



Galli Engineering, P.C.

June 11, 2014

Mr. Scott Deyette  
New York State Department of Environmental Conservation  
Division of Environmental Remediation; Remedial Bureau C  
625 Broadway, 11<sup>th</sup> Floor  
Albany, NY 12233

Re: 5-27 Kensington Road Site  
Bronxville, Westchester County  
BCP Site No. C360081  
Remedial Action Work Plan

Dear Mr. Deyette:

On behalf of our client Gateway Kensington, LLC and as it pertains to the site located at 5-27 Kensington Road, in Bronxville, Westchester County, New York, Galli Engineering, P.C. hereby submits the Remedial Action Work Plan, amended to include those modifications requested by the NYSDEC and NYSDOH on May 28, 2014. Requests for modifications were for the report dated February 25, 2014. This submittal contains the full appendices of this report, including Appendix J, which was updated in accordance with the request.

If you have any questions or comments pertaining to these materials, please feel free to contact me at your convenience. Thank you for your time and consideration in this matter.

Yours truly,

Victoria Frank  
Galli Engineering, P.C.

**REMEDIAL ACTION WORK PLAN FOR CONTAMINATION**  
**IN SOIL AND GROUNDWATER**

TO BE CONDUCTED AT  
5 - 27 Kensington Road  
Bronxville, New York 10708  
Section 11, Block 5, Lots 1, 6 and 16

Brownfield Cleanup Program  
Site Number C360081

PREPARED FOR:

Gateway Kensington LLC  
c/o McManus and Associates  
35 Main Street  
Newtown, CT 06470

PREPARED BY:

Galli Engineering, P.C.  
35 Pinelawn Road, Suite 209E  
Melville, NY 11747

February, 2014  
Rev. 1 June 11, 2014

**CERTIFICATION:**

*I Richard D. Galli, P.E. certify that I am currently a NYS registered professional and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).*

\_\_\_\_\_  
Richard D. Galli, P.E.

\_\_\_\_\_  
Date

UNAUTHORIZED ALTERATION OF, OR ADDITION TO, PLANS OR DOCUMENTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. ANY ALTERATION OF THIS DOCUMENT MUST BE DONE BY A PERSON ACTING UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL IN ACCORDANCE WITH THE STATE EDUCATION LAW. COPIES OF THIS DOCUMENT NOT MARKED WITH AN ORIGINAL OF THE PROFESSIONAL ENGINEERS INKED SEAL SHALL NOT BE CONSIDERED VALID TRUE COPIES.

## **EXECUTIVE SUMMARY**

### **Statement of Purpose and Basis**

This Draft Brownfield Cleanup Program (BCP) Remedial Action Plan presents the remedy proposed by the Applicant to the Department of Environmental Conservation (Department) for 5-27 Kensington Road. The proposed remedial program was chosen in accordance with Article 27 Title 14 of the New York State Environmental Conservation Law and the 6 NYCRR 375 regulations relative to the BCP.

### **Description of the Site**

The site is located at 5-27 Kensington Road in the Village of Bronxville, Westchester County. The site is approximately 1.63 acre in size and is located in a predominantly urban area of mixed commercial and residential use. It is bordered to the west by the Metro North Railroad line. The site is currently being used for municipal parking. The proposed redevelopment of the site, includes residential condos and a two-story subsurface parking garage.

### **Assessment of the Site**

Contamination was identified by the Remedial Investigation of this site, which does not represent a significant threat to public health and the environment, however, a remedial program is required for the site to address the contamination identified below:

Nature of contamination: Contaminants at the site that have been detected above standards, criteria and guidance values (SCGs) include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals associated with petroleum and coal storage and usage at the site. Areas of the site contain grossly contaminated soils. Polychlorinated biphenyls (PCBs) were also detected at the site, but below guidance values. The southern portion of the site was formerly used as a gas station and service garage. The northern portion of the site was formerly the site of a power plant, which was powered by coal for a time and later switched to fuel oil.

Extent of contamination: Subsurface soils at the site are contaminated with VOCs and SVOCs as a result of historic site usage. Contamination extends to bedrock in portions of the site. Bedrock slopes steeply downhill from east to west beneath the site and ranges from 1 foot below the surface to approximately 27 feet below the surface. Contamination was not found in subsurface soils downgradient (west) of the site. Contamination was not found in groundwater downgradient of the site. Low-levels of SVOCs, slightly above guidance values, were detected in a well upgradient or crossgradient to the site.

### **Description of Selected Remedy**

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, in a Decision Document signed September 17, 2007, the NYSDEC selected a Track 4 cleanup for this BCP site. The Applicant may elect to demonstrate compliance with either a Track 1 or Track 2 cleanup based on field conditions and additional sampling, and an enhanced level of effort. The components of the remedy set forth in the Remedial Work Plan, are as follows:

1. Excavate all areas of grossly contaminated soils. Excavation across areas of the site that do not contain grossly contaminated soils will proceed to an elevation of approximately 97 feet above sea level to allow for redevelopment of the site, which will further remove contamination from the site. Subject to practical limitations, excavation in areas where grossly contaminated soils are encountered will continue until those soils are removed (i.e., excavation in these areas will be deeper than that required for redevelopment). All excavated soils will be properly disposed of off-site. Endpoint sampling will be performed across the site at the bottom of the excavation.
2. Construct a soil vapor intrusion mitigation system to contain and prevent exposure to site related contaminants. The mitigation system will prevent exposure by preventing contaminated soil vapor from entering the on-site buildings. It will consist of a series of pipes laid under the building foundation to collect subsurface vapors, which will then be positively vented to the outside air above the building's roofline. An evaluation will be performed to determine if there is a potential for exposure to contaminated vapors at off-site properties.
3. Construct and maintain a cover system over the site. The cover system will consist of an impermeable surface (such as a concrete slab, asphalt paving, etc.) or at least two-feet of clean soil underlain by a demarcation layer, such as a geotextile.
4. Since the remedy results in residual contamination above unrestricted levels remaining at the site, a Site Management Plan (SMP) will be developed and implemented. The SMP will include the institutional controls and engineering controls to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment. The plan would require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; (b) evaluate the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) provide for the operation and maintenance of the components of the remedy; (d) monitor the groundwater and (e) identify any use restrictions on site development or groundwater use.
5. The SMP will require the property owner to provide a periodic Institutional Control/Engineering Control (IC/EC) certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department. This periodic certification would verify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and that nothing has occurred that would impair the ability of the controls to protect public health or the environment or



constitute a violation or failure to comply with any operation of maintenance or soil management plan.

6. Imposition of an institutional control in form of an environmental easement that would:  
(a) require compliance with the approved site management plan, (b) limit the use and development of the property to restricted residential use; (c) restrict use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the Westchester County Department of Health; and, (d) require the property owner to complete and submit to the NYSDEC an IC/EC certification.

## TABLE OF CONTENTS

1.0	BACKGROUND AND PURPOSE .....	1
1.1	Remedial Action Objectives .....	3
1.2	Environmental Conditions and Existing Remedial Measures.....	3
1.3	Summary of Environmental Investigations .....	5
2.0	ALTERNATIVES ANALYSIS.....	8
2.1	Available Alternatives.....	8
2.1.1	No Action .....	9
2.1.2	Unrestricted Use: Generic Soil Cleanup Table (Track 1) .....	10
2.1.3	Restricted Use: Generic Soil Cleanup Table (Track 2) .....	11
2.1.4	Restricted Use: Site Specific Evaluation (Track 4).....	12
2.2	Remedy Evaluation.....	13
2.2.1	No Action .....	13
2.2.2	Track 1.....	14
2.2.3	Track 2 Restricted Residential .....	17
2.2.4	Track 4.....	20
2.2.5	Selection of Alternative .....	22
3.0	SITE ACTIVITIES .....	23
3.1	Site Security .....	25
3.2	Soil Sampling .....	25
3.3	Excavation and Removal Methodology.....	26
3.3.1	Tank Removal Methodology.....	29
3.4	Disposal of Contaminated Soil .....	30
3.5	Sub-Slab Venting System and Geomembrane.....	31
3.6	Backfill and Cover System .....	34
3.7	Demolition of Existing Structures.....	34
3.8	Soil Vapor Sampling .....	34
4.0	SOIL VAPOR INTRUSION.....	36
5.0	AIR MONITORING.....	37
6.0	ODOR, DUST AND NUISANCE CONTROL PLAN .....	38
6.1	Odor Control Plan.....	38
6.2	Dust Control Plan.....	39
6.3	Other Nuisances .....	39
7.0	ENDPOINT SAMPLES .....	40
8.0	LAB ANALYSIS .....	41
8.1	Quality Assurance and Quality Control (QA/QC) .....	41
8.2	Sample Personnel .....	41
8.3	Sampling Equipment.....	41
8.4	Sample Acquisition .....	42
8.5	Sample Documentation.....	44
8.5.1	Sample Identification.....	44
8.5.2	Chain of Custody Procedures.....	44
8.5.3	Laboratory- Custody Procedures.....	45
9.0	INSTITUTIONAL CONTROLS AND ENGINEERING CONTROLS.....	46

10.0	SITE SPECIFIC PERSONNEL.....	47
11.0	POST REMEDIATION ACTIVITIES .....	48

<b>APPENDIX A</b>	<b>HISTORICAL SOIL BORING AND MONITORING WELL LOCATION PLAN</b>
<b>APPENDIX B</b>	<b>SITE PLAN WITH CONTAMINATION OVERLAY</b>
<b>APPENDIX C</b>	<b>SITE VICINITY MAP, USGS TOPOGRAPHIC QUAD, WETLANDS MAP</b>
<b>APPENDIX D</b>	<b>AREAS OF EXCAVATION PLAN</b>
<b>APPENDIX E</b>	<b>BUILDING FOOTPRINT</b>
<b>APPENDIX F</b>	<b>SHORING DIAGRAM</b>
<b>APPENDIX G</b>	<b>SUB-SLAB VENTING SYSTEM</b>
<b>APPENDIX H</b>	<b>PROJECT SCHEDULE</b>
<b>APPENDIX I</b>	<b>SOIL VAPOR SAMPLING LOCATIONS</b>
<b>APPENDIX J</b>	<b>CPP</b>
<b>APPENDIX K</b>	<b>HASP</b>
<b>APPENDIX L</b>	<b>GALLI RI REPORT</b>
<b>APPENDIX M</b>	<b>GALLI PHASE II ESA</b>
<b>APPENDIX N</b>	<b>CAMP</b>

## **1.0 BACKGROUND AND PURPOSE**

This Remedial Action Work Plan ("RAWP") is intended to provide an operational framework for the planned remediation of the soil contamination at 5-27 Kensington (the Subject Property), located in Bronxville, New York, tax identification number: Section 11, Block 5, Lots 1, 6 and 16. This work plan has been prepared on behalf of Gateway Kensington LLC ("Gateway"), 1025 Westchester Avenue, White Plains, NY 10604, the prospective buyer and developer of the three contiguous parking lot parcels. It is proposed to construct residential condominiums on the site, with a subsurface parking garage.

The Brownfield Cleanup Program Site (BCP Site) consists of the parcels of land on Lots 1, 6, and 16. These three lots together comprise the "subject property". The procedures described herein will be applied to the subject property. The BCP site measures approximately 1.63 acres. The site is currently being used for municipal parking and is comprised of three separate parking lots.

Gateway Kensington LLC proposes to redevelop this land in the heart of Bronxville. The development will comprise 54 residential condominiums with a 300 space subsurface parking garage. The condominiums by design and pricing will be marketed to empty nesters from Bronxville and other surrounding Westchester towns. The condominium residences will average approximately 1,700 square feet and will feature large master suites and small second bedrooms. The design of the development in the Tudor and Spanish Mission style architectures will complement the unique architectural style found throughout Bronxville. The pedestrian courtyard will provide residents with a gathering place and the motor courts will pull traffic off Kensington Road to within the project site thereby reducing traffic congestion and providing an easily accessible service area for dropping off and picking up passengers. Some of the homes will have direct entry from the street, resulting in increased pedestrian activity along Kensington Road. In addition to the residential component and provision of approximately 100 parking spaces required for the project and its residents, the proposal includes plans to construct a parking garage containing approximately 200 parking spaces for use by the Village of Bronxville. The 200 spaces will serve the Village's pressing need for parking in this area without the need for funding the acquisition of additional land and the cost of constructing a parking

garage.

The project site is located immediately adjacent to the central business district and within walking distance to the Metro-North Railroad Bronxville station. As such, it is eminently appealing to empty nesters seeking a lively neighborhood with all the conveniences offered by the Village of Bronxville including the downtown restaurants and shops.

The land is situated in a general north-south direction. The topographic gradient of the land is to the west-southwest. The bedrock is composed of folded and faulted metamorphic rock from the Precambrian to Triassic age. Gneiss and schist are the dominant rock types. The bedrock is overlain by unconsolidated glacial deposits of Pleistocene age. These glacial deposits are a mixture of clays, silts, sands and boulders. Depth to bedrock ranges from ½ foot below land surface to 24 feet below land surface. The bedrock trend slopes down from east to west. No surface water features are in close proximity to the subject site. The Bronx River is 2,400 feet to the northwest.

Past uses of this site have been documented since the turn of the 20th century. The subject property has been previously utilized for housing, a power plant, a gasoline station and an automobile repair facility. It is currently a municipal parking lot. Around 1905, the "Hotel Gramatan Power and Light Plant" was built on the area that is now the middle lot. Coal was used to fuel the power plant until 1961, when the plant switched over to fuel oil. Coal piles were identified on the Sanborn maps from the years 1918, 1932 and 1950. The "Gramatan Garage" (Texaco gas station) was operated on site from circa 1958-1994. It was closed by the Village of Bronxville in March, 1994. Since the early 1990s, the land has operated as a municipal parking lot, owned by the Village of Bronxville.

In preparation for development, extensive environmental investigations have been conducted on the subject property; including soil borings, ground penetrating radar, soil sample collection and analysis, monitoring well installation and groundwater sample collection and analysis.

Some contamination was identified during the Remedial Investigation of the site, consistent with the past uses of the site. A former gasoline station, an automotive repair shop and a parking

facility operated on the southern portion of the site; and a coal burning power plant formerly existed in the middle of the site. The power plant and other building structures have been demolished, and the debris has been graded and paved over to provide the land for the current municipal parking.

Gateway will begin the planned remediation by demolishing the current structures on site, excavating most of the contaminated soil to make room for the sub-grade parking garage and remove grossly contaminated soils; and leaving the rest of the contaminated soil in place to be capped with a geomembrane. Before capping, an active gas venting system will be installed to prevent exposure to contaminated subsurface vapors. Two feet of clean fill material will be brought onto the property to serve as final cover in areas that will be landscaped in the final developed parcel, if required depending on the cleanup Track attained.

