey SILT, little clay, moist.			
		Grey SILT, little clay, moist/wet			Sampled 7.5 to 10 ft. interval for VOC analysis.
				0.3	
10		Brown, fine SAND, trace silt, wet.			
		Brown, fine SAND, trace silt, wet.			
				0.2	
		Brown fine SAND, trace silt, wet.			
				0.1	
15		Brown, fine SAND, trace silt, wet.			
				0.4	
		Brown, fine SAND, some Silt, wet.			
				0.9	
20		Brown, fine SAND, some Silt, wet.			
		Brown CLAY, little silt, wet.		0.1	
					Bottom of soil boring at 22.5 ft bls.
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-104S	161053.3	938602.2

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

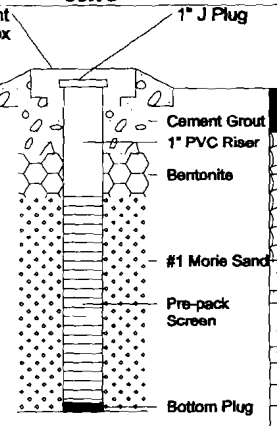
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	9/9/05-9/9/05

CASING MAT./DIA.	SCREEN:					
PVC / 1-inch	TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH -5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot	

ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
	33.78	33.53	26.3 / 31.3	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, course to fine SAND, some Gravel, trace Brick, trace Concrete, trace organic material (Lumber), moist. (fill)		0.3	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Brown, course to fine SAND, little gravel, little organic material (Lumber), trace Brick trace Concrete, moist. (fill)		9.3	
		Grey, fine SAND, little silt, moist.			
5		Brown to black, fine SAND, little Silt, little organic material (Roots, Weeds), moist.		0.1	Sampled 4 to 6 ft. interval for VOC analysis.
		Grey to black, fine SAND, some Silt, little black organic material, moist.		0.2	
		Grey SILT, little clay, moist.			Bottom of well at 7.5 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

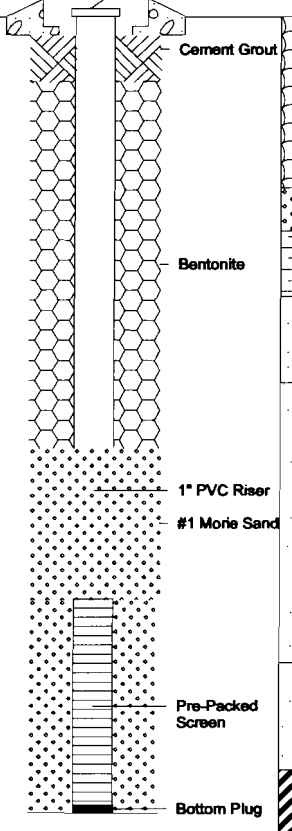
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

Page 1 of 1

WELL CONSTRUCTION LOG

WELL NO.: **MW-105D**	NORTHING: **160931.7**	EASTING: **938567**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/29/05-8/29/05**
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE: **32.85**	TOP OF WELL CASING: **32.56**	TOP & BOTTOM SCREEN: **14.4 / 19.4**	GRAVEL PACK SIZES: **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Grey to brown, course to fine SAND, some Gravel, some Concrete, little brick and silt, dry/moist	G	0.4	Sampled 1.5 to 3 ft. interval for VOC analysis.
5		Brown to grey, medium to fine SAND, some Silt, little organic material, trace gravel, moist.	G	0.4	Sampled 4.5 to 6 ft. interval for VOC analysis.
		Grey SILT, little clay, trace fine sand, dry/moist.		0.5	Sampled groundwater for VOC analysis.
		Grey, fine SAND, some Silt, moist/wet.			
		Grey, fine SAND, some Silt, wet		0.6	
10		Brown, fine SAND, little silt, wet.		0.6	
		Brown, fine SAND, little silt, wet.		1.1	
15		Brown, fine SAND, some Silt, wet		0.9	
		Brown, high plasticity CLAY, little silt, wet.		0.6	
20					
25					
30					

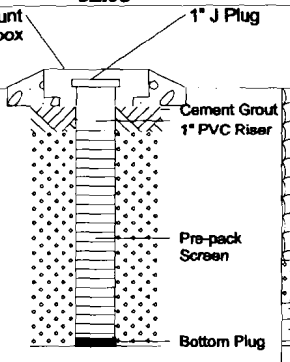
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-105S**	NORTHING: **160933.4**	EASTING: **938567.5**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/29/05-8/29/05**
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE: **32.85**	TOP OF WELL CASING: **32.61**	TOP & BOTTOM SCREEN: **31.9 / 26.9**	GRAVEL PACK SIZES: **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Grey to brown, course to fine SAND, some Gravel, some Concrete, little brick and silt, dry/moist			
					Sampled 1.5 to 3 ft. interval for VOC analysis.
5		Brown to grey, medium to fine SAND, some Silt, little organic material, trace gravel, moist.			Sampled 4.5 to 6 ft. interval for VOC analysis.
		Grey SILT, little clay, trace fine sand, dry/moist.			
10					
15					
20					
25					
30					

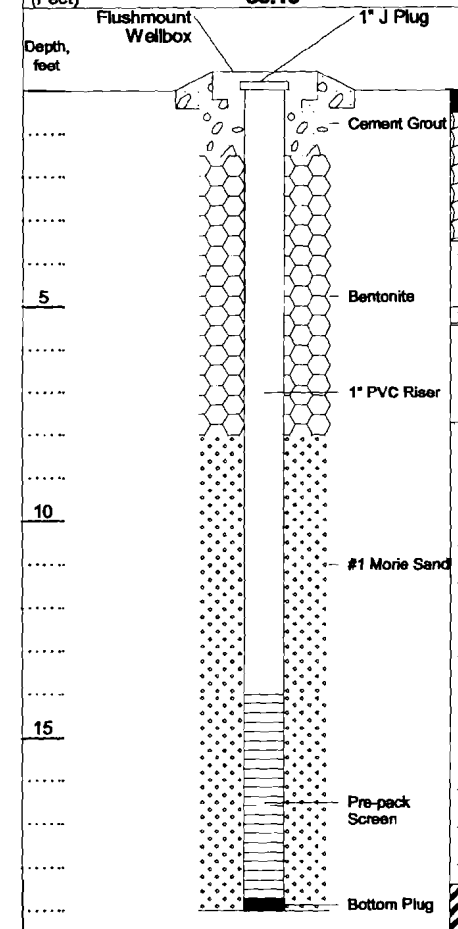
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-106D**	NORTHING **160942.2**	EASTING **938703.2**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/12/05-9/12/05**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **33.13**	TOP OF WELL CASING **32.80**	TOP & BOTTOM SCREEN **14.1 / 19.1**	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Asphalt		0.6	
	Brown, course to fine SAND, some Gravel, little silt, trace brick, dry/moist.			Sampled 0.5 to 2 ft. interval for VOC analysis.
	Grey to dark grey, fine SAND, some Silt, trace black organic material.			
5	Grey SILT, little fine sand, little clay, moist.		0.0	Sampled 4 to 6 ft. interval for VOC analysis.
	Grey, fine SAND, trace silt, moist/wet.			Upper silt/clay unit begins at approximately 5.5 ft. bls.
	Brown, fine SAND, trace silt, wet.		0.2	Sampled groundwater for VOC analysis.
10			0.4	
	Brown, fine SAND, trace silt, wet.		0.5	
15			0.9	
			1.2	
	Brown CLAY, little silt, moist/wet.			Lower silt/clay unit begins at approximately 18 ft. bls.
20				Bottom of well at 19 ft bls.
25				
30				

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-106S	**160942.2**	**938705.2**

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	**1650 Richmond Avenue**

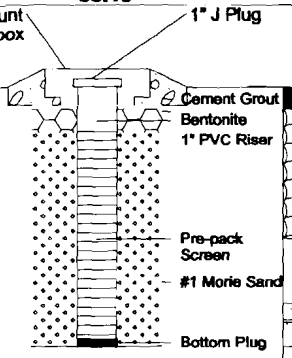
APPROVED BY	LOGGED BY	
DRAFT	**J. Sakellis**	**Staten Island, New York**

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**3.25-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**9/12/05-9/12/05**

CASING MAT./DIA.	SCREEN:					
PVC / 1-inch	TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	**33.15**	**32.94**	**27.2 / 32.2**	**Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt		0.6	
		Brown, course to fine SAND, some Gravel, little silt, trace brick, dry/moist.			Sampled 0.5 to 2 ft. interval for VOC analysis.
		Grey to dark grey, fine SAND, some Silt, trace black organic material.			
5		Grey SILT, little fine sand, little clay, moist.		0.0	Sampled 4 to 6 ft. interval for VOC analysis.
		Grey, fine SAND, trace silt, moist/wet.			Upper silt/clay unit begins at approximately 5.5 ft. bls.
					Bottom of well is at 6 ft bls.
10					
15					
20					
25					
30					