The purpose of this Work Plan is to describe and document the technical approach, scope of work and remedial methodology to either eliminate the detected contamination or reduce it to an acceptable level deemed protective of public health and the environment, both on- and off-site.

## **1.1 Remedial Action Objectives**

Remedial Action Objectives (RAO's) for this site include remediation of source areas of contamination and prevention of exposure to site related contamination.

## **1.2 Environmental Conditions and Existing Remedial Measures**

Contamination consists of elevated levels of petroleum constituents in the soil on the southern portion of the site where underground storage tanks (USTs) were located. In the center of the site, (the area of the former power plant) there are elevated concentrations of total petroleum hydrocarbons (TPH) in the soil. PCB contaminants were also detected in this area, from soil samples taken at a depth of 4-8 feet, but the contamination was below the Soil Cleanup Objectives (SCOs) expressed in the New York State Department of Environmental Conservation 6 NYCRR Part 375-6.8 (a) or (b) "Soil Cleanup Objective Tables". The

contaminated soils are present on the surface, just below the parking lot pavement, as well as the subsurface of the site. Based on soil samples collected as part of the Remedial Investigation performed in December, 2006, the VOC and SVOC soil contamination is most concentrated on the middle and southern areas of the site. ~~No petroleum constituents were detected above TAGM in any of the samples collected from the northern area of the site.~~

Soil contaminants exceeding the Part 375 SCO's on the middle and southern lots include the semi-volatile organic compounds (SVOC's): benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo-a,h-anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. These SVOC's are all Polycyclic Aromatic Hydrocarbons (PAHs). PAH is the general term applied to a group of compounds, comprised of several hundred organic substances with two or more aromatic rings. PAHs are major constituents of petroleum and its derivatives. Exposure to PAHs may result in a wide range of effects on biological organisms. While some PAHs are known to be carcinogenic, others display little or no carcinogenic activity. Other contaminants in the soils on site exceeding the SCO's are the heavy metals arsenic, cadmium, chromium, lead and mercury. Exposure to elevated levels of these metals has been shown to cause detrimental health effects to biological organisms. Potential exposure pathways for these contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated groundwater.

The major source areas contributing to the contamination of the site are the former Gramatan Garage, as well as the former power plant. The power plant operated on site from circa 1905 until the late 1980s. The power plant operated during the time period that coal gasification was ongoing, and there is possible evidence of coal tar in the soil samples taken from the central lot. Coal gasification contaminants include SVOC's and metals, and many of these contaminants were detected at a level above the Part 375 SCO's. However, based on the results of the Toxicity Characteristic Leaching Procedure (TCLP) analyses, these soils do not meet the criteria for hazardous waste.

Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and priority pollutant metals were detected at varying concentrations in the groundwater samples collected from the monitoring wells. No VOCs were detected above the analytical method detection limit



in any of the groundwater samples. MW-4 and MW-5 had some VOCs that were detected below the NYSDEC Ambient Water Quality Standards and Guidance Values (Ambient Limits).

The locations of the monitoring wells are shown on the Historical Soil Boring and Monitoring Well Location Plan in Appendix A.

There are open DEC Spill numbers associated with these parcels of land; spill #88-08146 corresponds to the former Gramatan Garage area, and spill #93-14613 corresponds to the former power plant area.

### **1.3 Summary of Environmental Investigations**

Previous environmental investigations have been done on the property. An Environmental Site Assessment (ESA) report done in February 1989 by "Environmental Risk Limited" (ERL) identifies the Gramatan Garage as a Texaco gas station with two 2,000-gallon UST's which contained unleaded gasoline; and two 3,000-gallon UST's, one containing unleaded gasoline, and the other containing diesel fuel which were all installed around 1970. The gas station also contained a sealed floor drain, which is a cause for environmental concern as a potential pathway for contamination of the subsurface area. On October 26-28, 1989, one of the 3,000-gallon tanks was excavated and removed. A passive soil venting system was installed beneath the garage floor in January 1990. In April 1991, two other tanks were removed, and the last was abandoned in place. A tank closure report for the Gramatan Garage was prepared by Empire Soils Investigations, Inc. (ESI) in November 1989. The report states that one UST was removed from the garage in October 1989. Three groundwater monitoring wells were installed in March 1990, in the area of the former Gramatan Garage at the request of the NYSDEC. This area was assigned DEC spill number 88-08146. The area of the former power plant was assigned DEC spill number 93-14613.

Soil Mechanics Drilling Corporation (SMDC) performed a subsurface soil investigation for the entire subject property in June, 1992. Soil borings were done on the former Gramatan Garage area, the area of the former power plant and on the parking lot at the north end of the property.

The findings showed elevated BTEX (benzene, toluene, ethylbenzene and xylene) contamination in the area of the former Gramatan Garage and elevated TPH concentration in the area of the former power plant. Groundwater samples were also analyzed by Soil Mechanics. BTEX contaminant concentrations above NYSDEC groundwater standards and elevated concentrations of TPH were detected in the monitoring wells.

A work plan for site remediation was prepared by Stoller Environmental Engineering, P.C./Sadat Associates, Inc. and submitted to the NYSDEC in March 1994, then amended and approved in April 1994. That work plan recommended excavation and removal of contaminated soil and installation of monitoring wells at the former power plant site. However, this work plan was never implemented.

In October 2003, Galli Engineering, along with subcontractors, collected groundwater samples from the two existing monitoring wells, advanced soil borings, collected soil samples, performed ground penetrating radar across the entire site and performed geotechnical borings on the subject property.

A total of two groundwater samples were taken from the existing monitoring wells. The groundwater analytical results revealed the presence of VOC's, SVOC's and Priority Pollutant (PP) metals in varying concentrations. Arsenic, barium, cadmium, chromium, lead, mercury, silver and m,p-xylene were detected above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Seventy soil samples were collected for field screening with a PID, and twenty-two of those samples were selected for laboratory analysis. The soil sample analytical results revealed the presence of VOC's, SVOC's, PP metals and PCB's in varying concentrations. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo-a,h-anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, arsenic, cadmium, chromium, lead and mercury were detected above the NYSDEC SCO's. Based on the TCLP results, none of the soil samples met the criteria for characterization as hazardous waste.

The bedrock profile for the Site indicated a general downward gradient from east to west, with higher elevations along Kensington Road, and lower elevations near the rail road tracks. A depression in the bedrock is located in the northern part of the middle lot, possibly relating to the former power plant in that area.

Depth to bedrock on the southern lot ranged from 6-22 feet below land surface. The profile of the southern lot revealed greater depths to bedrock on the northwest side and lower depths on the southeast side. Depth to bedrock on the middle lot ranged from 1-29 feet below land surface. The bedrock profile is highest along the west, and lowest along the east side. On the northern lot, the depth ranged from 4-19 feet, with the greater depths to bedrock along the northwest side and lower depths along the southeast side.

A Remedial Investigation, including installation of three more monitoring wells, was completed by Galli Engineering in December, 2006. The findings of this investigation were presented in a Remedial Investigation Report dated February, 2007. The results are summarized as follows:

- No VOCs above their respective NYSDEC Ambient Water Quality Standards and Guidance Values were detected in the groundwater samples collected from the five monitoring wells.
- Groundwater from the three new wells installed off-site to the west and southwest did not reveal any VOC or SVOC contamination. Some PP metals contamination was present in the samples, most likely due to the high turbidity of some groundwater samples, which was a result of insufficient development.
- Based on water elevations measured on November 17, 2006, groundwater flow is to the west-southwest and it appears that the groundwater impact from previous uses of the site is minimal and restricted to the area of MW-4 and MW-5.
- SVOCs and some metals were detected at concentrations above the NYSDEC Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- VOCs, SVOCs and metals were detected at concentrations above the NYSDEC Soil Cleanup Objectives in the soil samples collected from the central parking lot (former power plant parcel).
- No VOC's or SVOC's were detected above their respective SCOs in any of the soil samples on the northernmost lot.
- It appears that the soil contamination is limited to the southern and middle parking lots.
- Soil in which contaminants appear lies in a layer on top of bedrock ranging from ½ to 24 feet thick. The soil layer is up to 24 feet thick in the vicinity of the middle lot and up to 21 feet thick in the southern lot.

## **2.0 ALTERNATIVES ANALYSIS**

In accordance with the Draft Brownfield Cleanup Program Guide, “The goal of the remedy selection process in the BCP is to select a remedy for a site that is fully protective of public health and the environment, taking into account the current intended and reasonably anticipated future land use of the site.” Accordingly, possible alternatives under consideration will be enumerated here along with evaluations of the effectiveness of each compared against the following program criteria:

1. Protection of Human Health and the Environment
2. Standards, Criteria, & Guidance (SCG)
3. Short-term Effectiveness & Impacts
4. Long-term Effectiveness & Permanence
5. Reduction of Toxicity, Mobility, or Volume
6. Implementability
7. Cost Effectiveness
8. Community Acceptance
9. Land Use

### **2.1 Available Alternatives**

The Alternatives Analysis identifies and compares potential site remedies. In accordance with the Draft Brownfield Cleanup Program Guide, three alternatives need to be reviewed.

**Alternatives considered for remediation of this property are as follows:**

- 1- No Action
- 2- Unrestricted Reuse (Track 1) scenario
- 3- Restricted Reuse (Track 2) scenario (Restricted Residential)
- 4- Restricted Reuse (Track 4) scenario

### **2.1.1 No Action**

The No Action alternative requires that no remedial action be completed at the site. The No Action alternative is the easiest and least costly course of action. This alternative would provide no additional control over potential exposure to contaminants identified at the site, so the risk of exposure to site contaminants would remain similar to current conditions, nor would it result in any development of the Site.

Under the No Action alternative, contaminants detected during the Remedial Investigation in soil and groundwater would be left in place. This alternative would not include any active measures to meet chemical specific SCGs, or actively reduce the toxicity, mobility, or volume of contamination. However, some degree of natural degradation and attenuation of the VOCs and SVOC's detected in soil and groundwater would be expected to occur over time, thereby naturally reducing toxicity, mobility, and volume of contamination.

The degree to which natural attenuation may decrease the risk of exposure to contaminants over time is not certain, but some degradation would be expected to occur over the long term. In the interim short term, adverse effects are unlikely because the risk of human exposure is considered minor under current conditions and there is minimal wildlife contact with the site. Since the ground surface at the site is currently covered with asphalt or building slabs, and will also be covered under the planned future development, this alternative does not pose an elevated risk of direct contact exposure to site soils.

Under the No Action alternative, no development would occur at the site and the contamination would remain at the site and continue to pose a potential threat to human health and the environment.

### **2.1.2 Unrestricted Use: Generic Soil Cleanup Table (Track 1)**

Track 1 requires the most rigorous cleanup and provides for unrestricted use which allows the property to be developed for any use. Restrictions on the use of the site are not permitted. Track 1 utilizes a generic table to identify soil cleanup objectives for unrestricted use remedies.

The Track 1 alternative is the most restrictive and costly to implement. This alternative does not permit any future restrictions to site use, or the use of institutional/engineering controls to address exposure and achieve the RAOs. However, it does allow groundwater use restrictions to be placed on the site.

Track 1 cleanup requires that site remediation be completed to meet generic soil cleanup objectives developed for unrestricted use remedies. At this time, the generic soil cleanup objectives refer to those listed in NYSDEC NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives. Thus, unlike the No Action alternative, the Track 1 alternative would meet SCO's for soils.

Unlike the No Action alternative, the Track 1 alternative would substantially reduce the mass and mobility of contamination, and would meet chemical specific SCO's for soil and groundwater much more rapidly than the No Action alternative, which would rely on natural attenuation over the long term.

To achieve a Track 1 remedy, contaminated soil that exceeds the limits in the table must be removed. A Track 1 remedy would eliminate the potential on-site risk associated with direct human contact with soil contamination, by source removal, which would allow for unrestricted use of the site. In addition, a Track 1 remedy would not provide a measurable increased benefit in relation to fish and wildlife exposure risk, since there are currently no significant exposure risks associated with fish and wildlife and because of the site's setting, there are unlikely to be any in the future.

A Track 1 remedy would include removal of all contaminated soils to bedrock, to ensure that SCO's are met, without leaving residual contamination in place.

### **2.1.3 Restricted Use: Generic Soil Cleanup Table (Track 2)**

Track 2 Restricted Residential requires the next most rigorous cleanup and provides for use subject to certain restrictions. Track 2 utilizes a generic table to identify soil cleanup objectives for restricted use remedies.

The Track 2 alternative would likely be less costly to implement than a Track 1 cleanup. This alternative may require future restrictions to site use, and/or the use of institutional and engineering controls to address exposure and achieve the RAO's. Groundwater use restrictions may also be placed on the site.

Track 2 cleanup requires that site remediation be completed to meet generic soil cleanup objectives developed for the intended restricted use. At this time, the generic soil cleanup objectives refer to those listed in NYSDEC 6 NYCRR Subpart 375-6.8 (b) "Restricted Use Soil Cleanup Objectives". Thus, unlike the No Action alternative, the Track 2 alternative would meet SCO's for soils.

Unlike the No Action alternative, the Track 2 alternative would also substantially reduce the mass and mobility of contamination, and would meet chemical specific SCO's for soil and groundwater much more rapidly than the No Action alternative, which would rely on natural attenuation over the long term.

To achieve a Track 2 remedy, contaminated soil that exceeds the limits in the table must be removed. A Track 2 remedy would eliminate the potential on-site risk associated with direct human contact with soil contamination, by source removal, which would allow for restricted use of the site. In addition, a Track 2 remedy would not provide a measurable increased benefit in relation to fish and wildlife exposure risk, since there are currently no significant exposure risks associated with fish and wildlife and because of the site's setting, there are unlikely to be any in the future.

A Track 2 remedy would include removal of all contaminated soils to bedrock, or until endpoint samples demonstrate that all contamination exceeding the SCO's in Table 375-6.8(b) are achieved, while possibly leaving some residual contamination in place.

#### **2.1.4 Restricted Use: Site Specific Evaluation (Track 4)**

The Track 4 alternative is more costly and more difficult to implement than the No Action alternative, but it can be less costly to implement than the Track 1 alternative. The Track 4 alternative uses site-specific information and guidance to identify soil cleanup objectives to achieve a restricted use remedy, and would incorporate the use of institutional and/or engineering controls.

The planned remediation for this site includes removing most of the contaminated soil, and mitigating the effects of any residual contamination in remaining soil by means of a sub-slab venting system. Under a Track 4 scenario, some contaminated soil would be left in place (in areas where construction will not take place and in close proximity to the Metro-North tracks - see Appendix D, "Areas of Excavation Plan").