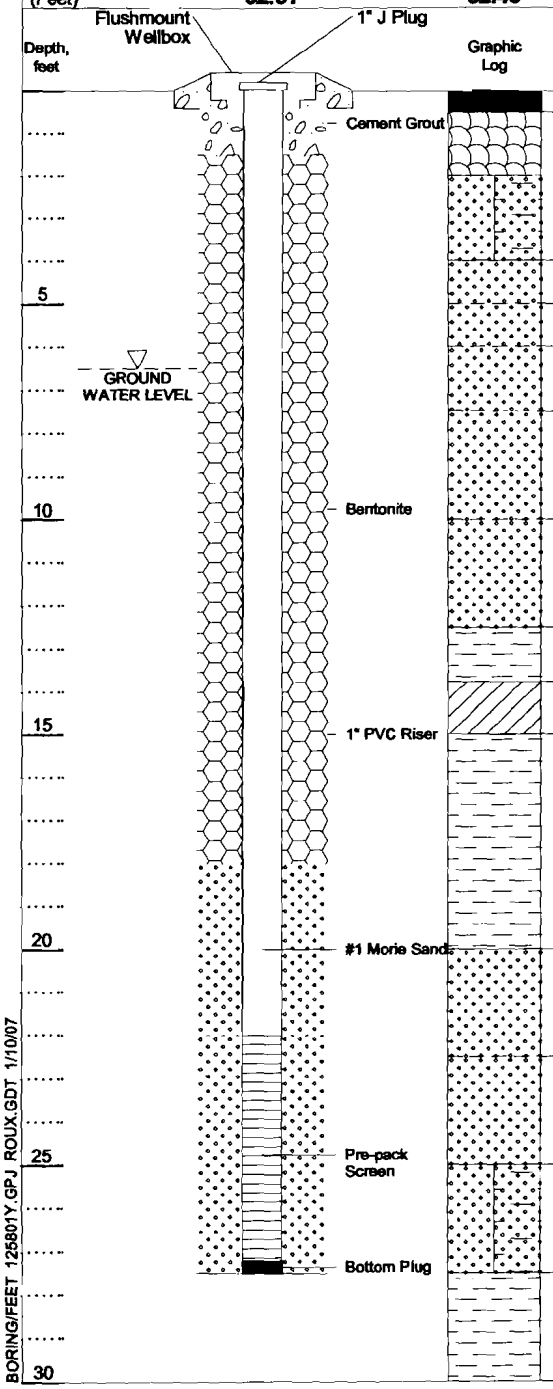
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-107AD**	NORTHING **160912.4**	EASTING **938787.8**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA **In Front of Jeweler**			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/14/05-9/14/05**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **32.61**	TOP OF WELL CASING **32.40**	TOP & BOTTOM SCREEN **5.6 / 10.6**	GRAVEL PACK SIZES **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, little Asphalt, trace Silt, Glass, and Brick, (fill); dry.		18.2	Sampled 0.5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey, fine SAND, little Silt, trace Gravel, trace organic materials (i.e. weeds and roots); moist.		3.0	Hand excavated to 4ft bls as part of utility clearance
5		Brown, medium to fine SAND; moist.		4.8	5
		Grey to brown, medium to fine SAND, trace Silt; moist/wet.		1.9	
		Brown, medium to fine SAND, trace Silt; wet		4.6	Sampled 4 to 6 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, medium to fine SAND; wet.		4.2	
10		Brown, medium to fine SAND, trace Silt; wet		3.6	10
		Brown SILT, little fine SAND; wet.		4.1	
		Brown Clay, trace Silt; moist/wet		6.3	
15		Brown SILT, little Gravel, trace fine Sand; moist/wet.		5.8	15
		Brown, fine SAND, trace Gravel and Silt; wet.		4.9	
20		Brown, coarse to fine SAND, trace Silt and Gravel; wet.		4.2	20
		Brown, fine SAND, some Silt, trace Clay and Gravel; wet.		5.3	Lithology data was obtained from SB-107A, performed 9/14/2005
25		Brown SILT, little Clay, trace fine Sand; moist/wet.		5.1	25
30					30

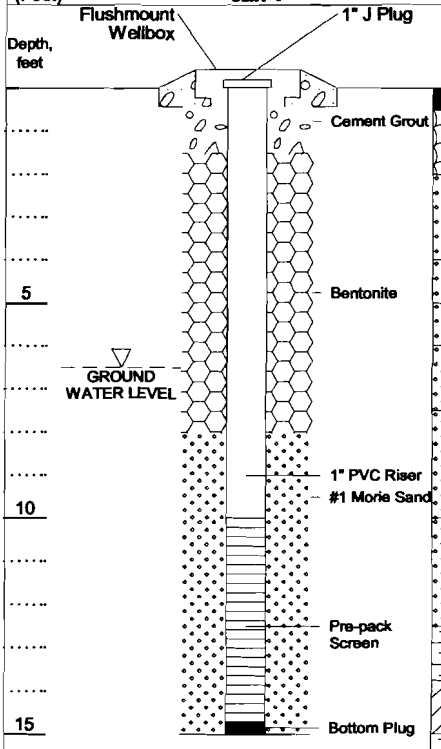
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-107AS**	NORTHING: **160913.2**	EASTING: **938785.8**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA: **In Front of Jeweler**		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **9/14/05-9/15/05**
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE: **32.71**	TOP OF WELL CASING: **32.42**	TOP & BOTTOM SCREEN: **17.7 / 22.7**	GRAVEL PACK SIZES: **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			Hand excavated to 4ft bls as part of utility clearance
		Brown, coarse to fine SAND, some Gravel, little Asphalt, trace Silt, Glass, and Brick, (fill); dry.		18.2	Sampled 0.5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey, fine SAND, little Silt, trace Gravel, trace organic materials (i.e. weeds and roots); moist.	G	3.0	Lithology data was obtained from SB-107A, performed 9/14/2005
5		Brown, medium to fine SAND; moist.		4.8	Sampled 4 to 6 ft. interval for VOC analysis.
		Grey to brown, medium to fine SAND, trace Silt; moist/wet.		1.9	
		Brown, medium to fine SAND, trace Silt; wet		4.6	Sampled 4 to 6 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, medium to fine SAND; wet.		4.2	
10		Brown, medium to fine SAND, trace Silt; wet		3.6	
		Brown SILT, little fine SAND; wet.			
		Brown Clay, trace Silt; moist/wet		4.1	
15		Brown SILT, little Gravel, trace fine Sand; moist/wet.			
20		Brown, fine SAND, trace Gravel and Silt; wet.			
		Brown, coarse to fine SAND, trace Silt and Gravel; wet.			
25		Brown, fine SAND, some Silt, trace Clay, trace Gravel; wet.			
		Brown, SILT, little Clay, trace fine Sand; moist/wet.			
30					

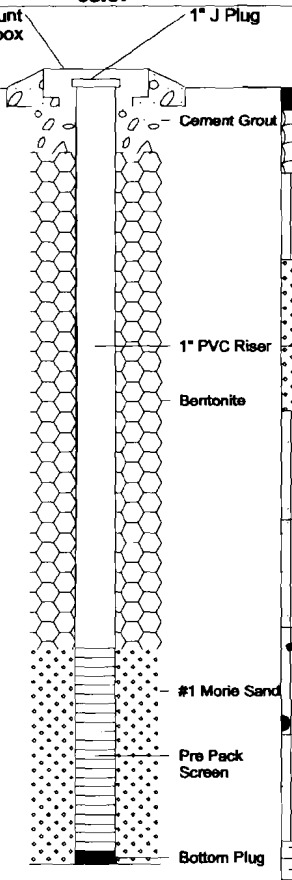
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-108D**	NORTHING **160910.9**	EASTING **939137.4**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/19/05-9/19/05**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **-5.0 ft**	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **35.07**	TOP OF WELL CASING **34.85**	TOP & BOTTOM SCREEN **17.1 / 22.1**	GRAVEL PACK SIZES **Morie #1**	



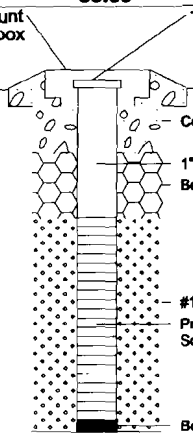
Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, fine SAND, some Silt, little Gravel, trace asphalt, trace Brick; dry (fill)		0.9	Hand excavated to 4ft bls as part of utility clearance
		Black to grey, SILT, little fine Sand, trace organic materials (Weeds, Roots, Grasses); moist	G		Sampled 0.5 to 2 ft. interval for VOC analysis.
				1.0	Sampled 2 to 4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
5		Grey, fine SAND, some Silt, trace Clay; moist		0.7	Sampled 4 to 6 ft. interval for VOC analysis.
		Brown to grey, fine SAND, some Silt, little Clay; moist/wet		1.5	
		Brown, SILT, some fine Sand, little Clay; moist		1.0	Sampled groundwater for VOC, SVOC, Pesticide, and TAL Metals analyses.
10		Brown, SILT, some fine SAND, little Gravel, trace Clay; wet		0.8	
		Brown to grey, crushed rock (Sandstone), some Silt, little fine Sand, trace Gravel; moist		0.6	
15		Brown SILT, little fine Sand, trace Gravel, trace Clay; wet		0.7	
		Brown, SILT, little Clay, trace Gravel, trace fine Sand, wet		0.6	Bottom of well at 18 ft bls.
20		Brown, medium to fine SAND, some Silt, little Gravel, little Clay; wet		0.2	
		Brown, coarse to fine SAND, little Gravel, trace Silt; wet		0.2	Lithology data was obtained from SB-108, performed 9/19/2005
25					Bottom of soil boring at 25 ft bls.
30					

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: MW-108S	NORTHING: 160912.9	EASTING: 939137.9		
PROJECT NO./NAME: 125801Y / Coral Island Shopping Center		LOCATION: 1650 Richmond Avenue		
APPROVED BY: DRAFT	LOGGED BY: J. Sakellis	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER: Roux Associates / J. Veiss		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: 2-in. / Drive Sampler	BOREHOLE DIAMETER: 3.25-inches	DRILLING EQUIPMENT/METHOD: 6620 / Geoprobe	SAMPLING METHOD: 2" Macro-Core	START-FINISH DATE: 9/19/05-9/19/05
CASING MAT./DIA.: PVC / 1-inch	SCREEN: TYPE Pre-Packed MAT. PVC	TOTAL LENGTH -5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot
ELEVATION OF: (Feet)	GROUND SURFACE: 35.09	TOP OF WELL CASING: 34.83	TOP & BOTTOM SCREEN: 27.1 / 32.1	GRAVEL PACK SIZES: Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			Hand excavated to 4ft bls as part of utility clearance
		Brown, fine SAND, some Silt, little Gravel, trace asphalt, trace Brick; dry (fill)		0.9	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Black to grey, SILT, little fine Sand, trace organic materials (Weeds, Roots, Grasses); moist		1.0	Lithology data was obtained from SB-108, performed 9/19/2005
5		Grey, fine SAND, some Silt, trace Clay; moist		0.7	Sampled 2 to 4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey, fine SAND, some Silt, little Clay; moist/wet		1.5	Sampled 4 to 6 ft. interval for VOC analysis.
		Brown, SILT, some fine Sand, little Clay; moist			Bottom of well at 8 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-109D	160676.5	938885.4

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

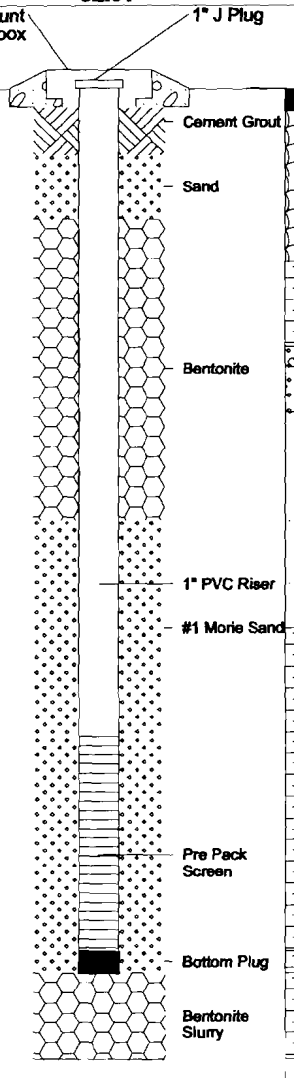
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	9/1/05-9/1/05

CASING MAT./DIA.	SCREEN:					
PVC / 1-inch	TYPE Prepacked	MAT. PVC	TOTAL LENGTH -5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot	

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	32.61	32.25	12.6 / 17.6	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown to grey, course to fine SAND, little gravel, little silt, trace brick, trace concrete, trace glass, dry/moist.		2.6	Sampled 0.5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicides, TAL Metals and Cyanide analyses.
		Brown to grey, course to fine SAND, little gravel, little silt, trace brick, trace concrete, trace glass, dry/moist.		2.0	
5		Grey to brown SILT, little clay, little fine sand, moist.		1.9	Sampled 4 to 6 ft interval for VOC analysis. Sampled groundwater for VOC analysis.
		Brown, course to fine SAND, some Gravel, little silt, moist.		0.7	
		Brown, fine SAND, little silt, little gravel, moist.		1.2	
10		Brown, fine SAND, little silt, little gravel, wet.		1.0	
		Brown SILT, little fine sand, little clay, trace gravel, wet.		0.8	
15		Brown SILT, little fine sand, little clay, wet.		1.5	
				1.0	
20		Brown SILT, little clay, moist.		1.0	
		Brown SILT, little clay, little fine sand, wet.			
25					
30					

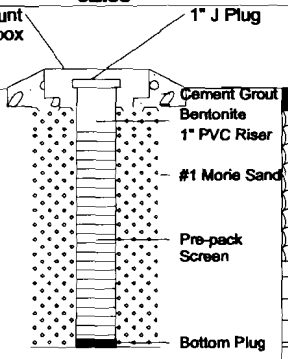
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-109S**	NORTHING: **160677.4**	EASTING: **938883.8**			
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**			
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **9/9/05-9/9/05**	
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE: **32.65**	TOP OF WELL CASING: **32.38**	TOP & BOTTOM SCREEN: **26.7 / 31.7**	GRAVEL PACK SIZES: **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"		PID Values (ppm)	REMARKS
		Asphalt				
		Brown to grey, course to fine SAND, little gravel, little silt, trace brick, trace concrete, trace glass, dry/moist.		G	2.6	Sampled 0.5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicides, TAL Metals and Cyanide analyses.
		Brown to grey, course to fine SAND, little gravel, little silt, trace brick, trace concrete, trace glass, dry/moist.		G	2.0	
5		Grey to brown SILT, little clay, little fine sand, moist.		G	1.9	Sampled 4 to 6 ft interval for VOC analysis. Soil boring shown here is from Pilot boring MW-109D, less than 3 ft away.
10						
15						
20						
25						
30						

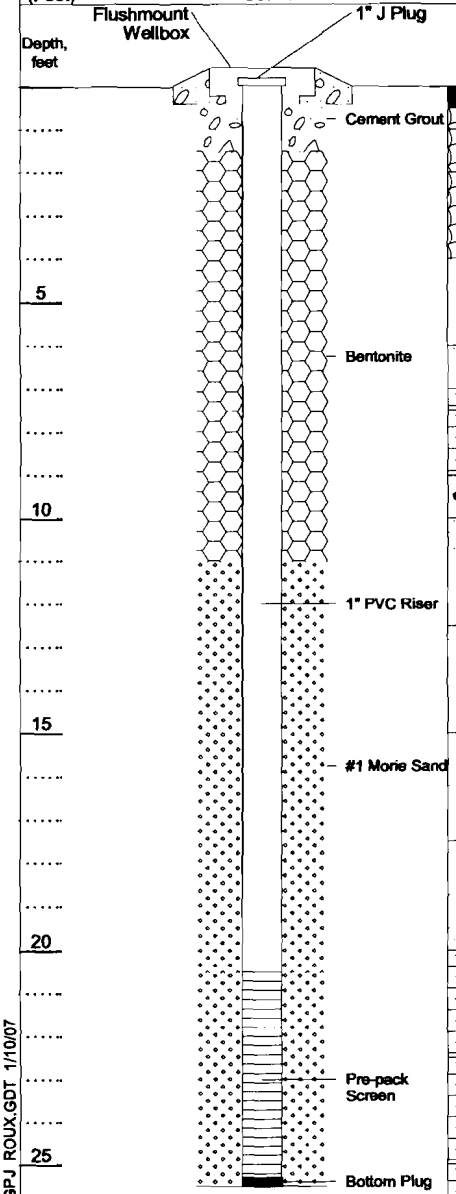
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-111D**	NORTHING **160873.8**	EASTING **938947.4**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/16/05-9/16/05**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **33.87**	TOP OF WELL CASING **33.60**	TOP & BOTTOM SCREEN **8.4 / 13.4**	GRAVEL PACK SIZES **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown to grey, coarse to fine SAND, little Asphalt little Gravel; dry/moist		7.8	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Brown, coarse to fine SAND, little Silt, little Gravel; dry/moist	G	2.4	
		Brown, coarse to fine SAND, little Silt, little Gravel, trace organic material (Lumber); dry/moist (fill)		2.8	
5		Brown to grey, SILT, little fine Sand, trace organic material (Weeds, Roots); moist/wet			Sampled 4 to 6 ft. interval for VOC analysis.
		Grey, fine SAND, little Silt; wet		2.3	Sampled groundwater for VOC analysis.
		Grey, SILT, trace Clay; moist		1.6	
		Brown, SILT, trace Clay, trace Gravel; moist		1.8	
10		Brown SILT, little Gravel, trace Clay; moist			
		Brown, SILT, little fine Sand, trace Gravel; moist/wet		3.9	
		Brown, SILT, little fine Sand, trace Gravel; moist/wet		4.3	
15		Brown SILT, little fine Sand, trace Gravel; moist/wet		3.7	
		Brown SILT, little fine Sand, trace Gravel; moist/wet		4.1	
20		Brown, SILT, trace fine Sand, trace Clay, trace Gravel; wet		0.8	
		Brown, SILT, little fine Sand, little Clay; moist/wet.		0.5	
25		Brown, SILT, little Clay, little Gravel; moist/wet		2.8	Bottom of well at 25.5 ft bls.
		Brown SILT, little Gravel, little medium to fine Sand, trace Clay; wet		3.1	Bottom of soil boring at 30 ft bls.
30					

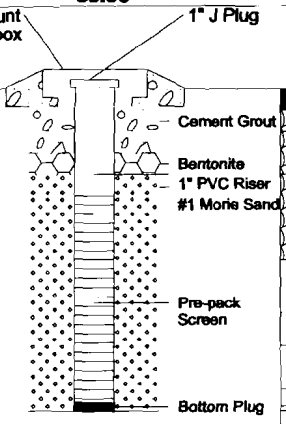
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-111S**	NORTHING: **160873.2**	EASTING: **938949.7**			
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**			
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **9/16/05-9/16/05**	
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE: **33.90**	TOP OF WELL CASING: **33.63**	TOP & BOTTOM SCREEN: **26.4 / 31.4**	GRAVEL PACK SIZES: **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			Hand excavated to 4ft bls as part of utility clearance
		Brown to grey, coarse to fine SAND, little Asphalt little Gravel; dry/moist		7.8	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Brown, coarse to fine SAND, little Silt, little Gravel; dry/moist		2.4	
		Brown, coarse to fine SAND, little Silt, little Gravel, trace organic material (Lumber); dry/moist (fill)		2.8	Lithology data was obtained from SB-111, performed 9/16/2005
5		Brown to grey, SILT, little fine Sand, trace organic material (Weeds, Roots); moist/wet		2.3	Sampled 4 to 6 ft. interval for VOC analysis.
		Grey, fine SAND, little Silt; wet			
		Grey, SILT, trace Clay; moist		1.6	Bottom of well at 7.5 ft bls.
10					
15					
20					
25					
30					

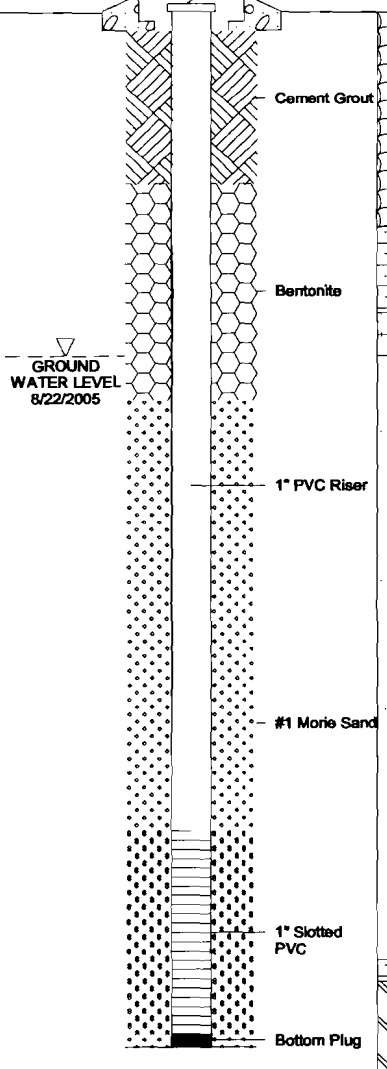
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: MW-112D	NORTHING: 161125.5	EASTING: 938699.4			
PROJECT NO./NAME: 125801Y / Coral Island Shopping Center		LOCATION: 1650 Richmond Avenue			
APPROVED BY: DRAFT	LOGGED BY: J. Sakellis	Staten Island, New York			
DRILLING CONTRACTOR/DRILLER: Roux Associates / J. Veiss		GEOGRAPHIC AREA: School Yard			
DRILL BIT DIAMETER/TYPE: 2-in. / Drive Sampler	BOREHOLE DIAMETER: 3.25-inches	DRILLING EQUIPMENT/METHOD: 6620 / Geoprobe	SAMPLING METHOD: 2" Macro-Core	START-FINISH DATE: 8/22/05-8/22/05	
CASING MAT./DIA.: PVC / 1-inch	SCREEN: TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH -5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot
ELEVATION OF: (Feet)	GROUND SURFACE: 32.72	TOP OF WELL CASING: 32.53	TOP & BOTTOM SCREEN: 8.7 / 13.7	GRAVEL PACK SIZES: Morie #1	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, some Gravel, little silt, trace brick, glass, concrete, dry/moist.		0.3	
		Brown to dark brown, course to fine SAND, some Gravel, little silt, trace, brick, glass, asphalt, dry/moist.		0.1	
5		Grey to brown SILT, little clay, dry		0.1	Top clayey-silt layer begins at 5 ft. bls.
		Grey, fine SAND, little silt, moist.			Sampled groundwater for VOC analysis.
		Grey, fine SAND, trace silt, wet.		0.5	
		Brown, fine SAND, trace silt, wet.			Top clayey-silt layer ends at approximately 9 ft. bls.
10				0.9	
				0.8	
15		Brown fine SAND, trace silt, wet.		2.2	
				3.3	
20				3.0	
		Brown SILT, little fine sand, wet.			
		Brown, medium to high plasticity CLAY, wet.		3.0	Bottom clay layer begins at 23.5 ft. bls.
25					Bottom of boring at 25 ft. bls.
30					