Engineering controls would integrate features to mitigate site contamination and exposure risk. For example, all future site buildings in affected areas will have a sub slab vapor barrier and/or sub-slab ventilation system to abate potential exposure to organic vapors in indoor air. Ground cover, such as pavement and building slabs, would reduce the risk of contact with contaminated soils. Institutional controls will be implemented that will limit the future use of site and prohibit the use of site groundwater without proper treatment, thereby mitigating the risk of human exposure to groundwater. Compared to No Action, the benefit of Track 4 in relation to fish and wildlife exposure risk is minimal, since there are currently no significant exposure risks associated with fish and wildlife and because of the site's setting, there is unlikely to be any in the future.



## **2.2 Remedy Evaluation**

### **2.2.1 No Action**

#### **1. Protection of Human Health and the Environment**

Potential exposure pathways for the contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated groundwater. Under the No Action remedy, the contamination on site will remain and will not be remediated. This alternative would provide no additional control over potential exposure to contaminants identified at the site, so the risk of exposure to site contaminants would remain similar to current conditions.

#### **2. Standards, Criteria, & Guidance (SCG)**

Under the No Action remedy, no cleanup will occur; therefore this remedy will not meet the SCGs.

#### **3. Short-term Effectiveness & Impacts**

Short-term impacts at the site will remain the same. If the site is not remediated, it will still be utilized as three contiguous parking lots.

#### **4. Long-term Effectiveness & Permanence**

In the foreseeable long term, if the site is not remediated, the current use will be the same. Natural attenuation is expected to occur very slowly for VOCs and even more so for SVOCs and little if any for metals over the long term. Since the ground surface at the site is currently covered with asphalt or building slabs, this alternative does not pose an elevated risk of direct contact exposure to site soils.

**5. Reduction of Toxicity, Mobility, or Volume**

No reduction of toxicity, mobility or volume will occur under the No Action track.

**6. Implementability**

No remedial actions will be implemented at the site, under the No Action remedy.

**7. Cost Effectiveness**

The No Action remedy will incur no additional costs beyond upkeep of the parking lot.

**8. Community Acceptance**

The No Action remedy for this project would not have to be approved by the community.

**9. Land Use**

The land use for this site under the No Action remedy will remain the same, three contiguous parking lots utilized by the Village of Bronxville.

**2.2.2 Track 1**

**1. Protection of Human Health and the Environment**

Potential exposure pathways for the contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated groundwater. The remedy for Track 1 would eliminate the potential exposure to contaminated soil by removing all contaminants from the site, leaving the site available for any use.

## **2. Standards, Criteria, and Guidance (SCG)**

SCG's for the Track 1 Remedy shall include a cleanup level that will allow the site to be used for any purpose without restrictions. Soil that remains after excavation will be cleaned up to the standard listed in "6 NYCRR Part 375-6" Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives.

## **3. Short-term Effectiveness and Impacts**

Short-term impacts to the site and surrounding areas during excavation and construction would include truck traffic and associated noise, odors and dust.

Increased truck traffic would occur along nearby roads, as trucks would need to be available to haul material off the site. During construction of the project, the existing 179 municipal parking spaces will be relocated until construction of the below grade parking structure is complete.

Special parking rules and exceptions will be implemented to accommodate displaced parking. Parking regulation exceptions may include temporary permitting of on-street parking for commuters and merchants Village-wide.

To control dust during excavation activities, personnel will liberally spray water on all stockpiles, open surfaces, truck paths and during any truck loading and unloading operations, as necessary. Air monitoring will be periodically performed to protect field personnel and the public against exposure to airborne hazardous substances and to determine appropriate levels of PPE for work tasks. Initial monitoring of the work area will be performed prior to site work. This testing will determine background levels, and determine if any immediate hazards exist. Dust monitoring will be performed using a MIE Dust Monitor for PM-10.

#### **4. Long-term Effectiveness and Permanence**

Under the Track 1 remedy, all contaminated soils will be excavated and removed from the site. This will permanently reduce the mass and mobility of contamination, and would meet appropriate SCGs for the site.

#### **5. Reduction of Toxicity, Mobility, or Volume**

By removing all of the source material, this will permanently reduce the toxicity, mobility and volume of the contamination located at the site.

#### **6. Implementability**

The removal of all contaminated soils from the site would not be feasible, as a portion of the site borders the Metro-North railroad platform, and any excavation in that area would undermine the platform, causing it to fail. Since meeting the Track 1 SCGs requires removal of all contaminated soil, this would not be feasible, as all of the contaminated soils cannot be excavated from the site, due to inaccessibility and undermining of the railroad platform.

#### **7. Cost Effectiveness**

The cost for a Track 1 cleanup would be greater than either the No Action alternative or the Track 4 alternative due to the fact that a greater amount of material would have to be removed from the site and disposed of. This would also involve marginally more effort for shoring, site control and railroad safety. The Track 1 cleanup would not require engineering controls or long term site management, as all the material would be removed, but this is not feasible due to the presence of the railroad platform abutting the site.

## **8. Community Acceptance**

Fact sheets will be mailed to the site contact list regarding the Remedial Workplan with 30-day comment period, Remedial Investigation Report and the Remedial Work Plan with 45-day comment period.

## **9. Land Use**

Track 1 provides for unrestricted remedies which allow the property to be developed for any use. Restrictions on the use of the site are not permitted.

### **2.2.3 Track 2 Restricted Residential**

#### **1. Protection of Human Health and the Environment**

Track 2 Restricted Residential is the next less stringent cleanup standard, after Track 1.

Potential exposure pathways for the contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated groundwater. The remedy for Track 2 would reduce the potential exposure to contaminated soil by removing all contaminants exceeding the Track 2 SCO's from the site, leaving the site available for Restricted Residential use.

#### **2. Standards, Criteria, and Guidance (SCG)**

SCG's for the Track 2 Remedy shall include a cleanup level that will allow the site to be used for Restricted Residential use with appropriate restrictions. Soil that remains after excavation will be cleaned up to the standard listed in "6 NYCRR Part 375-6" Table 375-6.8(b): Restricted Use Soil Cleanup Objectives.

### **3. Short-term Effectiveness and Impacts**

Short-term impacts to the site and surrounding areas during excavation and construction would include truck traffic and associated noise, odors and dust.

Increased truck traffic would occur along nearby roads, as trucks would need to be available to haul material off the site. During construction of the project, the existing 179 municipal parking spaces will be relocated until construction of the below grade parking structure is complete.

Special parking rules and exceptions will be implemented to accommodate displaced parking. Parking regulation exceptions may include temporary permitting of on-street parking for commuters and merchants Village-wide.

To control dust during excavation activities, personnel will liberally spray water on all stockpiles, open surfaces, truck paths and during any truck loading and unloading operations, as necessary. Air monitoring will be periodically performed to protect field personnel and the public against exposure to airborne hazardous substances and to determine appropriate levels of PPE for work tasks. Initial monitoring of the work area will be performed prior to site work. This testing will determine background levels, and determine if any immediate hazards exist. Dust monitoring will be performed using a MIE Dust Monitor for PM-10.

### **4. Long-term Effectiveness and Permanence**

Under the Track 2 remedy, the most heavily contaminated soils will be excavated and removed from the site. Residual soils having contaminants present above the Track 2 Restricted Residential SCO's will be isolated by a 2-foot cap of clean fill in any undeveloped area. Exposure pathways and contact with metals will be prevented, as a permanent cap will be put on the entire site. Any gaseous contaminants remaining in soils after excavation will be vented out by the sub-slab venting system. Annual inspection of the venting system will be done to ensure its effectiveness as well as performance. The venting system will be

permanently in place beneath the parking garage structure. This will permanently reduce the mass and mobility of contamination, and would meet appropriate SCGs for the site.

#### **5. Reduction of Toxicity, Mobility, or Volume**

By removing the most heavily contaminated source material, placement of the clean fill layer, and installation of the sub-slab venting system, the toxicity, mobility and volume of the contamination will be greatly reduced.

#### **6. Implementability**

The removal of all contaminated soils from the site would not be feasible, as a portion of the site borders the Metro-North railroad platform, and any excavation in that area would undermine the platform, causing it to fail. Meeting the Track 2 SCGs requires removal of all contaminated soil exceeding Track 2 Restricted Residential SCO's, which may not be feasible, as all of the contaminated soils would need to be excavated from the site.

#### **7. Cost Effectiveness**

The cost for a Track 2 cleanup would be greater than either the No Action alternative or the Track 4 alternative due to the fact that a greater amount of material would have to be removed from the site and disposed of under either of these two scenarios. This would also involve marginally more effort for shoring, site control and railroad safety. The Track 2 cleanup would require engineering and institutional controls or long term site management, and this would represent an ongoing cost expenditure/

#### **8. Community Acceptance**

Fact sheets will be mailed to the site contact list regarding the Remedial Work Plan with 30-day comment period, Remedial Investigation Report and the Remedial Work Plan with 45-day comment period.

## **9. Land Use**

Track 2 provides for Restricted Residential remedies which allow the property to be developed for residential use, subject to restrictions to be listed in the Site Management Plan.

### **2.2.4 Track 4**

#### **1. Protection of Human Health and the Environment**

Potential exposure pathways for the contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated groundwater. The remedy for this site will eliminate the potential exposure to contaminated soil by removing the majority of source material from the site, and capping the remaining soils with a membrane, where the gaseous contaminants will be captured and vented out by the sub-slab venting system. An open-air break (in the form of the parking garage) will be provided between the source material and residences.

#### **2. Standards, Criteria, and Guidance (SCG)**

Since this site is to be redeveloped as residential property, it will utilize Engineering Controls and Institutional Controls to allow for the proposed use. The Track 4 cleanup would not meet the Restricted Residential SCO's but would rely on EC/IC's to allow the proposed use.

#### **3. Short-term Effectiveness and Impacts**

Short-term impacts to the site and surrounding areas during excavation and construction would include truck traffic and associated noise.

Increased truck traffic would occur along nearby roads, as trucks would need to be available to haul material off the site. During construction of the project, the existing 179



municipal parking spaces will be relocated until construction of the below grade parking structure is complete.

Special parking rules and exceptions will be implemented to accommodate displaced parking. Parking regulation exceptions may include temporary permitting of on-street parking for commuters and merchants Village-wide.

#### **4. Long-term Effectiveness and Permanence**

The bulk of the contamination would be removed from the site. Exposure pathways and contact with metals will be prevented, as a permanent cap will be put on the entire site. Any gaseous contaminants remaining in soils after excavation will be vented out by the sub-slab venting system. Annual inspection of the venting system will be done to ensure its effectiveness as well as performance. The venting system will be permanently in place beneath the parking garage structure.

#### **5. Reduction of Toxicity, Mobility, or Volume**

By removing the source material, the volume of contaminants will be greatly and directly reduced.

#### **6. Implementability**

This proposed action will remove all grossly contaminated soils to the extent feasible, leaving in place some residual contamination to be vented out by the sub-slab system. This action will not compromise the integrity of the railroad platform.

#### **7. Cost Effectiveness**

The cost for a Track 4 cleanup would be less than the Track 1 or Track 2 alternatives due to the fact that less material would have to be removed from the site and disposed of.

## **8. Community Acceptance**

Fact sheets will be mailed to the site contact list regarding the Remedial Workplan with 30-day comment period, Remedial Investigation Report and the Remedial Work Plan with 45-day comment period. No negative feedback has been received from the community, and the project has been looked upon favorably by the community.

## **9. Land Use**

This site will be developed as 54 residential condominiums with a 300 space subsurface parking garage. In 1996, the Village of Bronxville adopted zone text amendments for the Six-Story Multiple Residence D zoning district. These amendments were adopted in order to permit an age-restricted multiple residence facility to be constructed on the subject property.

### **2.2.5 Selection of Alternative**

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, in a Decision Document signed September 17, 2007, the NYSDEC selected a Track 4 cleanup for this BCP site. However, the Applicant retains the option of attempting a higher cleanup level (Track 1 or Track 2) based on field conditions and additional sampling, and an enhanced level of effort.

### **3.0 SITE ACTIVITIES**

The following scope of work is an outline of the process and steps that are to be used in the cleanup of the Site. The NYSDEC and Westchester County Department of Health (WCDOH) will both be notified at least seven days in advance of any work being performed on site, so that arrangements can be made, if desired, for their representatives to be present to witness the excavation and obtain samples.

All Site activities will be performed according to the Site specific Health and Safety Plan (HASP, Appendix K). Program required public involvement with the project will be incorporated as provided in the Citizen Participation Plan (CPP, Appendix J).

Thirty days prior to the start of remediation, residents of the Village of Bronxville will be notified that the parking lots will be under construction, and that alternative parking will need to be found. The site will be unavailable for further parking until completion of construction.

The site is currently utilized as a municipal parking lot, divided into three sections. The dimensions of the entire site are approximately 650 feet long and 100 feet wide. Contaminated soil is present on the lots, as delineated on the Site Plan with Contamination Overlay shown in Appendix B. The development of the property is to include a subsurface parking garage; one level four and a half feet below grade, and the second level twenty feet below grade.

The Scope of Work is summarized as follows:

1. Notify agencies of commencement of work.
2. Implement the Health and Safety Plan.;
3. Excavate and stockpile (if necessary) contaminated soil on 6-mil plastic sheeting and cover with 6-mil plastic sheeting;
4. Load, transport, and dispose of contaminated soil to appropriate facility;
5. PID monitoring and dust control monitoring;
6. Storm water management;
7. Endpoint sampling of soil, with laboratory analysis;
8. Install active soil venting system during excavation activities;

9. Concurrently, install filtration system for storm water management;
10. Cap remaining contaminated soils in place with membrane;
11. Bring in clean fill materials for backfilling purposes as necessary;
12. Dust mitigation;
13. Health and safety meetings before the start of every day;
14. Record keeping;
15. Preparation of a Final Engineering Report.

The goals of this scope of work are to 1) remove contaminated soil to bedrock or to a depth of 99 feet MSL, whichever is deeper, and where feasible; 2) to demonstrate compliance with the selected SCO's; and 3) to provide measures to mitigate the effects of any residual contamination. Material removal is necessary to accommodate the space needed for the proposed sub-grade parking garage on the site and to meet program requirements to remove the maximum amount of grossly contaminated soil. Any contaminated soil that is not excavated (for example, that nearest the railroad tracks and above bedrock in the southwest corner of the BCP site) and is to remain in place, will be capped with a geomembrane, and actively vented through a system permanently installed beneath the floor of the parking garage.

Groundwater was not encountered in the deep structural soil borings done in previous site investigations. Given that the property is not in a flood prone zone; that the groundwater is not a source of potable drinking water; and that the groundwater contamination is minimal and is isolated, no need to remediate the groundwater on-site is anticipated. Monitoring wells installed off-site and downgradient to the west revealed no contamination by VOC's or SVOC's above regulatory limits.