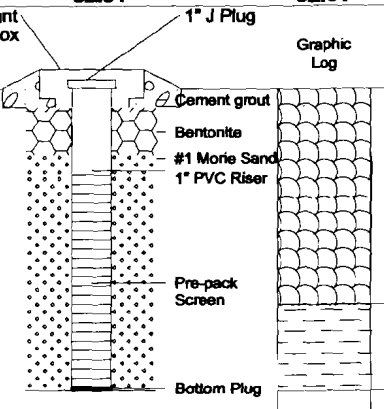
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-112S**	NORTHING **161125.9**	EASTING **938698**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/22/05-8/22/05**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE **32.81**	TOP OF WELL CASING **32.61**	TOP & BOTTOM SCREEN **25.8 / 30.8**	GRAVEL PACK SIZES **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, some Gravel, little silt, trace brick, glass, concrete, dry/moist.			
		Brown to dark brown, course to fine SAND, some Gravel, little silt, trace, brick, glass, asphalt, dry/moist.			
5		Grey to brown SILT, little clay, dry			5
10					10
15					15
20					20
25					25
30					30

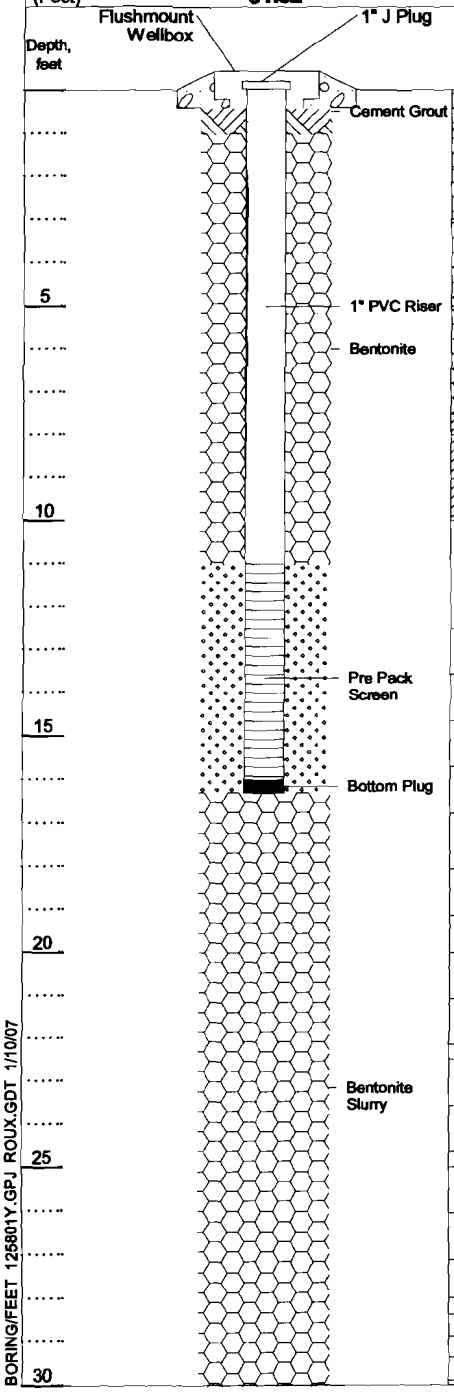
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-113D**	NORTHING: **161022**	EASTING: **938907.6**			
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**			
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA: **Church backyard**			
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/23/05-8/23/05**	
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE: **31.32**	TOP OF WELL CASING: **31.04**	TOP & BOTTOM SCREEN: **15.3 / 20.3**	GRAVEL PACK SIZES: **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, some Gravel, trace silt, moist.	G	0.8	Sampled 0-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey, medium to fine SAND, little silt, wet.	G	2.1	
5		Grey to brown, medium to fine SAND, some Silt, wet.		2.8	
		Brown CLAY, some Silt, moist/wet.		1.5	Sampled groundwater for VOC analysis.
		Brown CLAY, some Silt, little gravel, moist.			
10		Brown SILT, some fine Sand, some Gravel, wet.		1.5	
		Brown SILT, some Clay, little gravel, moist.		1.3	
15				2.9	
		Brown SILT, some Clay, little gravel, moist		10.1	
20		Brown SILT, some Clay, trace gravel, moist		16.5	
		Brown SILT, some Clay, trace fine sand, moist.		40.7	
25		Brown SILT, some Clay, moist		36.7	
		Brown SILT, little clay, little gravel, moist.		44	
30					

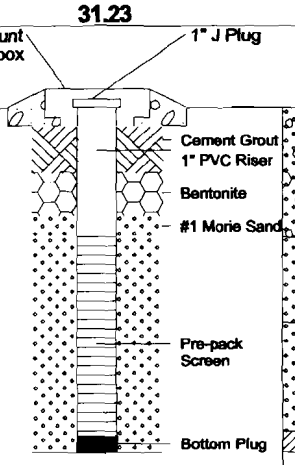
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-113S**	NORTHING **161020.4**	EASTING **938907.1**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/23/05-8/23/05**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **31.23**	TOP OF WELL CASING **30.89**	TOP & BOTTOM SCREEN **28.2 / 23.2**	GRAVEL PACK SIZES **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown, course to fine SAND, some Gravel, trace silt, moist.			Sampled 0-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
5		Brown to grey, medium to fine SAND, little silt, wet.			
		Grey to brown, medium to fine SAND, some Silt, wet.			
		Brown CLAY, some Silt, moist/wet.			Sampled groundwater for VOC analysis.
10					
15					
20					
25					
30					

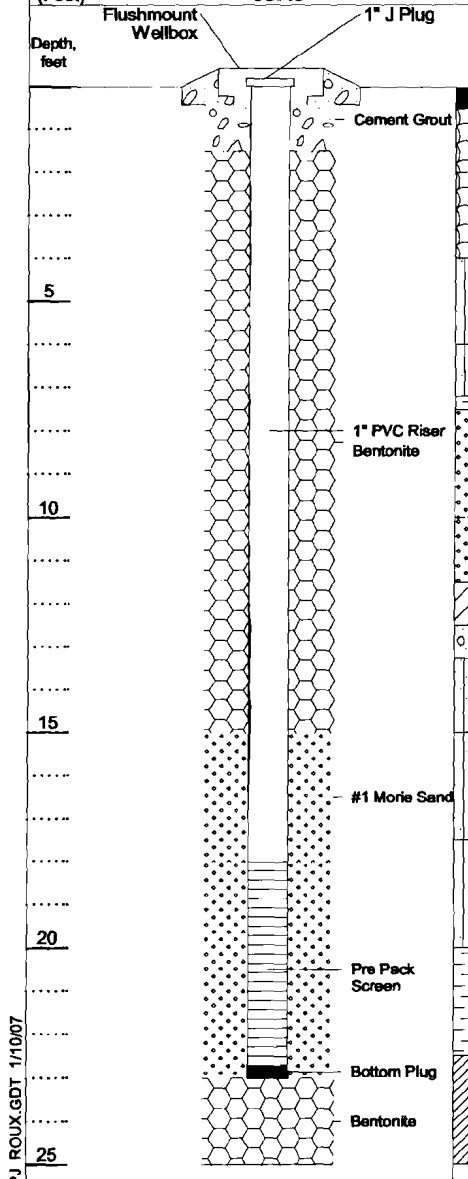
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-126D**	NORTHING: **160818.1**	EASTING: **938544.5**			
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**			
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **9/13/05-9/13/05**	
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **-5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE: **33.49**	TOP OF WELL CASING: **33.24**	TOP & BOTTOM SCREEN: **10.5 / 15.5**	GRAVEL PACK SIZES: **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, trace Brick, trace Concrete, dry. (fill)		6.2	
		Brown, coarse to fine SAND, some Gravel, trace Silt, trace Brick, dry/moist. (fill)		0.3	
5		Brown, SILT, little fine Sand, trace Gravel, trace organic material (Roots), moist		0.1	Sampled groundwater for VOC analysis.
		Dark brown, SILT, little fine Sand, trace Gravel, trace organic material (Roots, Weeds), moist		0.7	
		Grey, SILT, little Clay, moist			
		Brown fine SAND, little Silt, wet.		0.0	
10		Brown fine SAND, little Silt, wet.			
		Brown, CLAY, trace Silt, wet.		0.1	
		Brown, coarse SAND, some Gravel, some medium to fine Sand, wet			
		Brown SILT, little fine Sand, trace gravel, moist		0.0	
15		Brown SILT, some fine Sand, trace gravel, wet			
				0.2	
		Brown SILT, some fine Sand, trace gravel, wet			
				0.0	
20		Brown SILT, little Clay, trace fine Sand, moist/wet			
				0.0	
		Brown, CLAY, little Silt, moist/wet.			Bottom of well at 23 ft bls.
				0.0	
25					Bottom of soil boring at 25 ft bls.
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-126S	160819.7	938544.9

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

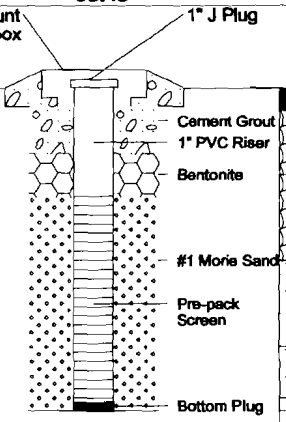
APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	3.25-inches	6620 / Geoprobe	2" Macro-Core	9/13/05-9/13/05

CASING MAT./DIA.	SCREEN:				
PVC / 1-inch	TYPE Pre-Packed	MAT. PVC	TOTAL LENGTH -5.0 ft	DIA. 1-inch	SLOT SIZE 20-Slot

ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
(Feet)	33.48	33.26	26.0 / 31.0	Morie #1



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, trace Brick, trace Concrete, dry. (fill)		6.2	
		Brown, coarse to fine SAND, some Gravel, trace Silt, trace Brick, dry/moist. (fill)	G	0.3	
5		Brown, SILT, little fine Sand, trace Gravel, trace organic material (Roots), moist		0.1	
		Dark brown, SILT, little fine Sand, trace Gravel, trace organic material (Roots, Weeds), moist		0.7	
		Grey, SILT, little Clay, moist			Bottom of well at 7.5 ft bls.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.	NORTHING	EASTING
MW-201D	**Not Measured**	**Not Measured**

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	**1650 Richmond Avenue**

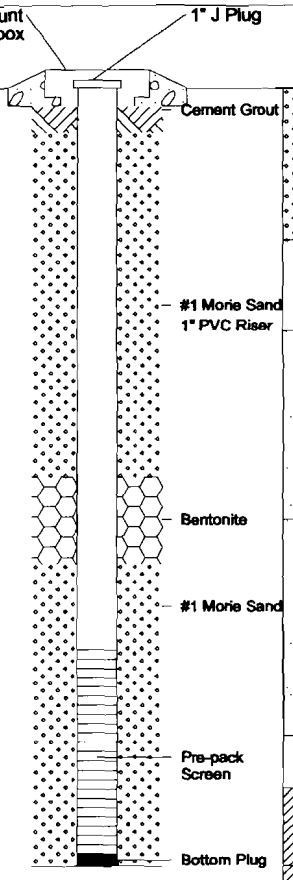
APPROVED BY	LOGGED BY	
DRAFT	**L. Derrendinger**	**Staten Island, New York**