The selected remedy for the subject property must eliminate or mitigate all significant threats to public health and/or the environment through the proper application of scientific and engineering principles. Specifically, the remediation goals for this site are to reduce or eliminate human exposure to contaminated soils on site by excavation and removal of soils; as well as installing an active venting system and capping the site. The items in the scope of work are further detailed in the following paragraphs. A project schedule is included in Appendix H.

### **3.1 Site Security**

Before excavation operations begin, a site enclosure fence will be installed in a manner that will prevent people and animals from easily entering the site except by entrance gates. Protection will be provided along the railroad platform and along the street. Any additional gaps in the existing fencing will be blocked off as well. Entrance gates will be provided for construction vehicles and will be locked at the end of each work day. Vehicular access to the work area shall be restricted to authorized vehicles only. A log of security incidents will be maintained. No visitors shall be allowed on-site without the expressed approval of the site contractor.

A sign will be posted at the site, indicating that remedial activities are being performed. The sign will include the program name, site name, site number, name of party performing remedial actions, and the names of the Governor, Commissioner and Municipal Executive.

### **3.2 Soil Sampling**

Soil will be excavated to remove or reduce the contamination in the soil as well as excavate enough of the soil from the site to accommodate the subsurface parking garage structure. Soil samples will be collected prior to excavation to characterize the waste soil for disposal. Soil samples will be collected using a geoprobe, and then transported to the laboratory for analysis. Soil samples collected for the purpose of waste characterization will be grab samples collected from the section of each boring which is the most highly contaminated (portion of the soil boring with the highest PID reading or the strongest odor, or soils which are determined to be grossly contaminated by means of visual inspection). If no signs of contamination are encountered in a boring, samples will be collected according to the requirements of the disposal facility.

The degree of contamination will be characterized using United States Environmental Protection Agency (US EPA) methods for volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), total petroleum hydrocarbons (TPH), priority pollutant metals, polychlorinated biphenyls (PCB's), toxicity characteristics leaching procedure (TCLP) for metals, and RCRA characteristics (ignitability, corrosivity and reactivity) to determine characterization

for disposal. One trip blank and one field blank will be collected for quality control purposes. Galli Engineering, P.C. will follow generally accepted industry practices and NYSDEC protocols and guidelines and submit the samples to a NYSDOH ELAP-Certified Laboratory for analysis. Additional analytes may be included depending on the requirements of the selected disposal facility.

The degree of contamination will be determined by a laboratory analysis of one sample from every 1,000 cubic yards of excavated soil, or at a different frequency, depending on the requirements of the selected disposal facility. The actual volume of excavated soil may vary based upon actual field conditions encountered. Depending on the laboratory findings, the contaminated soils will be transported to one or more facilities permitted to handle the appropriate level of contamination. The estimated total amount of rock to be removed is 12,000 tons. No special disposal is needed for the excavated rock.

Any remaining contaminated soils that will be left on site will be actively vented to remove contaminants and prevent their accumulation, and will be capped with a geomembrane. A two-foot thick layer of clean fill material will be brought on-site and placed over all areas that will ultimately be unpaved as well as encapsulate the existing on-site soils during construction of the property.

### **3.3 Excavation and Removal Methodology**

The excavation of the contaminated soil will consist of the equipment mobilization, soil excavation and stockpiling, erosion control, storm water management, air monitoring, and laboratory testing of soil for waste characterization. Laboratory testing will be performed prior to excavation so that soils can be transported to the proper disposal facility as soon as they are excavated. Soil samples will be collected using a geoprobe, and then transported to the laboratory for analysis.

Soil excavation will proceed in sections, starting in the northern portion of the site and working south, as shown on the Areas of Excavation Plan in Appendix D. At each section of soil removal, the soil will be loaded into trucks to be sent to a licensed disposal facility. All grossly

contaminated soils and any additional soil required for site development will be excavated.

If necessary, excavated soil will be stockpiled in a designated area and placed between two layers of 6-mil plastic sheeting, in preparation for loading. The sides of the bottom sheet will be folded up, the top sheet will be placed to overlap the folds, and they will be secured to the ground to prevent the contaminated soil from spreading. Erosion control will be implemented using silt fences and hay bales primarily along the western portion of the site.

Prior to excavation, soil samples taken from across the site will be sent to a certified laboratory for a waste characterization analysis. This analysis will determine the extent of contamination, if any, in each of the samples. The waste characterization analysis will determine to which facilities excavated soil will be transported. The following chart, based on previous laboratory analyses, gives a breakdown of the estimated total amount of material to be excavated.

Formatted: Not Highlight

Type of Material	Amount of Material
Uncontaminated Soil plus C&D debris	10,000 yd <sup>3</sup>
Contaminated Soil	20,600 yd <sup>3</sup>
Rock	10,550 yd <sup>3</sup>
Total material to be removed	41,150 yd <sup>3</sup>

The mix of uncontaminated soil and debris is unknown in the northernmost portion of the site; therefore a breakdown of 50/50 is used in that area.

All excavation work will be conducted in a safe manner in order to protect workers, the public and adjacent property. All applicable Federal, State and local requirements will be observed and necessary permits obtained by the Contractor.

Shoring will be employed to facilitate removal of as much contaminated soil as possible adjacent to the Metro-North tracks. An excerpt from the construction drawings showing the relationship between Right-Of-Way grade level, the lower floor of the parking garage, and

bedrock at the southern end of the lot has been included as Appendix F. The anticipated depth of shoring has been added to this detail. Approximately three feet of soil remains between bedrock and the floor at this location. If the shoring had to be extended to allow removal of this soil layer, it would have to bear against at least two times the depth. Because the load on the shoring is a squared function, it would have to resist four times the movement.

It must be kept in mind that any such shoring will be placed just inside the railroad right-of-way. This is a very active commuter rail line and no disruptions can be tolerated. Therefore, we consider the additional three foot layer of contaminated soil cannot be removed within practical or reasonable constraints. It was agreed to install the sub-slab venting system partially for this reason, knowing that some contaminants will necessarily remain.

The extent of shoring and bracing work includes, but is not limited to, the following:

- Shoring, bracing and other protection as necessary in conforming with Industrial Code Rule 23 of the Rules and Regulations of the State of New York and with Subsection 107-05 of the NYSDOT Standard Specifications.
- Shoring and bracing necessary to protect existing buildings, streets, walkways, utilities, and other improvements and excavation against loss of ground or caving embankments.
- Maintenance of shoring and bracing.
- Removal of shoring and bracing, as required.

The shoring and bracing system shall be designed by the Contractor on a Means and Methods basis. Shoring may consist of soldier piles with wood or concrete lagging, driven sheet pile, or other appropriate systems. Other methods acceptable to the agency having jurisdiction and conforming to Industrial Code Rule 23 will be considered by the Consultant upon written request by the Contractor. Tie-back anchors shall not be permitted to extend under Metro North Railroad.

Wherever shoring is required; locate the system to clear permanent construction and to permit forming and finishing of concrete surfaces. Provide shoring system adequately anchored and braced to resist earth and hydrostatic pressures. Shoring and bracing shall be well-constructed,



carefully aligned, substantial and firm, securely braced and fastened in position, and shall be maintained in that condition. Shoring should be placed in order to allow access to grossly contaminated soils to the maximum extent possible (as far west as possible, and as deep as possible).

### **3.3.1 Tank Removal Methodology**

The site was known to contain three tanks, which have since been removed. A GPR was used to ensure that there were no remaining tanks. The GPR projected what appears to be a concrete encasing, typical of that of an underground storage tank (UST) in the southern parking lot of the site. If the presence of a UST is confirmed, or any other USTs are discovered on the site they will be removed. Before development of the property, any existing USTs on site will be properly registered, cleaned, removed, made unusable, and disposed of in accordance with applicable regulations. Soils surrounding the tanks will be excavated and endpoint samples will be taken and analyzed for VOC's, SVOC's, PCB's and priority pollutant metals according to applicable methodologies to ensure proper cleanup in these areas. Endpoint samples for any tank excavation will coincide with final endpoint samples. If the tank excavation requires excavation deeper than otherwise needed, the bottom of the tank excavation would be the bottom of the final excavation and therefore would need final endpoint samples.

Pursuant to DER-10, the New York State Department of Environmental Conservation will be notified in writing one week prior to tank removal and collection of endpoint samples. After proper analysis, these soils will be disposed of in accordance with all applicable regulations.

The WCDH and NYSDEC will be notified at least one week prior to the start of any field work or sampling, including excavation of the UST.

A licensed waste oil recycler will be engaged to pump out the contents of and clean out the tank and render it vapor free. The clean-out and removal of the tank will be performed in accordance with NYSDEC Bulk Storage Regulations. All piping will be exposed, drained back to the tank (prior to tank cleaning), and removed. The UST will be excavated and removed from the

ground. An engineer will be present on site and will note the condition of the tank and the condition of the excavation area. The excavation will be examined for stains and odors. The tank will be rendered useless by perforation and appropriately disposed of.

At the completion of the tank excavation, endpoint samples will be collected from each of the four walls and the floor of the finished excavation. The holes will not be filled in until written WCDH or NYSDEC approval of endpoint analyses is obtained.

Petroleum contaminated soils will be disposed of in accordance with the ~~NYSDEC-STARs~~ ~~Program~~ Commissioners Policy (CP) -51, Soil Cleanup Guidance. Soil removed from the excavation will be placed directly into dump trucks or trailers for transport to an authorized disposal facility if suitable arrangements can be made. Otherwise, contaminated soil will be stockpiled, sampled for waste characterization purposes, and transported at a later date. If necessary, excavated soil will be stored on top of, and be covered by, layers of plastic sheet. Contaminated soil will be sampled for waste characterization purposes using analyses likely to be required by anticipated disposal facilities.

Appropriate load tickets will be logged to provide proof of disposal.

### **3.4 Disposal of Contaminated Soil**

The soil excavated from the areas of known contamination will be loaded for transport to the disposal site. The actual volume of excavated soil may vary based upon actual field conditions encountered. If necessary, soil will be stockpiled on-site, on and under polyethylene sheeting. Stockpiling may be necessary if the quantity of soil excavated exceeds the amount of soil that is able to be transported in one truck trip.

The contaminated soil will be transported for disposal or treatment to an appropriately permitted facility. The final disposition of the contaminated materials will be in accordance with all applicable federal, state, and local regulations. Disposal facilities will be selected based on the results of laboratory analysis for disposal parameters, distances to facility and cost of disposal. Based on the known nature of the soil contamination, disposal facilities and options are readily

available.

The NYSDEC will be notified in writing at least two weeks prior to the removal of any contaminated soils or groundwater with the names of the waste transporters and disposal facilities and their respective licenses and permits for agency review. All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364.

Loaded vehicles leaving the site must be appropriately lined, tarped, securely covered, manifested and placarded in accordance with appropriate local, State, and NYSDOT regulations.

A stabilized construction entrance will be constructed to prevent tracking of soil from the site. The entranceway and adjacent roadway will be monitored for evidence of off-site soil tracking and appropriate measures taken if tracking occurs. Trucks leaving the site will be monitored to ensure the exterior of the trucks are clean. Trucks will be cleaned prior to leaving the site as necessary. Any water used to clean trucks will be collected and disposed of properly.

### **3.5 Sub-Slab Venting System and Geomembrane**

To contain and prevent exposure to site-related contaminants, a soil vapor intrusion mitigation system consisting of a vapor barrier and an active ventilation system will be installed just beneath the concrete slab of the parking garage to positively vent any vaporized contaminants. The system includes a combination of fresh air inlet vents (Geovent) and contaminated air exhaust vents (also Geovent). Geovent is the product name given to a fabricated highly porous strip of material, approximately 1" thick and one-foot wide laid in long strips over the area to be vented. The end of each strip is connected to a header pipe which is connected, in turn, to a fan. The exhausted air will be passed through a stack and discharged above the roof.

Information from previous studies has documented the presence of contaminants consistent with the prior use of the site as a former gasoline station, an automotive repair shop, and a coal burning power plant. Due to the presence of heterogeneous fill material at this site, vapor

concentrations and migratory pathways cannot be predicted with any accuracy. Because bedrock is quite shallow on this site, approximately 2/3 of the contaminated soil will need to be removed to provide clearance for foundations, and more will be removed within limits of feasibility to meet program requirements to remove as much contamination as possible. Additionally, it has been agreed that an active venting system will be installed beneath the area where a small portion of the contaminated soil will remain and remove vapors as they accumulate. An impervious barrier, sealed around the entire perimeter and at all penetrations, will be provided. The proposed system will prevent vapors from migrating and accumulating inside future buildings by providing a positively vented pathway to the outside atmosphere.

The sub-slab venting system will consist of a ventilation system, a vapor barrier, graded fill placed beneath the vapor barrier, and blowers to prevent vapors from accumulating in the subsurface and ultimately from entering the buildings. These specifications apply to the ventilation system components including the Geovent vapor collector, the geotextile, headers, Liquid Boot<sup>®</sup> sprayed on impervious barrier, and blowers.

The ventilation system will consist of two four-inch diameter PVC headers laid in sand or finely crushed gravel beneath the garage floor slab. These headers will be installed using a geoprobe, and will be sealed using plumbers putty or beeswax. One of these will serve as a fresh air supply header; the other a vent header for vapor laden air. These will be run along the length of the vented area. Pairs of Geovent strips will extend perpendicular to the headers (alternating the fresh air supply Geovents with the exhaust Geovents). The Geovents will connect to an adapter and then to a 2" diameter PVC nipple and reducer before connection to the header. The vent header will extend beyond the building footprint and turn up into a fan enclosure at grade. A PVC riser will extend to above the roofline.

As vapors rise through the sub-surface, they will be blocked from entering the garage building by the continuous impervious barrier and collected by the sub-slab collectors, and carried away and vented to the atmosphere by the fan and riser.

A capping system will be placed over the contaminated soil that remains after excavation. The total area to be capped is estimated at 14,545 square feet. The final placement of vent piping will be determined at the time of construction of such system.

A sub-slab venting system has been specified rather than a sub-slab depressurization system due to the fact that the proposed system serves as an extra precaution against accumulation of vapors. Since the two lower parking levels of the proposed construction amount to open air structures, it won't be possible for vapors to accumulate. Therefore, the inclusion of any sub-slab system is somewhat superfluous. The rate of fresh air intake can be restricted, if necessary, using a gate valve installed at the fresh air intake vent - but the system would typically operate without that restriction. Any attempt to generate low pressures beneath the building is not advisable. This would not produce any significant benefit with respect to mitigating potential vapor migration to the interior of the building; it would have a tendency to increase the vapor level beneath the building, and if the blower were shut down for any reason, the rate of vapor migration to the interior of the building would spike upwards; and last but not least, inducing a partial vacuum beneath the building has the same effect as increasing the effective weight of the building - it can result in soil settlement and associated distress. Without restricting the fresh air inlet, the proposed system should produce a negative pressure of a few inches of water beneath the building.