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Roux Associates / J. Veiss	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**3.25-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**8/3/06-8/3/06**

CASING MAT./DIA.	SCREEN:				
PVC / 1-inch	TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**

ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
			/	**Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown fine SAND, some Silt, little fine Gravel; some roots and natural organic matter in top 3 inches; moist; soft; cemented red sand at 2.5 and 3.5 feet.	G	1.0	No samples collected; PID monitoring only.
2			G	1.2	
4		Light Grey fine(-) SAND, some Silt; Brown staining in top 2 inches; moist; firm.	G	1.4	
6		Reddish fine SAND; wet at bottom 4 feet; soft.	G	0.7	
8			G		
10		Reddish fine SAND; wet; firm.	G	1.6	
12			G	1.5	
14			G		
15		Reddish fine(-) SAND, some Silt; wet; very soft.	G	1.3	
16		Reddish CLAY, some Silt; wet; very firm; cemented red sand at bottom 3 inches.	G	1.3	
18		Reddish CLAY, little Silt; wet; very firm; cemented red sand at bottom 3 inches.	G		
20					
22					
24					
25					
26					
28					
30					

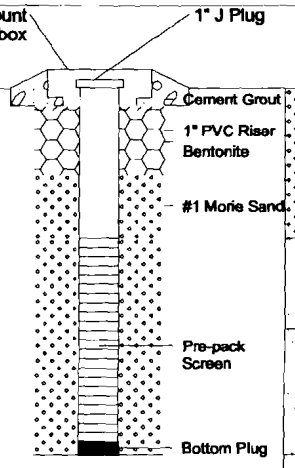
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-201S**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/3/06-8/3/06**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, some Silt, little fine Gravel; some roots and natural organic matter in top 3 inches; moist; soft; cemented red sand at 2.5 and 3.5 feet.			No samples collected; See MW-201D for PID monitoring results.
5		Light Grey fine(-) SAND, some Silt; Brown staining in top 2 inches; moist; firm.			
		Reddish fine SAND; wet at bottom 2.5 feet; soft.			
10					
15					
20					
25					
30					

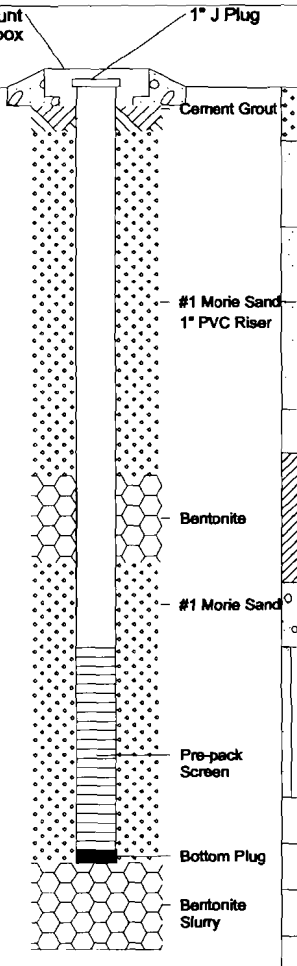
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-202D**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/2/06-8/2/06**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark Brown to Black fine SAND, and Silt, some roots and natural organic matter; moist; soft.		0.3	No samples collected; PID monitoring only.
		Light Grey fine(-) SAND, some Silt; Dark Brown staining in top 3 inches; moist; firm.		0.3	
		Light Brown fine(+) to medium(-) SAND; wet; firm.			
5		Reddish fine(+) to medium(-) SAND; wet; firm.		0.5	
		Reddish fine SAND; wet; firm.		0.6	
		Reddish CLAY, and Silt, trace fine Sand; very firm; wet.		1.2	
10		Reddish fine(-) SAND, and layers and pockets of cemented red sand; wet; firm;		1.1	
		Reddish SILT, and fine(-) Sand, little fine(-) Gravel of cemented Sand; wet; firm.		08	
15		Reddish SILT, some Clay, little fine Gravel of cemented sand; very firm; moist; increase in cemented sand content in bottom foot.		0.7	
20					
25					
30					

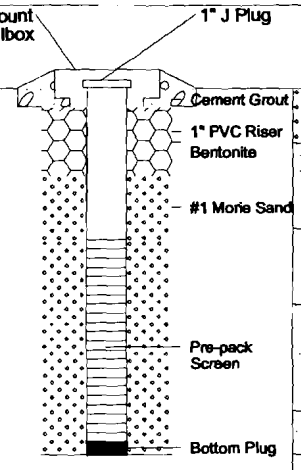
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-202S**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/2/06-8/2/06**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN **/**	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Dark Brown to Black SAND, and Silt, some roots and natural organic matter; moist; soft.			No samples collected; See MW-202D for PID monitoring results.
		Light Grey fine(-) SAND, some Silt; Dark Brown staining in top 3 inches; moist; firm.			
		Light Brown fine(+) to medium(-) SAND; wet; firm.			
5		Reddish fine(+) to medium(-) SAND; wet; firm.			
		Reddish fine SAND; wet; firm.			
10					
15					
20					
25					
30					

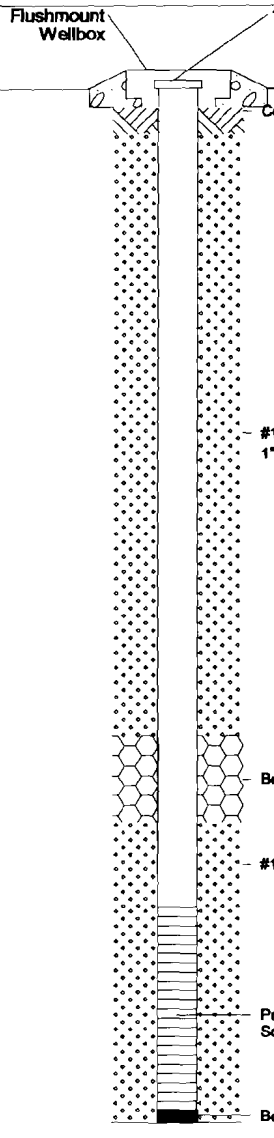
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-203D**	NORTHING **Not Measured**	EASTING **Not Measured**			
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**			
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/5/06-8/5/06**	
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed**	MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, some Silt; some roots and natural organic matter in top 3 inches; moist; soft;		0.5	No samples collected; PID monitoring only.
		Tan fine to medium SAND, trace Silt; moist; soft.		0.5	
5		Light Grey fine(-) SAND, some Silt; wet at bottom 10 inches; firm.		0.7	
		Reddish fine(+) to medium(-) SAND; wet; soft.		0.6	
10		Reddish fine SAND; wet; soft.		0.5	
				0.5	
15				0.5	
				0.6	
20				0.6	
				0.5	
25		Reddish CLAY, some Silt; wet; firm;			
30					

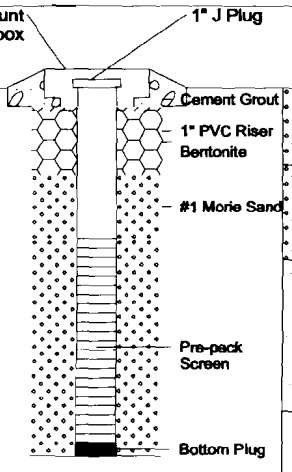
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO. **MW-203S**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **3.25-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/5/06-8/5/06**
CASING MAT./DIA. **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown fine SAND, some Silt; some roots and natural organic matter in top 3 inches; moist; soft;			No samples collected; See MW-203D for PID monitoring results.
		Tan fine to medium SAND, trace Silt; moist; soft.			
5		Light Grey fine(-) SAND, some Silt; wet at bottom 10 inches; firm.			
		Reddish fine(+) to medium(-) SAND; wet; soft.			
10					
15					
20					
25					
30					

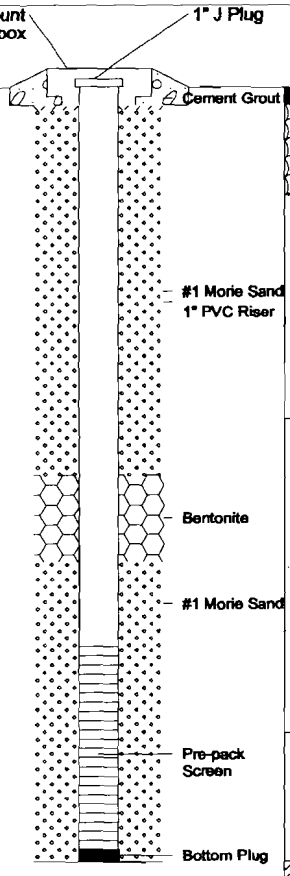
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-204D**	NORTHING: **Not Measured**	EASTING: **Not Measured**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/4/06-8/4/06**
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN /	GRAVEL PACK SIZES **Morie #1**



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt paving and gravel base.		1.7	
		Black medium to coarse SAND, and fine Gravel, (fill); moist; soft; mostly asphalt-like material in fine Gravel size fraction.			No samples collected; PID monitoring only.
		Light Grey fine(-) SAND, some Silt; Black staining in top 2 inches; wet in bottom 1.2 feet; very firm.		1.1	
5				1.5	
		Reddish fine SAND; wet; soft.		1.1	
10				1.8	
				1.9	
15		Reddish fine SAND; wet; firm.		1.3	
					No recovery from 15 feet to 18 feet (Driller)
		Reddish CLAY, little Silt; wet; firm; cemented red sand at bottom of section.			
20					
25					
30					

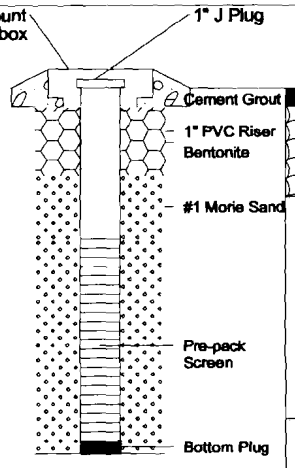
BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

WELL CONSTRUCTION LOG

WELL NO.: **MW-204S**	NORTHING: **Not Measured**	EASTING: **Not Measured**			
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**			
APPROVED BY: **DRAFT**	LOGGED BY: **L. Derrendinger**	**Staten Island, New York**			
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA			
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **3.25-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **8/5/06-8/5/06**	
CASING MAT./DIA.: **PVC / 1-inch**	SCREEN: TYPE **Pre-Packed** MAT. **PVC**	TOTAL LENGTH **5.0** ft	DIA. **1-inch**	SLOT SIZE **20-Slot**	
ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN: /	GRAVEL PACK SIZES: **Morie #1**	



Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Asphalt paving and gravel base.			No samples collected; See MW-204D for PID monitoring results.
		Black medium to coarse SAND, and fine Gravel, (fill); moist; soft; mostly asphalt-like material in fine Gravel size fraction.			
		Light Grey fine(-) SAND, some Silt; Black staining in top 2 inches; wet in bottom 1.2 feet; very firm.			
		Reddish fine SAND; wet; soft.			
5					5
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-102X	**Not Measured**	**Not Measured**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY			
DRAFT	**J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**9/8/05-9/8/05**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**5.5 (Feet BLS)**	**Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown to black, coarse to fine SAND, some Gravel, little Concrete, dry (fill)			
		Brown, coarse to fine SAND, little Gravel, trace Silt, trace Brick, trace Glass, moist (fill)		482	Sampled 0.5 to 2 ft. interval for VOC analysis.
		Brown to grey, fine SAND, little Silt, trace organic material (Roots, Weeds), trace Gravel, moist (fill)	G		
5				>2000	Sampled 2.5 to 5 ft. interval for VOC analysis. Strong odors evident
		Grey, fine SAND, little Silt, wet.		879	Odors evident
		Brown, medium to fine Sand, little Silt, trace Gravel, wet.		25.5	
		Brown, SILT, little Gravel, little fine Sand, moist.		13.7	
10					
		Brown, SILT, some Gravel, little fine Sand, moist/wet.		26.3	
		Brown, SILT, little Gravel, little fine Sand, moist/wet.		8.1	
15					
		Brown SILT, little Gravel, little fine Sand, moist.		8.4	
		Brown SILT, little Gravel, little fine Sand, moist.		15.3	
20					
		Brown SILT, little Clay, trace Gravel, trace fine Sand, moist.		8.4	
		Brown SILT, some Clay, trace Gravel, trace fine Sand, moist.		6.7	
25					
		Brown SILT, little Gravel, trace Clay, trace fine Sand, moist.		4.6	
		Brown SILT, little Gravel, trace fine Sand, moist.		4.5	
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
SB-102X	**Not Measured**	**Not Measured**
PROJECT NO./NAME		LOCATION
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**
APPROVED BY	LOGGED BY	
DRAFT	**J. Sakellis**	**Staten Island, New York**

Depth, feet	Graphic Log	Visual Description (continued)	Blow Counts per 6"	PID Values (ppm)	REMARKS
.....		Brown, coarse to fine SAND, little Gravel, wet			Sampled 30 to 32.5 ft. interval for VOC analysis.
.....				1.5	Bottom of boring at 32.5 ft bls.

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-103X**	NORTHING **160982.1**	EASTING **938966.3**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA **On property line**		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/6/05-9/6/05**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **5 (Feet BLS)**	BACKFILL **Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, coarse to fine SAND, some Gravel, little Silt, trace Brick, trace Glass, moist. (Fill)		560	
					Sampled 0.5 to 2 ft. interval for VOC analysis.
		Dark brown, medium to fine SAND, some Silt, little Gravel, trace Brick, trace Glass, moist. (Fill)		202	
5		Dark brown, medium to fine SAND, some grey Silt, trace Gravel, trace Organic material (Roots), moist/wet.		214	
				214	
		Grey, fine SAND, some Silt, trace Gravel, wet.		53.6	
		Brown, SILT, little fine Sand, little Gravel, trace Clay, wet.		5.5	
					Sampled 7.5 to 10 ft. interval for VOC analysis.
10		Brown SILT, trace Gravel, trace fine Sand, wet.		3.3	
		Brown, SILT, trace fine Sand, trace gravel, trace Clay, wet.		5.1	
15		Brown SILT, little fine Sand, trace Gravel, trace Clay, moist/wet.		4.3	
		Brown SILT, little Clay, moist/wet.		8.7	
20					Bottom of boring at 20 ft bls.
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-104X	160982.5	938935.2		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/8/05-9/8/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	5.5 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown to black, coarse to fine SAND, some Gravel, little Concrete, dry (fill)			
		Dark brown to black, coarse to fine SAND, some Gravel, little Silt, trace Concrete, moist (fill)		0.3	Sampled .5 to 2 ft. interval for VOC analysis.
		Brown to grey, Fine SAND, some Silt, trace organic material (Roots), moist	G	6.3	
				1.1	
5		Grey, fine SAND, little Silt, trace Gravel, wet.			Sampled 4 to 6 ft. interval for VOC analysis.
				2.6	
		Brown, SILT, some Gravel, little fine Sand, moist/wet.			
				14.3	
10		Brown, SILT, some Gravel, little fine Sand, wet.			Sampled 7.5 to 10 ft. interval for VOC analysis.
				5.0	
		Brown, SILT, little Gravel, trace Clay, moistwet.			
				4.3	
15		Brown SILT, some Gravel, little crushed stone, trace Clay, moist/wet.			
				2.6	Bottom of boring at 17.5 ft bls.
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-105X	**160950.9**	**938967.6**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY			
DRAFT	**J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis		**Inside dry cleaners**		
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**5400 / Geoprobe**	**2" Macro-Core**	**9/7/05-9/7/05**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**6 (Feet BLS)**	**Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Concrete slab			
		Brown, medium to fine SAND, moist		1.3	Sampled 1.5 to 3 ft. interval for VOC analysis.
		Brown to Grey, SILT, little fine Sand, moist			
		Dark brown to brown, SILT, little Gravel, little fine Sand, trace organic material (Roots, Weeds), moist/wet		1.5	
5		Brown, fine SAND, little Silt, trace organic material (Roots, Weeds), moist/wet		1.7	Sampled 4.5 to 6 ft. interval for VOC analysis.
		Grey, fine SAND, trace Silt, wet			
		Grey, fine SAND, trace Silt, wet		3.9	
		Grey to brown, fine SAND, little Silt, wet		14.4	
		Brown, SILT, little Gravel, little fine Sand, moist/wet			
10				2.6	
		Brown, SILT, little Gravel, little fine Sand, moist/wet		2.2	
					Bottom of boring at 12 ft bls.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-106	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/31/05-8/31/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	6.5 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt		0.6	
		Brown, course to fine SAND, some Gravel, little silt, trace brick, dry/moist.			Sampled 0.5 to 2 ft. interval for VOC analysis.
		Grey to dark grey, fine SAND, some Silt, trace black organic material.			
5		Grey SILT, little fine sand, little clay, moist.		0.0	Sampled 4 to 6 ft. interval for VOC analysis.
		Grey, fine SAND, trace silt, moist/wet.			Upper silt/clay unit begins at approximately 5.5 ft. bls.
		Brown, fine SAND, trace silt, wet.		0.2	
10				0.4	
		Brown, fine SAND, trace silt, wet.		0.5	
15				0.9	
				1.2	
		Brown CLAY, little silt, moist/wet.			Lower silt/clay unit begins at approximately 18 ft. bls.
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-107	160940.6	938705.7		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	J. Sakellis	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/31/05-8/31/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	7 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, course to fine SAND, some gravel, trace silt, trace brick, trace concrete, moist.		0.1	Sampled .5 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, course to fine SAND, little gravel, little silt, trace brick, trace concrete, moist.		0.1	
				0.2	
5		Grey to brown SILT, little clay, little fine sand, moist.		0.4	Sampled 4 to 6 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Grey to brown, fine SAND, little silt, moist.			
		Grey, fine SAND, trace silt, wet.		0.3	
		Brown, fine SAND, trace silt, wet.			
10				0.7	
		Brown, fine SAND, trace silt, wet.		0.6	
15				1.0	
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-108**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/19/05-9/19/05**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **8 (Feet BLS)**	BACKFILL **Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, fine SAND, some Silt, little Gravel, trace asphalt, trace Brick; dry (fill)		0.9	Hand excavated to 4ft bls as part of utility clearance
		Black to grey, SILT, little fine Sand, trace organic materials (Weeds, Roots, Grasses); moist	G		Sampled 0.5 to 2 ft. interval for VOC analysis.
				1.0	Sampled 2 to 4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicides, TAL Metals, Cyanide analysis.
5		Grey, fine SAND, some Silt, trace Clay; moist			5
				0.7	Sampled 4 to 6 ft. interval for VOC analysis.
		Brown to grey, fine SAND, some Silt, little Clay; moist/wet		1.5	
		Brown, SILT, some fine Sand, little Clay; moist		1.0	
10					10
		Brown, SILT, some fine SAND, little Gravel, trace Clay; wet		0.8	
		Brown to grey, crushed rock (Sandstone), some Silt, little fine Sand, trace Gravel; moist		0.6	
15					15
		Brown SILT, little fine Sand, trace Gravel, trace Clay; wet		0.7	
		Brown, SILT, little Clay, trace Gravel, trace fine Sand, wet		0.6	
20					20
		Brown, medium to fine SAND, some Silt, little Gravel, little Clay; wet		0.2	
		Brown, coarse to fine SAND, little Gravel, trace Silt; wet		0.2	
25					Bottom of soil boring at 25 ft bls. 25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-111	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss		In front of dry cleaners		
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/16/05-9/16/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	6 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown to grey, coarse to fine SAND, little Asphalt little Gravel; dry/moist		7.8	
		Brown, coarse to fine SAND, little Silt, little Gravel; dry/moist		2.4	Sampled .5 to 2 ft. interval for VOC analyses.
		Brown, coarse to fine SAND, little Silt, little Gravel, trace organic material (Lumber); dry/moist (fill)	G	2.8	
5		Brown to grey, SILT, little fine Sand, trace organic material (Weeds, Roots); moist/wet		2.3	Sampled 4 to 6 ft. interval for VOC analyses.
		Grey, fine SAND, little Silt; wet		1.6	
		Grey, SILT, trace Clay; moist		1.8	
		Brown, SILT, trace Clay, trace Gravel; moist			
10		Brown SILT, little Gravel, trace Clay; moist			
		Brown, SILT, little fine Sand, trace Gravel; moist/wet		3.9	
		Brown, SILT, little fine Sand, trace Gravel; moist/wet		4.3	
15		Brown SILT, little fine Sand, trace Gravel; moist/wet		3.7	
		Brown SILT, little fine Sand, trace Gravel; moist/wet		4.1	
20		Brown, SILT, trace fine Sand, trace Clay, trace Gravel; wet		0.8	
		Brown, SILT, little fine Sand, little Clay; moist/wet.		0.5	
25		Brown, SILT, little Clay, little Gravel; moist/wet		2.8	
		Brown SILT, little Gravel, little medium to fine Sand, trace Clay; wet		3.1	
30					Bottom of soil boring at 30 ft bls.