The Westchester County Department of Health will be contacted regarding the sub-slab venting system. Air discharge permits will be applied for and received regarding the air discharge stacks, if applicable.

~~The soil vapors from this project may be colorless and odorless gas which presents an explosion hazard at concentrations in air by volume from 5% (the lower explosive limit, LEL) to 15% (upper explosive limit, UEL). Due to the presence of poly aromatic hydrocarbons at this site, soil vapor concentrations and migratory pathways cannot be predicted with any accuracy. Accordingly, it has been agreed that an active venting system will be installed beneath the basement slabs of the parking garage and remove the soil vapors as it accumulates. An impervious barrier, sealed around the entire perimeter and at all penetrations, will be provided.~~

~~The proposed system will prevent soil vapors from migrating and accumulating inside future buildings by providing a positively-vented pathway to the outside atmosphere.~~

~~The sub-slab soil vapors mitigation system will consist of a ventilation system, a vapor barrier, graded fill placed beneath the vapor barrier, and blowers to prevent soil vapors from accumulating in the subsurface and ultimately from entering the buildings. These specifications apply to the ventilation system components including the Geovent vapor collector, the geotextile, headers, Liquid Boot<sup>®</sup> sprayed on impervious barrier, and blowers.~~

Specifications and plans for the sub-slab system are included as Appendix G.

### **3.6 Backfill and Cover System**

The proposed construction will encapsulate the entire site. Any gardens rendered on the proposed plan are potted plants above the impervious concrete slab. If any part of the site is to remain uncapped, two feet of clean soil will be used as a cover system in those areas. Two feet of clean soil will be used in areas of excavation after enough source material is removed to provide clearance for the structure. The source of the backfill will be documented as being acceptable prior to any soil being brought to the site. A demarcation layer consisting of a geotextile will be installed above the contaminated soils that will be left in place, to alert anyone performing excavations at the site in the future, that residual contaminated soil is present. The figure in Appendix E depicts the building footprint.

### **3.7 Demolition of Existing Structures**

Demolition of existing structures will be required before construction can commence. Any applicable permits will be applied for before demolition begins.

### **3.8 Soil Vapor Sampling**

Off-site soil vapor samples will be collected to confirm that site-related contamination has not impacted migrating soil vapor. Samples will be collected from beyond the eastern edge of the

site, along Kensington Road (see Appendix I for soil vapor sampling locations), in conjunction with the NYSDOH document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York". Samples will be collected before excavation of the site begins. Samples of soil vapor will be obtained by installation of temporary probes constructed of polyethylene, stainless steel or Teflon tubing. A hammer drill will be used to insert these probes in the ground to the depth of four feet below land surface. This hole will be cleared of any debris that may fall during drilling prior to tube insertion. The annular space surrounding the tubing will be sealed into the hole using plumber's putty or beeswax, to ensure ambient air is not affecting the sample. One to three implant volumes (the volume of the sample probe and tube) will be purged prior to collecting the sample. Flow rates for purging and collecting will not exceed 0.2 liters per minute to minimize outdoor air filtration during sampling. Helium will be used as a tracer gas at each sampling location to serve as a quality control measure. A confined atmosphere will be created above the sampling point, into which Helium will be applied. Once the Helium atmosphere is established (between 50% and 100% Helium), a direct reading instrument will be connected to the sample tubing to determine if Helium is passing through the tubing. If Helium concentrations exceed 10% in the tubing, the seal will be reconstructed and re-tested. Once a proper seal is confirmed, samples will be collected in the appropriate container which is certified clean by the laboratory. Sampling times will be eight hours per sample. The sample will then be submitted to a NYSDOH ELAP-Certified Laboratory for analysis by TO-15. QA/QC procedures for the sampling event will include ambient air sampling concurrently with the soil vapor sampling, as well as a duplicate sample from one of the three soil vapor sample points.

The field sampling team will maintain a sample log sheet summarizing the following:

Sample identification, date and time of sample collection, sampling depth, identity of samples, sampling methods and devices, purge volumes, purge rate, time, volume of soil vapor extracted, apparent moisture content of the sampling zone and chain of custody protocols.

#### **4.0 SOIL VAPOR INTRUSION**

The two lower levels of this building will be developed as a parking garage. This garage will have three open entrances without doors for use by the three hundred or so vehicles able to park at any given time. A sub-slab venting system has already been proposed for the areas beneath the structure where soil will not be completely removed. The design and layout of this system was submitted to the DEC in July, 2006. This system vents only the strata beneath the parking garage with no connection to the residential space.

Soil Vapor Intrusion is defined as the process by which volatile chemicals migrate from a sub-surface source into the indoor air of buildings, where they may accumulate and cause health impacts. Because the bulk of the contaminated source material will be removed from the site; and because the open parking garage will provide an open physical barrier between the remaining contaminated soil and any living space; and because that parking garage will itself be vented; and because the sub-slab contaminated soil remaining in place will be actively vented by induced draft and forced draft; no viable pathway will remain by which Soil Vapor Intrusion could pose any threat to human health or the environment.



## 5.0 AIR MONITORING

Air monitoring will be conducted using dust monitors and a Photo Ionization Detector (PID) to ensure that volatile organic vapors are not present and that particulate matter is not migrating from the site. Air monitoring will take place in accordance with the New York State Department of Health (NYSDOH) guidance values. Details on air monitoring are available in the Health and Safety Plan developed for this project. Monitoring for background levels will take place at the start of each workday. The monitors will then be moved to the downwind side of any ongoing work to monitor for excessive levels of dust or volatile gases. The Community Air Monitoring Program (CAMP, Appendix N) requires continuous monitoring of dust levels at upwind and downwind locations. Upwind VOC monitoring ~~may~~ will be performed ~~periodically~~ continuously. Air monitoring results will be recorded on the appropriate log sheet. A copy of the Air Monitoring Log form is included in the HASP.

Dust suppression activities will be implemented if conditions indicate that dust may become problematic. Air monitoring will be periodically performed to protect field personnel and the public against exposure to airborne hazardous substances and to determine appropriate levels of PPE for work tasks. Initial monitoring of the work area will be performed prior to site work. This testing will determine background levels, and determine if any immediate hazards exist. Dust monitoring will be performed using a MIE Dust Monitor for PM-10. A PID will be used to monitor for volatile organic vapors. Detection of levels in excess of 5 parts per million (ppm) above background levels will result in a stoppage of work until the levels have dropped back to within 5 ppm of background.

## **6.0 ODOR, DUST AND NUISANCE CONTROL PLAN**

This section describes all methods to be followed for odor, dust and nuisance control. The Final Engineering Report will include the following certification by the Remedial Engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

### **6.1 Odor Control Plan**

The odor control plan is capable of controlling emissions of nuisance odors. Specific odor control methods to be used in the event of any odor complaint will include application of odor neutralizing agents applied through misters, at strategic locations, as long as any odor is being produced. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Applicant's Remediation Engineer, who is responsible for certifying the Final Engineering Report.

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

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

## **6.2 Dust Control Plan**

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

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

## **6.3 Other Nuisances**

A plan will be developed and utilized by the contractor for all remedial work and will conform, at a minimum, to NYCDEP noise control standards.

## **7.0 ENDPOINT SAMPLES**

Endpoint samples will be collected when the final depth of excavation is reached, across the entire site, to characterize the nature of the soils remaining after excavation. This will document areas of gross contamination as well as other areas that may be contaminated above unrestricted SCO's, but may not show obvious signs of contamination. The soil will be collected directly from the base of the excavated area, in accordance with DER-10 which requires one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area. The samples will be analyzed for VOC's, SVOC's, PCB's and priority pollutant metals according to applicable methodologies. The contaminants remaining in the soils will then be actively vented out, as described in Section 3.5.

## **8.0 LAB ANALYSIS**

Laboratory analysis of contaminated soil will be performed to satisfy disposal facility requirements. The degree of contamination will be characterized using the United States Environmental Protection Agency (US EPA) methods for volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), total petroleum hydrocarbons (TPH), priority pollutant metals, polychlorinated biphenyls (PCB's), toxicity characteristics leaching procedure (TCLP) for metals, and RCRA characteristics (ignitability, corrosivity and reactivity).

### **8.1 Quality Assurance and Quality Control (QA/QC)**

The sampling QA/QC protocol is in accordance with the United States Environmental Protection Agency's (USEPA) accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, Sampling and Analysis Procedures for Hazardous Material Waste Streams, Environmental Protection Agency, Cincinnati, Ohio, EPA-600/280-018) and ASTM Material Sampling Procedures.

### **8.2 Sample Personnel**

All samples will be taken by or under the auspices of a USEPA Office of Emergency and Remedial Response Certified Sampler for Hazardous Materials. Sampling technicians will possess a minimum of a BA Degree in the Earth and Space Sciences or a BS Degree in Engineering. Sampling technicians will have a minimum of one-year experience in environmental fieldwork.

### **8.3 Sampling Equipment**

Prior to arrival on site and after each sample acquisition, any non-disposable sampling equipment will be decontaminated as follows:

- Washed by brushing with detergent solution (Alconox/Liquinox) and hot potable water

- Rinsed with distilled water
- Rinse with dilute (1%) nitric acid or dilute (1%) hydrochloric acid (for stainless steel)
- Distilled water rinse
- Methanol rinse
- Final rinse with distilled water
- Air dry and wrap in clean unused aluminum foil (shiny side out)

Mixing of soil samples for composites will be conducted using dedicated plastic spatulas.

Dedicated sampling equipment will be used for this sampling event and thrown out after use.

#### **8.4 Sample Acquisition**

All sample vessels will be "level A" certified decontaminated containers supplied by a New York State Department of Health Certified Laboratory. Containers will be of appropriate volume and type according to the analysis to be performed. Those samples to be analyzed for volatile organic compounds will be placed in containers with Teflon lined caps.

Those samples requiring preservation to maintain their integrity will be placed in vessels containing the appropriate chemical preservative as prepared by the laboratory. After acquisition, samples will be cooled to 4°C. The number and type of containers and required preservatives are listed in the table below. Samples will be analyzed by a New York State Department of Health ELAP Certified Laboratory. The samples will be Category B deliverables. Required trip blanks and field blanks will be collected and analyzed for quality control purposes.

### SAMPLING CONTAINERS, PRESERVATION AND HOLDING TIMES

PARAMETER	MATRIX	CONTAINER	PRESERVATION	HOLDING TIMES
TCL Volatiles	Aqueous	40 ml. VOA vial w/TFE lined septum cap	HCl to pH<2.0 4°C (2)	10 days
TCL Volatiles	Soils	4 oz. glass jar	4°C (2)	7 Days
TCL Semi-Volatiles	Aqueous	Amber glass w/TFE lined cap (1 liter)	4°C	5 days until extraction 40 days from extraction until analysis (1)
TCL Semi-Volatiles	Soils	Glass wide- mouth w/TFE lined septum cap/8 oz.	4°C	5 days until extraction 40 days from extraction until analysis (1)
TCL Pest/PCBs	Aqueous	Amber glass w/TFE lined cap (1 liter)	None	5 days until extraction 40 days from extraction until analysis (1)
TCL Pest/PCBs	Soils	Glass wide- mouth w/TFE lined septum cap/8 oz.	None	5 days until extraction 40 days from extraction until analysis (1)
TAL Metals (total)	Aqueous	Polyethylene 1 qt.	HNO <sub>3</sub> to pH<2.0 (2)	Hg 28 days All other metals 6 months
TAL Metals	Soil	Polyethylene 1 qt. (250 ml for soil borings)	4°C	Hg 28 days All other metals 6 months

(1) Technical Times (time from sample collection until sample analysis) will be used to audit results.

(2) Acids will be procured from a chemical supplier, trace grade.

TCL Target Compound List

TAL Target Analyte List

## **8.5 Sample Documentation**

To establish proper control, the following sample identification and chain of custody procedures will be followed.

### **8.5.1 Sample Identification**

Sample identification will be executed by use of a sample tag, logbook, and manifest. Said documentation will provide the following information:

- Project Name
- Sample Field Number
- Sample Preservation
- Requested Analysis
- Date Sample Was Secured From Source Soil
- Time Sample Was Secured From Source Soil
- Person Who Secured Sample From Source Soil

### **8.5.2 Chain of Custody Procedures**

Sample possession will be traceable from the time the samples are to be collected until they are received by the testing laboratory. A sample will be considered under custody if:

- It is in a person's possession,
- It was in a person's view, after being in possession,
- It was in locked storage, under a person's control; or
- It is in a designated area.

When transferring custody, the individuals relinquishing and receiving the samples will sign, date, and note the time on the Chain-of-Custody Form.



### **8.5.3 Laboratory- Custody Procedures**

A designated sample custodian will accept custody of the shipped samples and will verify that the information on the sample tags matches that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc. will be entered in the "Remarks" section. The custodian will then enter the sample tag data into a bound logbook, which will be arranged by project code and station number.

The laboratory custodian will use the sample tag number, or assign a unique laboratory number to each sample tag, and ensure that all samples will be transferred to the proper analyst or stored in the appropriate source area.

The custodian will distribute samples to the appropriate analysts. Laboratory personnel will be responsible for the care and custody of samples, from the time they are received, until the sample is exhausted or returned to the custodian.

All identifying data sheets and laboratory records will be retained as part of the permanent documentation. Samples that are received by the laboratory will be retained until after analysis and quality assurance checks are completed.

All laboratory analysis will be performed by a NYSDOH Environmental Laboratory Approval Program (ELAP) certified lab. The laboratory will provide all sample containers. The laboratory will provide trip and lab blanks if requested.

## **9.0 INSTITUTIONAL CONTROLS AND ENGINEERING CONTROLS**

“Institutional Controls” shall mean any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a Brownfield site.

“Engineering Controls” shall mean any physical barrier or method employed to actively or passively contain, stabilize, or monitor hazardous waste or petroleum, restrict the movement of hazardous waste or petroleum to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to hazardous waste or petroleum. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

Engineering Controls used for this project will include a sub-slab venting system, a physical barrier in the form of a parking garage, a geomembrane cap of the site and a clean fill cap.

Institutional Controls used for this project will include an environmental easement on the property to ensure that the Engineering Controls are not compromised. Since this site is to be developed as restricted residential, there will be a restriction on the groundwater use on the site.

## 10.0 SITE SPECIFIC PERSONNEL

Principal In Charge	Richard D. Galli, P.E. Galli Engineering, P.C. 35 Pinelawn Road Suite 209E Melville, NY 11747	(631) 271-9292
Project Manager:	Ken Brooks, P.E. Galli Engineering, P.C. 35 Pinelawn Road Suite 209E Melville, NY 11747	(631) 271-9292
Client Contact:	Kevin McManus McManus and Associates 35 Main Street Newtown, CT 06470	(914) 769-6500 x216
Field Geologists:	Frank Gehrling Galli Engineering, P.C. 35 Pinelawn Road Suite 209E Melville, NY 11747	(631) 271-9292
	Scott Davidow Galli Engineering, P.C. 35 Pinelawn Road Suite 209E Melville, NY 11747	(631) 271-9292
Subcontractors:	TBD	

## **11.0 POST REMEDIATION ACTIVITIES**

Upon completion of remedial activities, a Final Engineering Report will be prepared and submitted to the New York State Department of Environmental Conservation, the New York State Department of Health, the Westchester County Department of Health, and other document repositories in accordance with the Citizen Participation Plan. The goal of the report will be to demonstrate that the materials excavated from the site were disposed of properly and that the site is satisfactorily restored. The report would likely include the following: A brief narrative description of project activities to date; site description and site map; summary of available previous soil and groundwater results; nature and extent of contamination; summary tables of analytical results; evaluation of results; conclusions and recommendations; and documentation (may include tables, photographs, PID readings, laboratory results, and C&D tracking documents, as appropriate); site boundaries and a description of any institutional controls that will be used, including mechanisms to implement, maintain, monitor, and enforce such controls. The Final Engineering Report will contain a certification by the professional engineer that the approved Remedial Work Plan has been implemented and that all engineering controls are in place as specified. Any changes (and their authorizations) will also be discussed. A log of daily activities will be kept and submitted with the Final Engineering Report. All locations pertinent to the remediation (extent of excavation, location of endpoint samples, etc.) will be surveyed by a professional surveyor and their vertical and horizontal position included in the Final Engineering Report, which will include as-built drawings of the remedy (including excavations performed) stamped by a NYS Professional Engineer. The actual content of the report and its acceptability to DEC will depend on conditions encountered in the field.

Periodic inspection of the venting system will be done to ensure its effectiveness as well as performance.

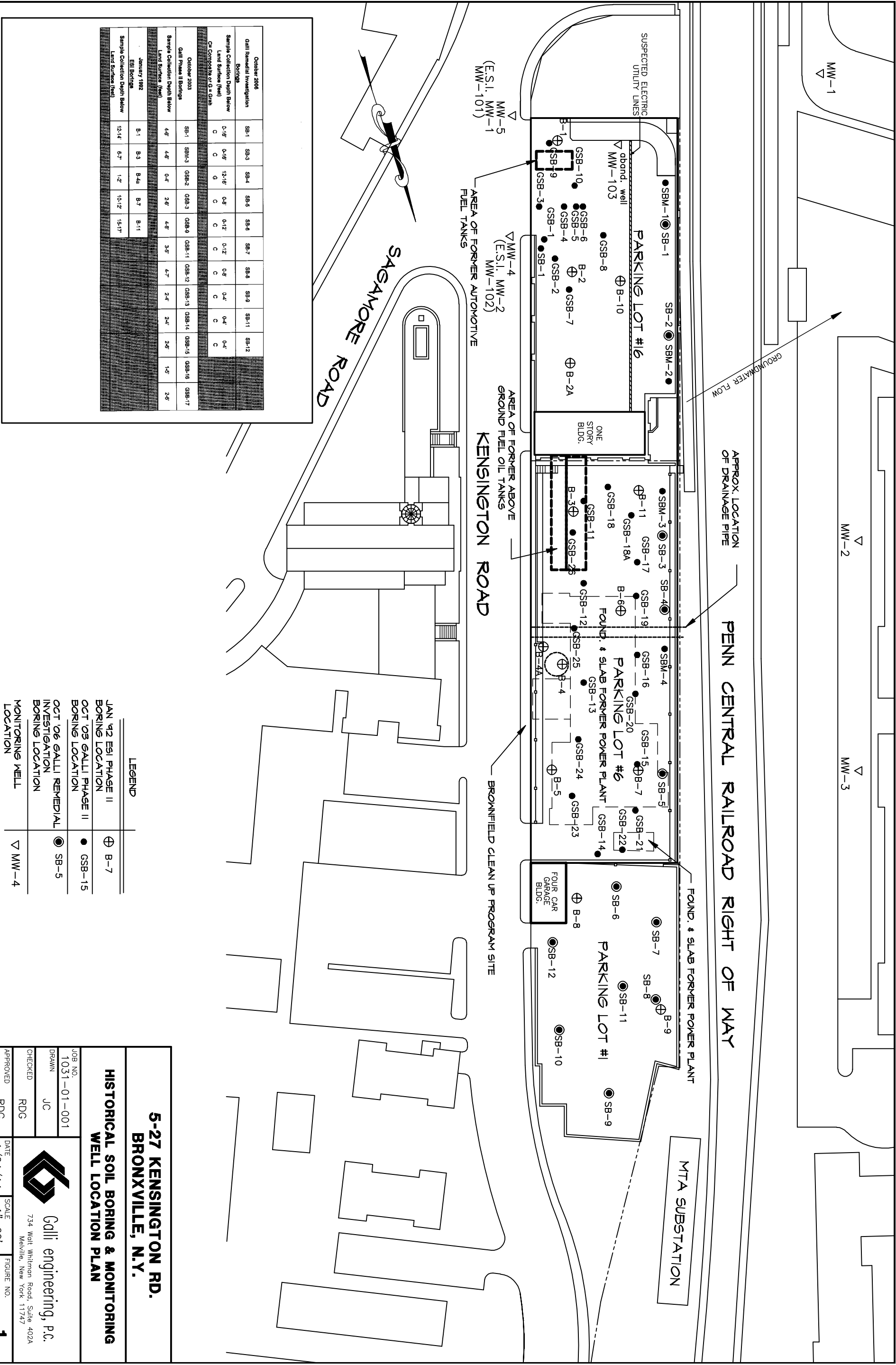
A Site Management Plan (SMP) will also be included as an Institutional Control for this site. The SMP will be prepared to manage residual contamination at the site in perpetuity. The SMP will describe the means for implementation of Institutional Controls and Engineering Controls, which will be required by the Environmental Easement for the site. The SMP will provide a detailed description of all procedures required to manage residual contamination at the Site

following the completion of the Remedial Action in accordance with the Brownfield Cleanup Agreement. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain all treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

The SMP will require the property owner to provide a periodic institutional control / engineering control (IC/EC) certification, prepared and submitted by a Professional Engineer licensed to practice in New York, who would certify that the institutional controls and engineering controls put in place are unchanged from the previous certification and that nothing has occurred that would impair the ability of the controls to protect the public health or the environment or constitute a violation or failure to comply with any operation and maintenance or Soil Management Plan.

## **APPENDIX A**

### **HISTORICAL SOIL BORING AND MONITORING WELL LOCATION PLAN**



**5-27 KENSINGTON RD.  
BRONXVILLE, N.Y.**

**HISTORICAL SOIL BORING & MONITORING  
WELL LOCATION PLAN**

JOB NO.  
1031-01-001

DRAWN  
JC

CHECKED  
RDG

APPROVED  
RDG



Galli engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747

DATE  
1/24/14

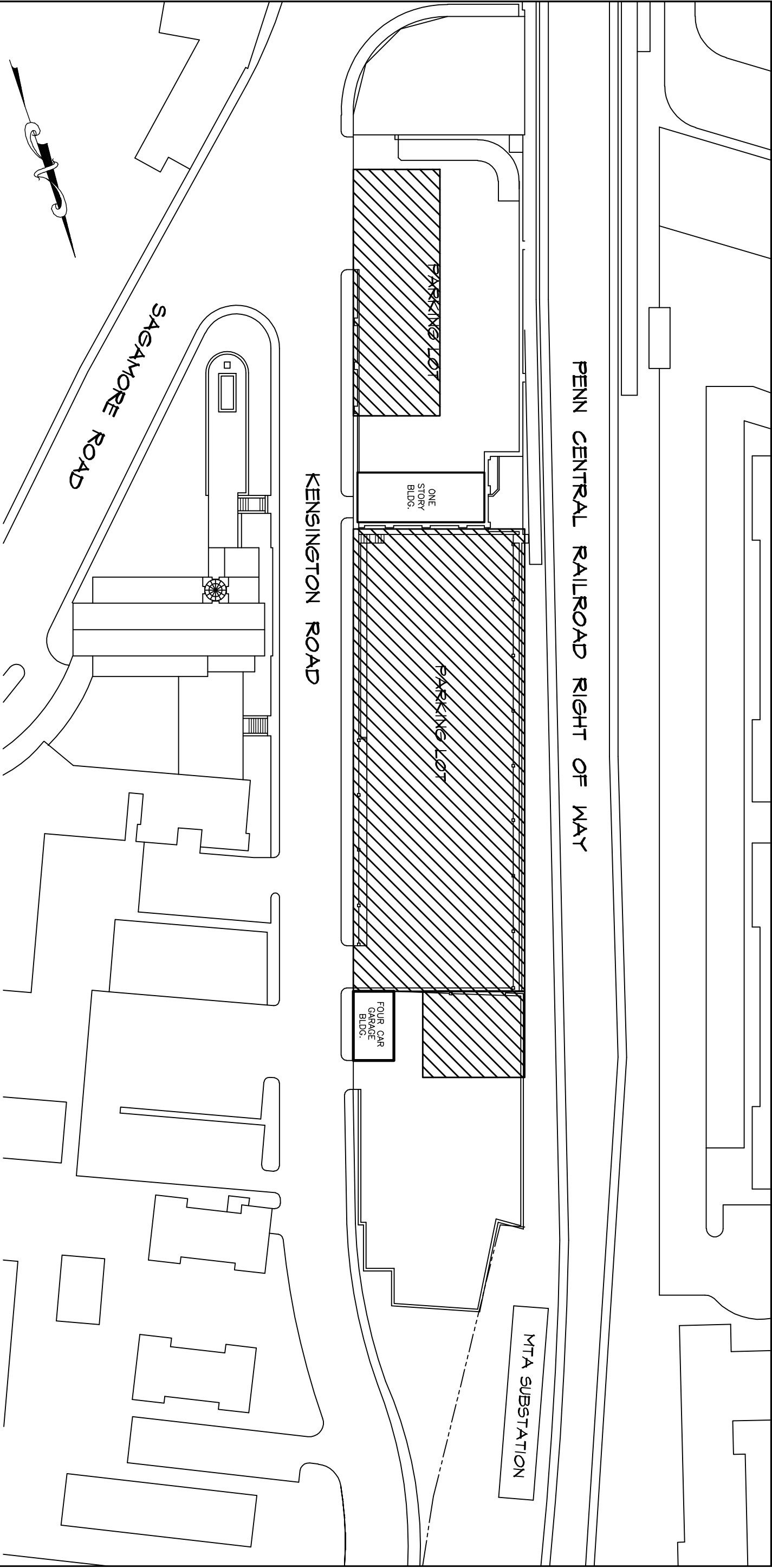
SCALE  
1"=60'

FIGURE NO.  
**1**

## **APPENDIX B**


### **SITE PLAN WITH CONTAMINATION OVERLAY**





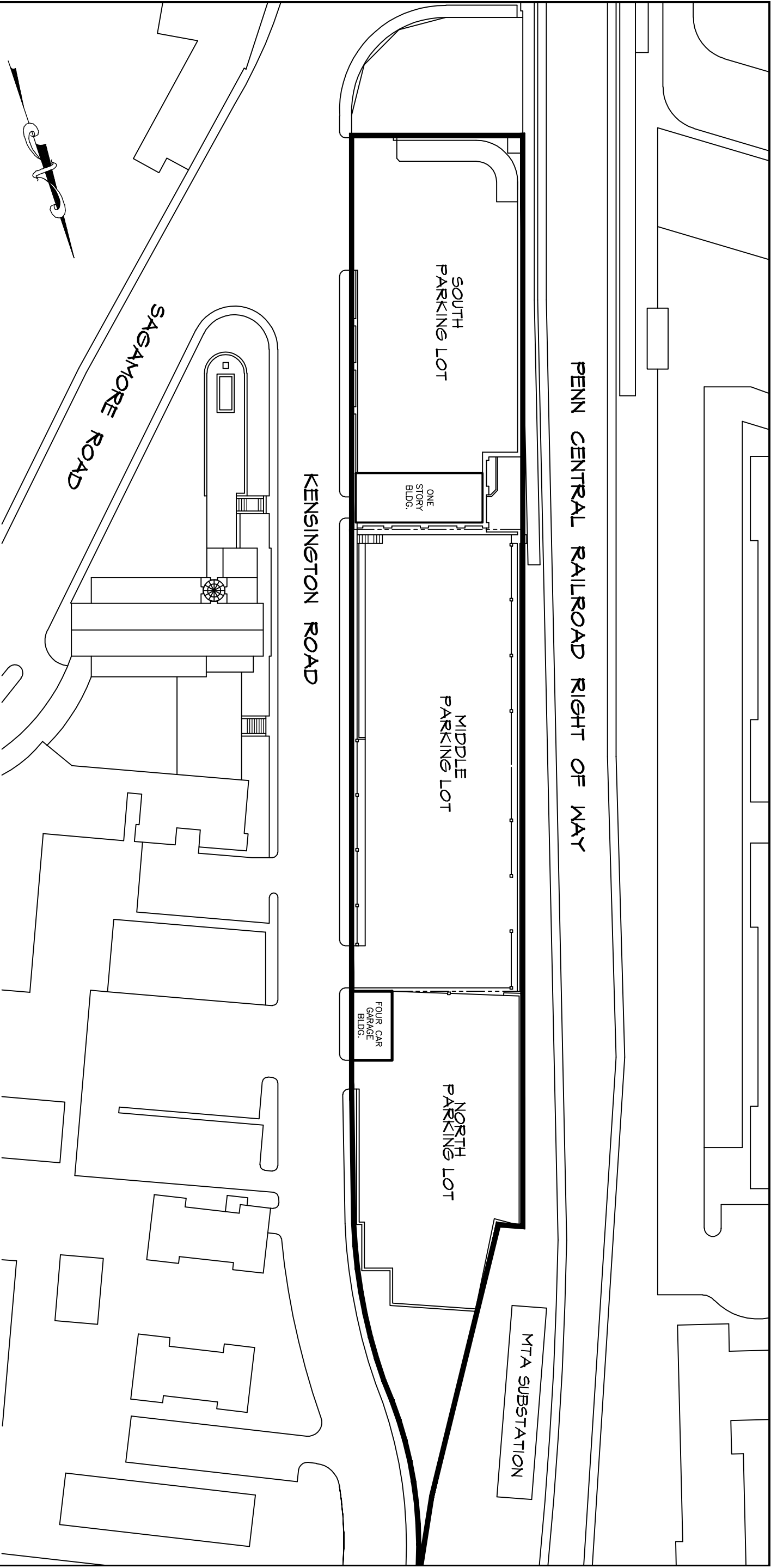
**5-27 KENSINGTON RD.  
BRONXVILLE, N.Y.**

**CONTAMINATION OVERLAY**

JOB NO. 1031-01-001	 <div>Galli engineering, P.C. 734 Walt Whitman Road, Suite 402A Melville, New York 11747</div>	
DRAWN AXC		
CHECKED RDG		
APPROVED RDG		
DATE 1/24/14	SCALE 1"=60'	FIGURE NO.