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-113	160731.9	938784.5		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/1/05-9/1/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	7 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, some Gravel, little silt, trace brick, moist.		12.2	
		Brown, course to fine SAND, some Gravel, little silt, trace brick, moist.		0.4	Sampled 0-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, course to fine SAND, little silt, moist.			
5		Brown, course to fine SAND, some Silt, trace gravel, moist.		2.3	
		Tan to brown SILT, little fien sand, moist/wet			
		Brown, fine SAND, some Silt, wet.		1.2	Groundwater sample collected for VOC analysis.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-114	161686.1	938787.7		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/1/05-9/1/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	8.5 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, coarse to fine SAND, little Gravel, little Silt, trace Brick, dry.		15.9	Sampled 0 to 2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, coarse to fine SAND, little Gravel, little Silt, trace Brick, dry/moist.		0.4	
		Brown, coarse to fine SAND, little Silt, trace Gravel, dry/moist.			
5		Brown, fine SAND, little Silt, dry/moist.		1.3	
		Brown SILT, little Clay, trace Gravel, moist/wet.		0.7	
		Brown SILT, trace Clay, trace Gravel, wet.		3.3	
10		Brown, fine SAND, trace Silt, wet.		1.0	Groundwater sample collected for VOC analysis.
		Brown SILT, trace Clay, trace Gravel, wet.			
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
SB-115	160614.4	938789.9

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue
APPROVED BY: DRAFT	LOGGED BY: J. Sakellis
	Staten Island, New York
DRILLING CONTRACTOR/DRILLER: Zebra Environmental / E. Moraitis	GEOGRAPHIC AREA

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/1/05-9/1/05

LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL
Not Measured	6 (Feet BLS)	Bentonite

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, little gravel, trace organic material, trace brick, trace ceramic tile, trace concrete, dry.		0.9	
				0.8	Sampled 0-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Tan to brown, fine SAND, trace silt, dry/moist.		0.8	
5		Brown, fine SAND, little silt, wet.		0.8	
		Brown SILT, little clay, little gravel, wet/moist.		0.5	
10		Brown SILT, little clay, little gravel, wet/moist.		0.3	Groundwater sample collected for VOC analysis.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING
SB-116	160522.5	938797.7

PROJECT NO./NAME	LOCATION
125801Y / Coral Island Shopping Center	1650 Richmond Avenue

APPROVED BY	LOGGED BY	
DRAFT	J. Sakellis	Staten Island, New York

DRILLING CONTRACTOR/DRILLER	GEOGRAPHIC AREA
Zebra Environmental / E. Moraitis	

DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/1/05-9/1/05

LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL
Not Measured	6 (Feet BLS)	Bentonite