**APPENDIX C**

**SITE VICINITY MAP  
USGS TOPOGRAPHIC QUAD  
WETLANDS MAP**




LEGEND

LOT BOUNDARIES

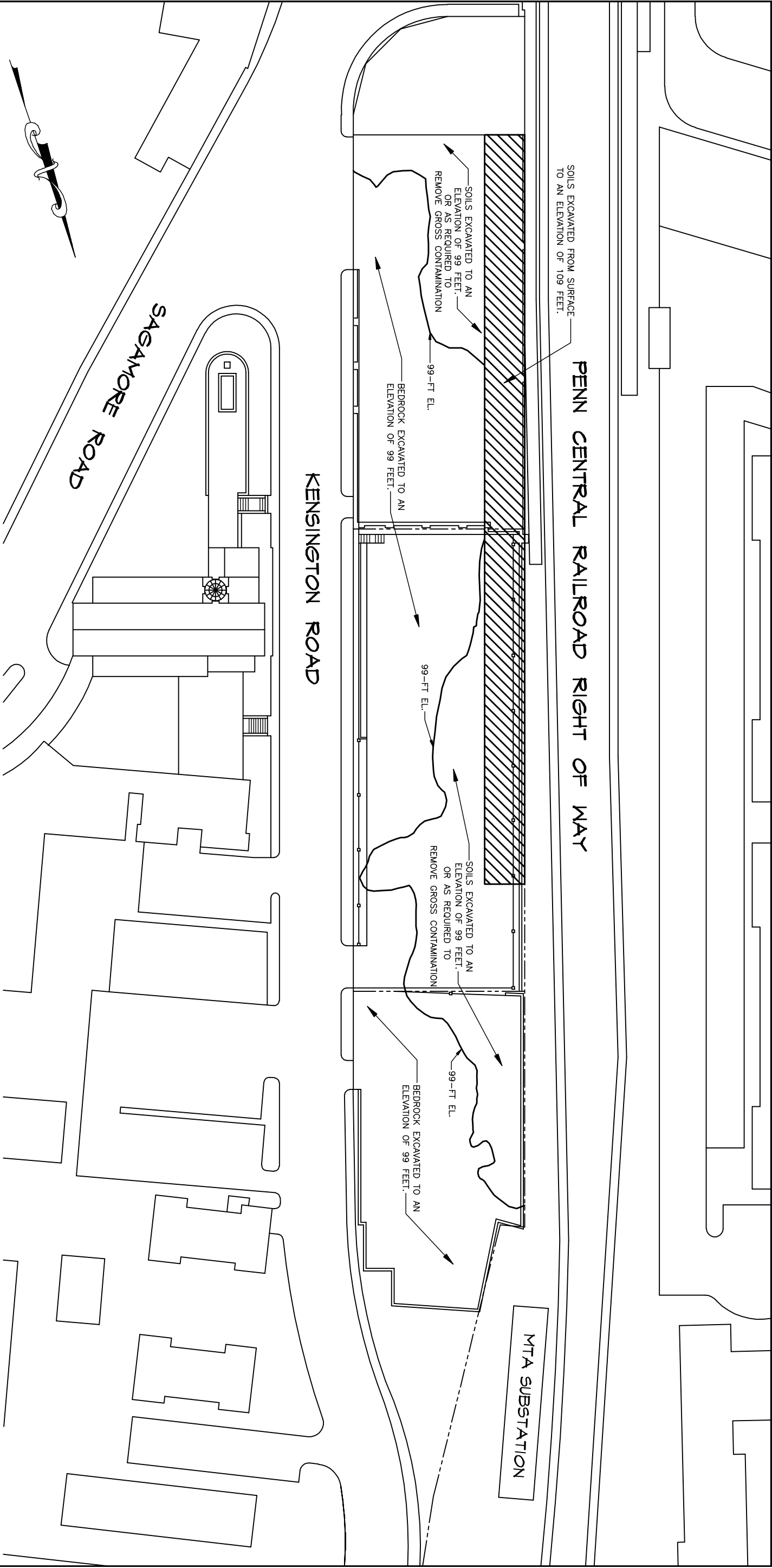
5-27 KENSINGTON RD.  
BRONXVILLE, N.Y.


SITE VICINITY MAP

JOB NO. 1031-01-001		 <div>Galli engineering, P.C. 734 Walt Whitman Road, Suite 402A Melville, New York 11747</div>
DRAWN	AXC	
CHECKED	RDG	
APPROVED	RDG	
DATE	SCALE	FIGURE NO.
1-24-14	1"=60'	2

## **APPENDIX D**

### **AREAS OF EXCAVATION PLAN**

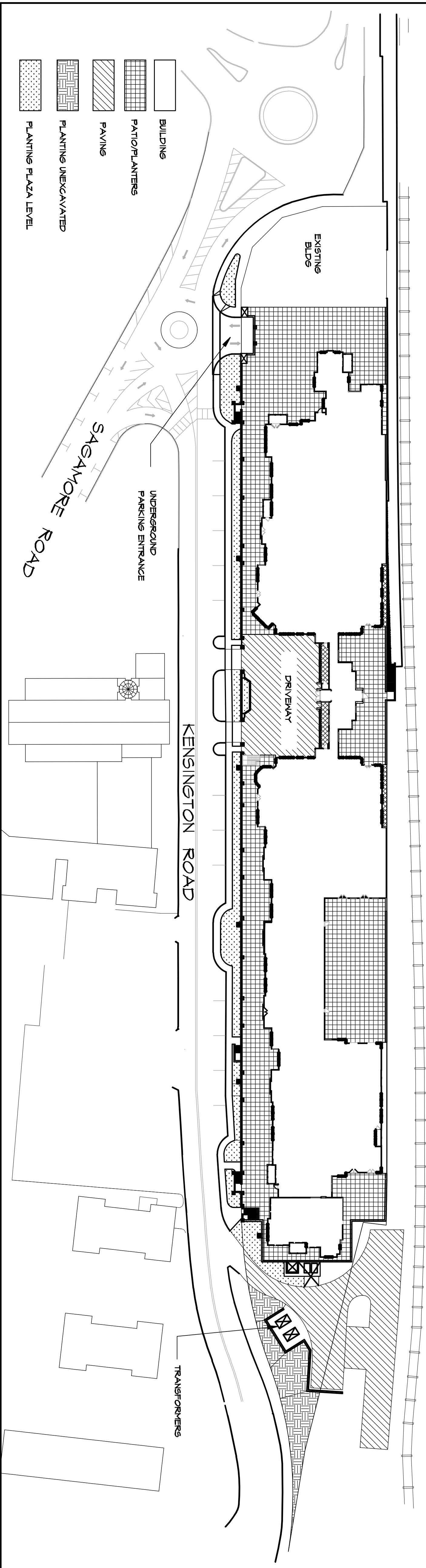


<b>5-27 KENSINGTON RD. BRONXVILLE, N.Y.</b>			
<b>AREAS OF EXCAVATION PLAN</b>			
JOB NO. 1031-01-001	 Galli engineering, P.C. 734 Walt Whitman Road, Suite 402A Melville, New York 11747		
DRAWN AXC			
CHECKED RDG			
APPROVED RDG	DATE 1/24/14	SCALE 1"=60'	FIGURE NO. -

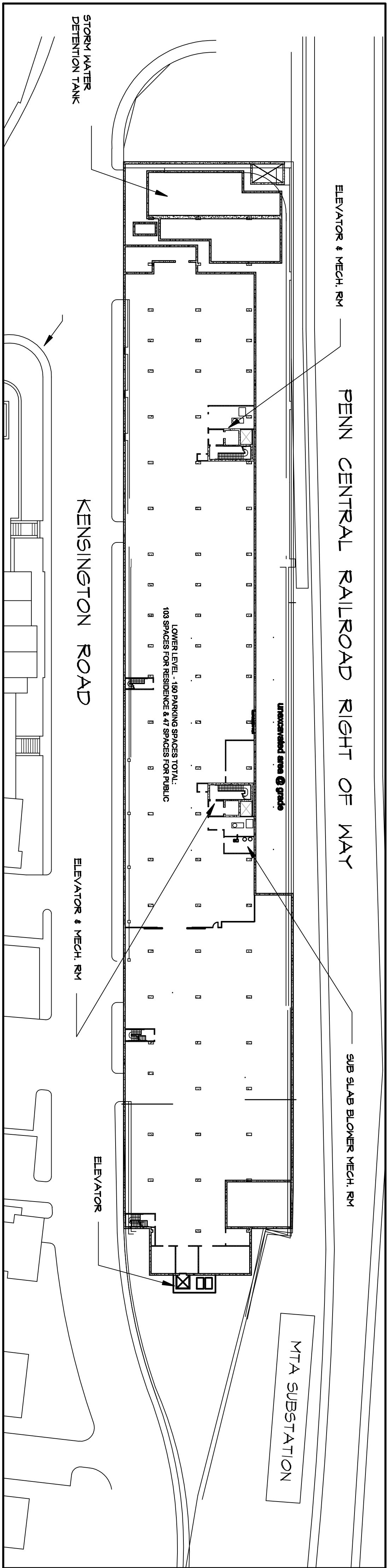
## **APPENDIX E**

### **BUILDING FOOTPRINT**

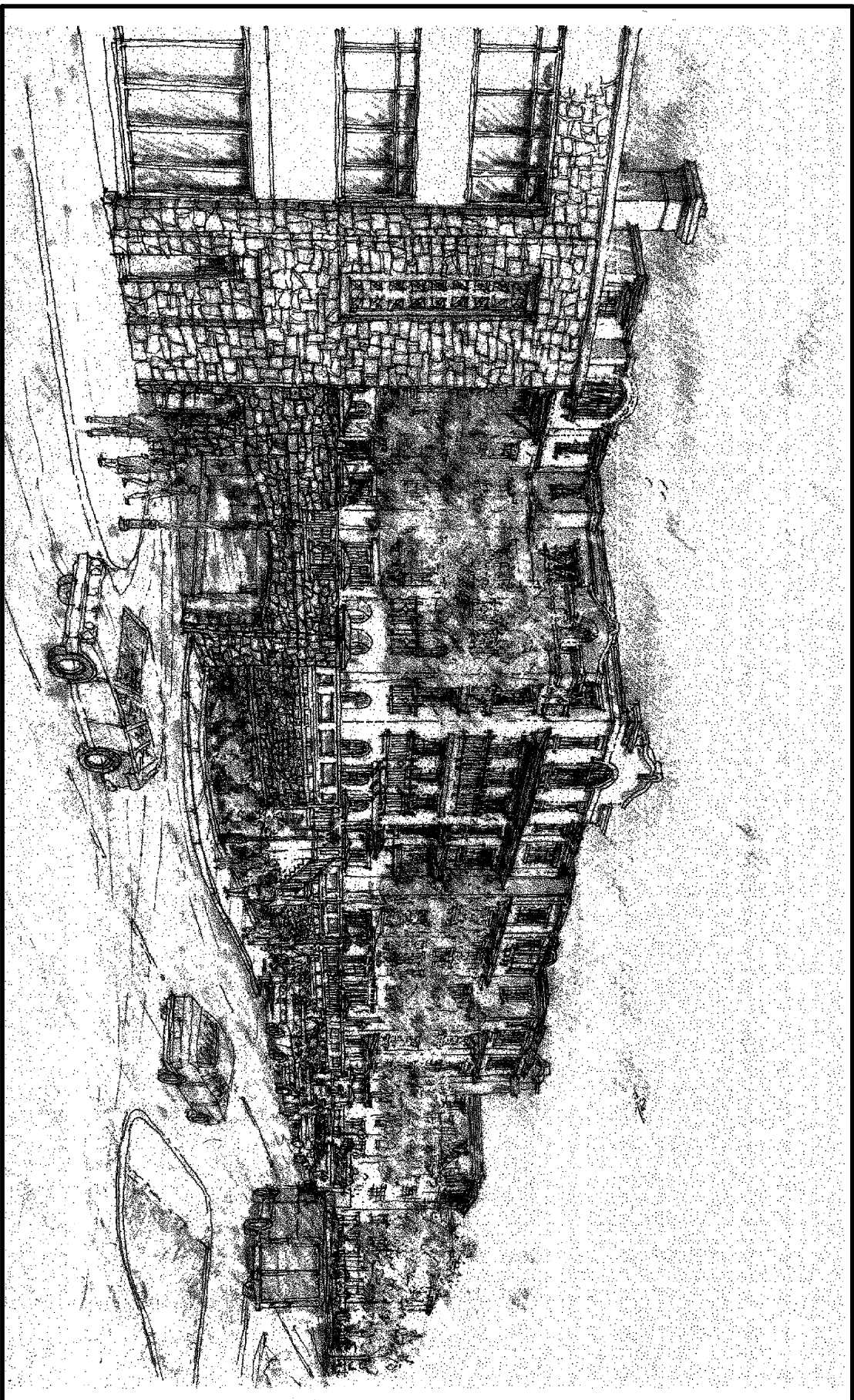
PENN CENTRAL RAILROAD RIGHT OF WAY



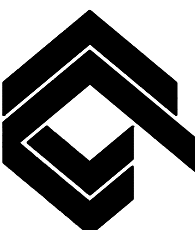
SITE LAYOUT(PLAZA LEVEL)  
1"=80'



GARAGE LOWER LEVEL  
1"=80'