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown, course to fine SAND, some Gravel, trace silt, trace plant roots, dry.		0.4	
		Brown, course to fine SAND, some Gravel, trace sitl, trace plant roots, dry.		0.5	
5		Tan to Brown, fine SAND, little silt, trace clay, moist.		0.7	
		Grey SILT, little clay, trace fine sand, wet.		0.8	
		Grey, fine SAND, little silt, wet.			Sampled 6 to 8 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
10		Brown, fine SAND, trace silt, wet.		0.8	
		Brown SILT, little gravel, little medium to fine sand, wet.		0.7	Groundwater sample collected for VOC analysis.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-117**	NORTHING **160820.2**	EASTING **938960.5**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **9/20/05-9/20/05**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **6.5 (Feet BLS)**	BACKFILL **Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, little Silt, (fill); dry		5.6	
			G		Hand excavated to 5ft bls as part of utility clearance
5		Dark grey to grey, fine SAND, little Silt, trace Organic Material (i.e. weeds, grass, and roots); moist/wet.		0.2	
		Grey, fine SAND, little Silt; moist/wet.			
	▽ GROUND WATER LEVEL 9/20/2005	Grey to brown, fine SAND, some Silt, trace Gravel; wet.		0.2	
		Brown SILT, little fine SAND and Gravel, trace Clay; moist/wet		0.2	
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-118	160732.2	938942.1		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	J. Sakellis	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/7/05-9/7/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	11.5 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, little Organic material (Roots), trace Glass, dry (fill)		0.6	Sampled 0.5-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, coarse to fine SAND, some Gravel, little Organic material (Roots), trace Glass, dry (fill)		0.6	
5		Brown to grey, medium to fine SAND some Silt, trace Gravel, trace Clay, dry		0.5	
		Brown to Grey, fine SAND, some Silt, dry/moist		1.0	
		Brown, SILT, little Clay, trace Gravel, dry/moist			
		Brown, SILT, little Gravel, trace Clay, dry/moist		0.7	
10		Brown, SILT, little Gravel, trace Clay, dry/moist		0.6	
					Bottom of boring at 12 ft bls.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-119	160650.1	938936.8		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/7/05-9/7/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	8 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, coarse to fine SAND, some Gravel, little Silt, trace Concrete, dry (fill)		2.0	Sampled 2-4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey, medium to fine SAND, some Silt, dry/moist		2.6	
5		Brown, medium to fine SAND some Silt, trace Clay, moist		1.9	
		Brown, coarse to fine SAND, little Silt, moist			
		Brown, SILT, little Gravel, trace fine Sand, trace Clay, moist/wet		2.1	
		Brown, fine SAND, little Silt, wet		1.8	
10		Brown, SILT, little Gravel, trace fine Sand, moist/wet		1.0	
					Bottom of boring at 12 ft bls.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-120	160564.9	938945.9		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	J. Sakellis	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Zebra Environmental / E. Moraitis				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	5400 / Geoprobe	2" Macro-Core	9/7/05-9/7/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	8 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Dark brown to brown, SILT, little medium to fine Sand, trace Concrete, trace Ceramic Tile, dry (fill)		0.9	Sampled 0.5-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown, SILT, little Clay, moist		0.8	
5		Brown, medium to fine SAND, little Silt, trace Gravel, moist/wet		1.0	
		Brown, SILT, some Gravel, trace fine Sand, moist/wet		1.2	
		Brown, SILT, some Gravel, trace fine Sand, moist/wet		0.6	
10		Brown, SILT, little Gravel, little fine Sand, wet		0.5	
					Bottom of boring at 12 ft bls.
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-121	160601.3	938890.9		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/20/05-9/20/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	9 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Tan, coarse to fine SAND, some Gravel, trace Brick and Felt Liner Material, (fill); dry.		0.3	Hand excavated to 5ft bls as part of utility clearance
		Brown to grey SILT, little fine Sand, trace Organic Material (i.e. wood, twigs, and grass); moist	G	0.4	Sampled 2-4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Brown to grey SILT, little fine Sand, trace Crushed Rock; moist.			
5		Brown SILT, little fine SAND, trace Gravel; moist			5
		Brown, medium to fine SAND, some Gravel, little Silt; moist.		0.2	
		Brown, coarse to fine SAND, some gravel, little Silt; moist.			
	▽ GROUND WATER LEVEL 9/20/2005	Brown, fine SAND, some Silt, trace Gravel; wet.		0.2	
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.: **SB-122**	NORTHING: **160835.1**	EASTING: **939022.3**		
PROJECT NO./NAME: **125801Y / Coral Island Shopping Center**		LOCATION: **1650 Richmond Avenue**		
APPROVED BY: **DRAFT**	LOGGED BY: **J. Sakellis**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER: **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE: **2-in. / Drive Sampler**	BOREHOLE DIAMETER: **2-inches**	DRILLING EQUIPMENT/METHOD: **6620 / Geoprobe**	SAMPLING METHOD: **2" Macro-Core**	START-FINISH DATE: **9/20/05-9/20/05**
LAND SURFACE ELEVATION: **Not Measured**	DEPTH TO WATER: **5 (Feet BLS)**	BACKFILL: **Bentonite**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Aphalt			
		Dark brown, medium to fine SAND, little Silt, little Gravel, (fill); dry.		1.0	Sampled 0.5-2 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Dark brown to grey, medium to fine SAND, little Gravel, trace Wood (i.e. lumber), Glass, and Brick, (fill); moist.	G	0.7	Hand excavated to 5ft bls as part of utility clearance
		Grey, fine SAND, little Silt; moist/wet.		0.3	
5	▽ GROUND WATER LEVEL 9/20/2005	Brown, medium to fine SAND, little Silt; wet.			
		Brown, coarse to fine SAND, trace Silt; wet.		0.2	
		Brown SILT, little fine Sand, little Gravel, trace Clay; moist/wet.		0.3	
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-123	160814.9	939098.3		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/20/05-9/20/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	6 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown, medium to fine SAND, some Gravel, trace Silt, (fill); dry.		.05	Hand excavated to 5ft bls as part of utility clearance
		Dark brown to grey, medium to fine SAND, little Silt and Gravel, trace Brick and Glass, (fill); moist.	G	1.1	Sampled 2-4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
5		Grey, fine SAND, little Silt, trace Organic Material (i.e. grass and roots); moist.		0.4	
	▽ GROUND WATER LEVEL 9/20/2005			0.5	
		Brown, fine SAND, little Silt, trace Gravel; wet.			
		Brown SILT, little Clay, trace Gravel; moist.		0.5	
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-124	160824.3	938665.2		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/20/05-9/20/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	7.5 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown to tan, coarse to fine SAND, some Gravel, trace Brick and Concrete, (fill); dry		0.9	
		Dark brown, medium to fine SAND, little Gravel, trace Silt, Brick, and Organic Material (i.e. roots, weeds, and lumber), (fill); moist.	G	0.3	Hand excavated to 5ft bls as part of utility clearance
5		Brown to grey SILT, little fine Sand, trace Clay and Organic Material (weeds and grass); moist.		0.3	
		Grey SILT, little Clay; moist.			
		Grey SILT, some fine Sand; moist/wet.		0.4	
	▽ GROUND WATER LEVEL 9/20/2005				
		Brown, fine SAND, trace Silt; wet.		0.2	
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-125	160807.2	938774.2		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	J. Sakellis			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	9/20/05-9/20/05
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	7 (Feet BLS)	Bentonite		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Asphalt			
		Brown to tan, fine SAND, little Silt, trace Gravel; moist.		0.9	Hand excavated to 5ft bls as part of utility clearance
		Brown, fine SAND, little Silt, trace Gravel; moist.	G		Sampled 2-4 ft. interval for VOC, SVOC, Pesticide, PCB, Herbicide, TAL Metals and Cyanide analyses.
		Dark brown to black, medium to fine SAND, little Silt and Gravel, trace wood (i.e. lumber), (fill); moist.		4.2	
		Grey SILT, little fine Sand, trace Organic Material (i.e. weeds and roots); moist.		0.3	
5		Grey SILT, little fine Sand and Clay; moist.			5
				0.2	
▽ GROUND WATER LEVEL 9/20/2005		Brown, fine SAND, little Silt; wet.			
				0.4	
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-201**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / L. Derrendinger**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **/ Hand Auger**	BOREHOLE DIAMETER **3-inches**	DRILLING EQUIPMENT/METHOD **/ Hand Auger**	SAMPLING METHOD **3" Hand Auger**	START-FINISH DATE **8/8/06-8/8/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **>5 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to medium SAND, some Silt, some fine to coarse Gravel, trace pieces of glass and plastic, (fill); wet with sewer odor from 2 to 3 feet, and with strong hydrocarbon odor from 3 to 3.75 feet.			
				>9999	
5		Light Grey fine(+) to medium(-) SAND; moist; little to no sewer and/or hydrocarbon odor.	G		Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-202	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	L. Derrendinger			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Geoprobe / L. Derrendinger				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
/ Hand Auger	3-inches	/ Hand Auger	3" Hand Auger	8/4/06-8/4/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	>5 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, some Silt, some fine to coarse Gravel, trace pieces of glass, (fill); moist; soft.			
		Light Grey fine(-) to medium(-) SAND; moist; soft.		1.3	
5			G		Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-203**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **/ Hand Auger**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/1/06-8/1/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **>5 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, little Silt, some fine to coarse Gravel, trace pieces of glass, (fill); moist; soft; pockets of light grey sand.			
		Light Grey fine(+) to medium(-) SAND; moist; soft.		3.1	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-204**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / L. Derrendinger**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **/ Hand Auger**	BOREHOLE DIAMETER **3-inches**	DRILLING EQUIPMENT/METHOD **/ Hand Auger**	SAMPLING METHOD **3" Hand Auger**	START-FINISH DATE **8/4/06-8/4/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **>5 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Grey medium SAND, some fine Gravel, (fill); moist; soft.			
		Brown fine to medium SAND, little Silt, little fine to coarse Gravel, (fill); moist; soft.			
		Tan medium SAND, little fine Gravel, (fill?); moist; soft.			
		Light Grey fine(+) to medium(-) SAND; moist; soft.		1.0	
5			G		Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-205	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	L. Derrendinger	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/2/06-8/2/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	4.5 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, some Silt, little fine to coarse Gravel, trace Concrete, trace red cemented sand at bottom of section, (fill); moist; soft, top finished with liner and bluestone gravel.			
		Light Grey fine to medium (-) SAND; wet in bottom 1.5 feet; soft.			Hand excavated to 5ft bls as part of utility clearance
5		Reddish fine to medium (-) SAND, some fine Gravel, trace light Grey cemented sand at bottom of section; wet; soft; sub-angular Gravel.			
		Reddish fine(-) SAND, and Silt, little Clay; wet, firm; few pockets stained black.		27.5	
10		Reddish medium(-) SAND, little fine(-) Gravel; wet; soft.			Collected sample from 8 - 10 feet and analyzed for TCL VOCs.
		Reddish fine(-) SAND, and Silt, little Clay, little fine Gravel; wet, firm; angular Gravel.		33.1	
15		Reddish fine(-) SAND, some Silt, little fine Gravel; wet; very firm; sub-angular gravel.			Collected sample from 12 - 14 feet and analyzed for TCL VOCs.
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-206	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	L. Derrendinger			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	4.5 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, some small Gravel, trace Silt, little Organic Matter, trace Concrete and glass; low moisture content; soft.		13.1	
		Light grey fine SAND, trace Silt, trace red cemented sand fragments in bottom of section; wet in bottom 6 inches; firm; stained brown in top six inches.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
				0.3	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-207	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	L. Derrendinger			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	4 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND and fine GRAVEL, some Silt, little Organic Matter, trace Concrete; moist; soft.		0.2	
		Brown reddish fine SAND, some Silt, trace Concrete and asphalt-like gravel; moist; soft; cemented white sand at bottom of section.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Threads of lumber with strong hydrocarbon-like odor; Little fine Sand.			
		Light Grey fine SAND, trace red cemented sand at bottom of section; wet in bottom foot of section; firm.		0.6	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-208**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/1/06-8/1/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **3.9 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, some Silt, little Organic Matter in top 3 inches, trace Concrete and asphalt-like gravel; moist; soft.		0.4	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Tan fine SAND, trace organic fragments (e.g., roots); Black stains; moist; firm.			
		Tan greyish fine SAND; wet in bottom 11 inches; firm; turning reddish in bottom 9 inches.		0.2	Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
5					
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-209**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/1/06-8/1/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **4.1 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND and fine GRAVEL, some Silt, little Organic Matter, trace Concrete, trace Glass; moist; soft.		1.3	
		Brown reddish fine SAND, some Silt, trace Concrete and asphalt-like gravel; moist; soft.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Dark Grey fine SAND, little Silt, trace brick or cemented red sand; moist; firm; pockets of black staining.		4.4	
5		Light Grey fine (-) SAND, some Silt; firm; wet; some pockets stained tan-yellowish.			Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-210	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	L. Derrendinger	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	5 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND and fine GRAVEL, some Silt, little Organic Matter, trace Concrete; moist; soft.		10.8	
		Dark brown fine (-) SAND and SILT; moist; soft.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light grey fine SAND, some Silt, trace pieces of red brick or cemented red sand; moist; firm.			
		Dark Grey fine SAND, little Silt; moist; firm; wet in core shoe only.		10.6	
					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
5					5
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-211	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	L. Derrendinger	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	3.5 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, little angular Gravel, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand at bottom of section; moist; soft; bottom 2 inches stained dark brown.		0.5	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Tan greenish fine SAND; wet in bottom 2 inches; firm; top 6 inches stained brown.		0.1	
5		Pink reddish medium SAND; top 2 inches stained tan.			Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-212	**Not Measured**	**Not Measured**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY	**Staten Island, New York**		
DRAFT	**L. Derrendinger**			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**8/1/06-8/1/06**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**3.7 (Feet BLS)**	**Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown fine SAND, little angular Gravel, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand at bottom of section; moist; soft; bottom 2 inches stained dark brown.		0.2	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Tan greenish fine SAND; wet in bottom 5 inches; firm; top 7 inches stained brown.		0.5	
5		Light Grey medium SAND, trace red cemented sand; wet; firm; red cemented sand at bottom of section.			Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-213	**Not Measured**	**Not Measured**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY	**Staten Island, New York**		
DRAFT	**L. Derrendinger**			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**8/1/06-8/1/06**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**3.8 (Feet BLS)**	**Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand; moist; soft; bottom 2 inches stained black.		15.2	
		Tan fine SAND, trace Silt, trace red cemented sand in bottom of section; moist; firm; brown staining in top 2 inches of section.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light Brown medium (-) SAND, trace red cemented sand; wet in bottom 1.2 feet; firm.		1.8	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO. **SB-214**	NORTHING **Not Measured**	EASTING **Not Measured**		
PROJECT NO./NAME **125801Y / Coral Island Shopping Center**		LOCATION **1650 Richmond Avenue**		
APPROVED BY **DRAFT**	LOGGED BY **L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER **Roux Associates / J. Veiss**		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE **2-in. / Drive Sampler**	BOREHOLE DIAMETER **2-inches**	DRILLING EQUIPMENT/METHOD **6620 / Geoprobe**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **8/1/06-8/1/06**
LAND SURFACE ELEVATION **Not Measured**	DEPTH TO WATER **3.5 (Feet BLS)**	BACKFILL **Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, some Silt, little Organic Matter in top 3 inches, trace red cemented sand; moist; soft.		450	
		Light Brown fine SAND, little Silt; trace red cemented sand at bottom of section; moist; soft.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light Grey fine SAND, trace Silt; tan mottling; wet at bottom two inches; firm; strong hydrocarbon-like odor.		61.1	
		Light Grey fine (-) SAND, trace Silt; wet; firm; changed to reddish color in bottom of section; Little or no hydrocarbon-like odor.			Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
5					5
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-215	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	L. Derrendinger			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	2.8 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand or red brick, trace plastic; low moisture content; soft.		0.0	
		Light Grey fine SAND, trace Silt; wet in bottom 2 inches; firm.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light Grey fine (-) SAND, little Silt; wet; firm; change to reddish color at bottom of section.		0.2	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-216	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY	Staten Island, New York		
DRAFT	L. Derrendinger			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	4.2 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown fine SAND, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand and asphalt-like gravel in bottom of section; moist; soft;		0.3	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Tan greenish fine SAND, trace Silt; wet in bottom 8 inches; firm; top 2 inches stained brown.		0.4	Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
5					
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-217	Not Measured	Not Measured		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		1650 Richmond Avenue		
APPROVED BY	LOGGED BY			
DRAFT	L. Derrendinger	Staten Island, New York		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	2-inches	6620 / Geoprobe	2" Macro-Core	8/1/06-8/1/06
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	4.0 (Feet BLS)	Sand		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, little angular Gravel, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand and asphalt-like gravel in middle of section; moist; soft;		1.1	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light-Grey greenish fine SAND, trace Silt; wet in bottom 8 inches; firm; top 4 inches stained dark brown.		0.2	
5		Pink reddish fine SAND; wet; firm.			Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-218	**Not Measured**	**Not Measured**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY	**Staten Island, New York**		
DRAFT	**L. Derrendinger**			
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**8/1/06-8/1/06**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**4.1 (Feet BLS)**	**Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine SAND, trace Silt, little Organic Matter in top 3 inches, trace red cemented sand at bottom of section; moist; soft.		0.2	
		Light Grey fine SAND, trace Silt; wet at bottom 4 inches; firm; top 4 inches stained brown.			Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Reddish fine SAND, trace tan cemented sand at bottom of section; wet; firm.		0.2	
5					Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
10					
15					
20					
25					
30					

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

209 Shafter Street
Islandia, New York 11749
Telephone: 631-232-2600
Fax: 631-232-9898

SOIL BORING LOG

WELL NO.	NORTHING	EASTING		
SB-219	**Not Measured**	**Not Measured**		
PROJECT NO./NAME		LOCATION		
125801Y / Coral Island Shopping Center		**1650 Richmond Avenue**		
APPROVED BY	LOGGED BY			
DRAFT	**L. Derrendinger**	**Staten Island, New York**		
DRILLING CONTRACTOR/DRILLER		GEOGRAPHIC AREA		
Roux Associates / J. Veiss				
DRILL BIT DIAMETER/TYPE	BOREHOLE DIAMETER	DRILLING EQUIPMENT/METHOD	SAMPLING METHOD	START-FINISH DATE
2-in. / Drive Sampler	**2-inches**	**6620 / Geoprobe**	**2" Macro-Core**	**8/1/06-8/1/06**
LAND SURFACE ELEVATION	DEPTH TO WATER	BACKFILL		
Not Measured	**2.9 (Feet BLS)**	**Sand**		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		Brown fine SAND, trace Silt, little Organic Matter in top 3 inches, trace gravel and red cemented sand at bottom of section; moist; soft.		0.9	Collected sample from 0 - 2 feet and analyzed for TCL VOCs.
		Light Grey fine SAND, trace Silt; wet at bottom 4 inches; firm; top 4 inches stained brown.			
		Reddish fine SAND, trace tan cemented sand at bottom of section; wet; firm.		0.4	Collected sample from 3 - 5 feet and analyzed for TCL VOCs.
5					5
10					10
15					15
20					20
25					25
30					30

BORING/FEET 125801Y.GPJ ROUX.GDT 1/10/07

APPENDIX C

Analytical Data

APPENDIX D

Data Usability Summary Report

- Intentionally Omitted from Draft -

As presented on Page 20, a DUSR for all data is currently being prepared by a third party data validation subcontractor. Once finalized, the DUSR will be included as Appendix D