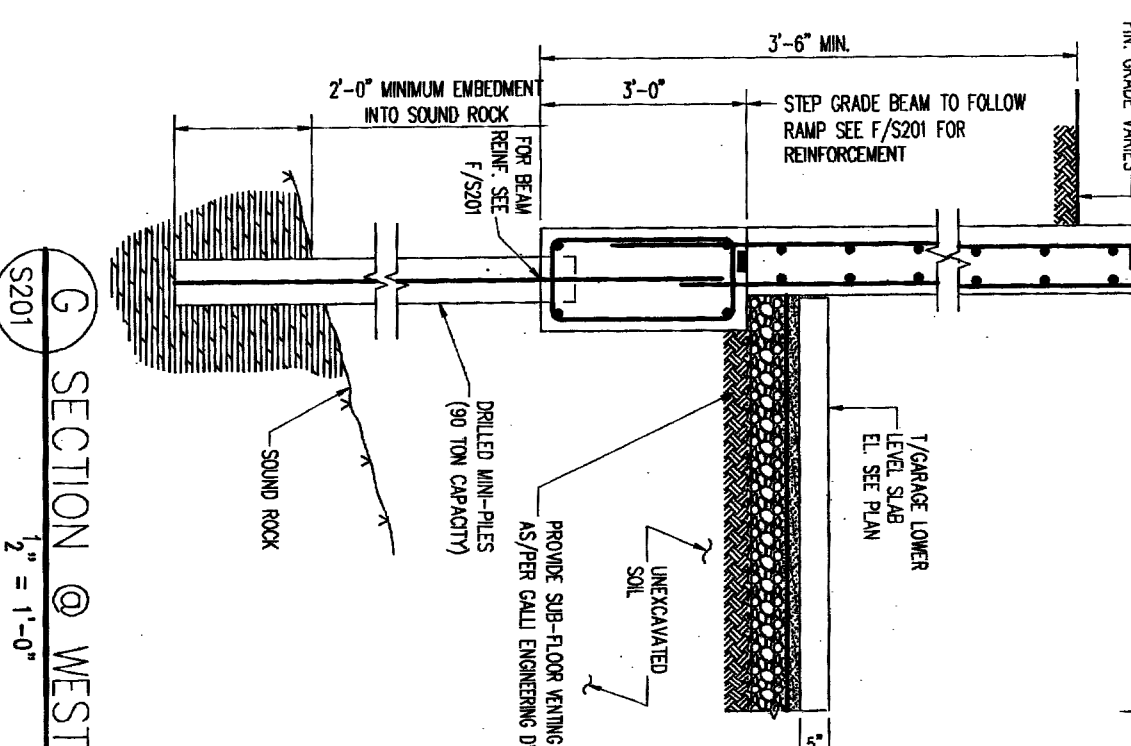
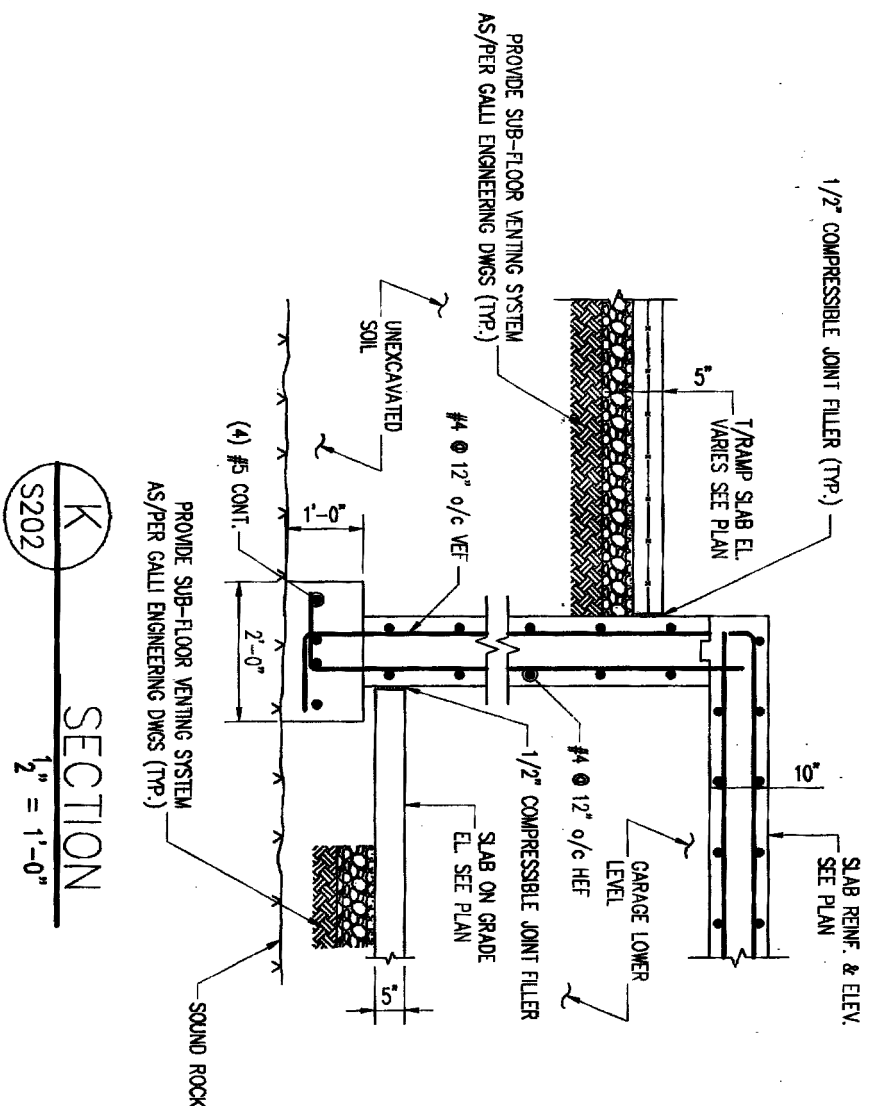
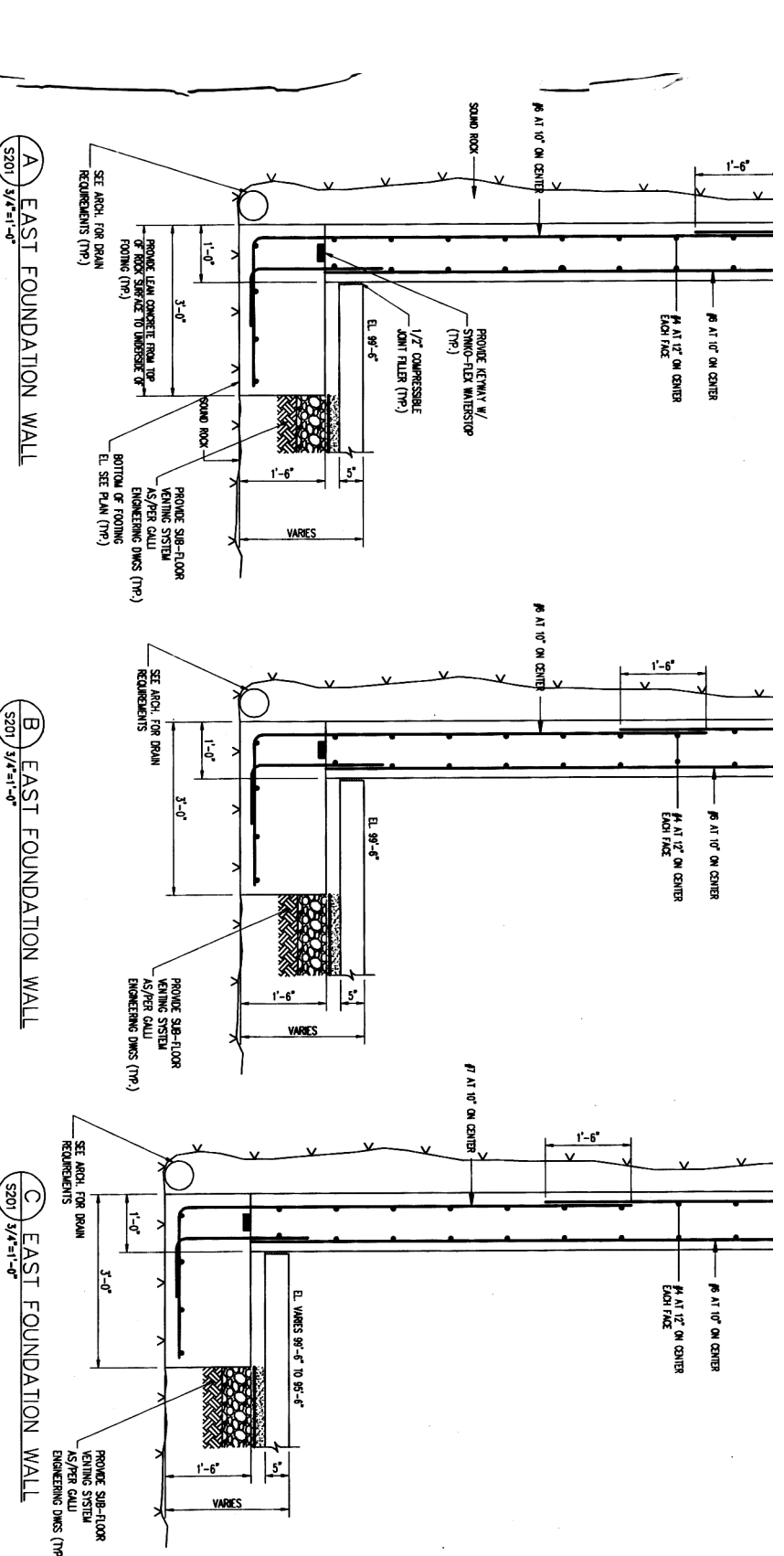
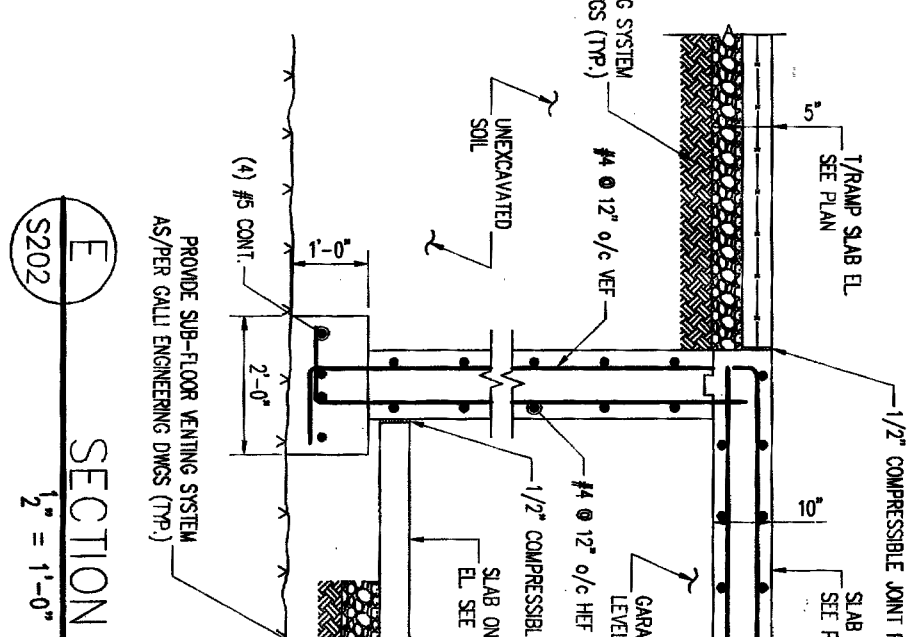
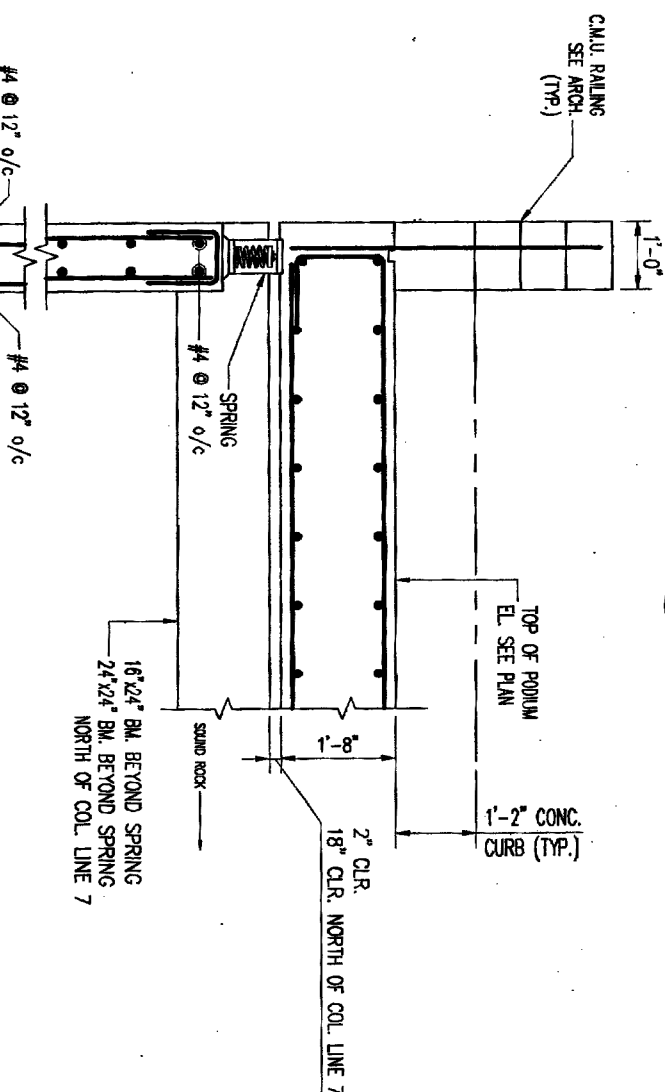
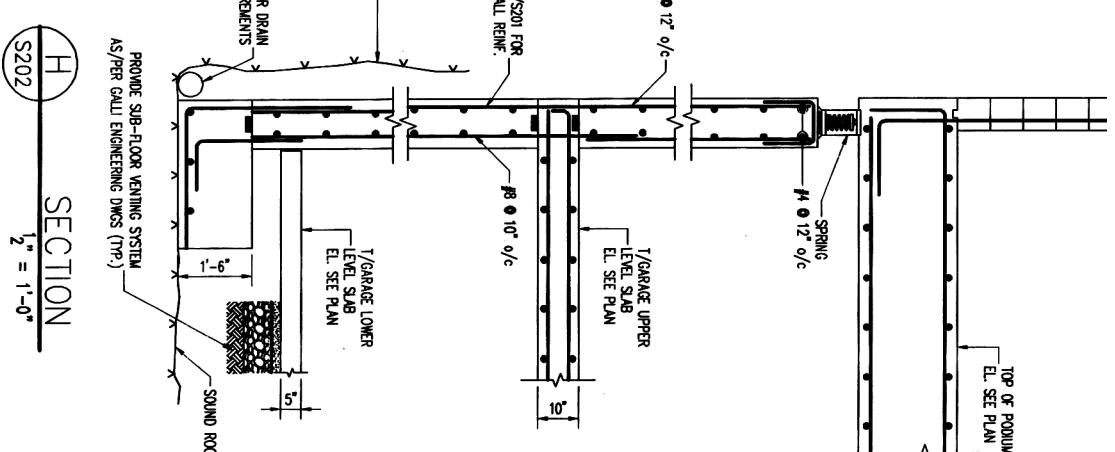
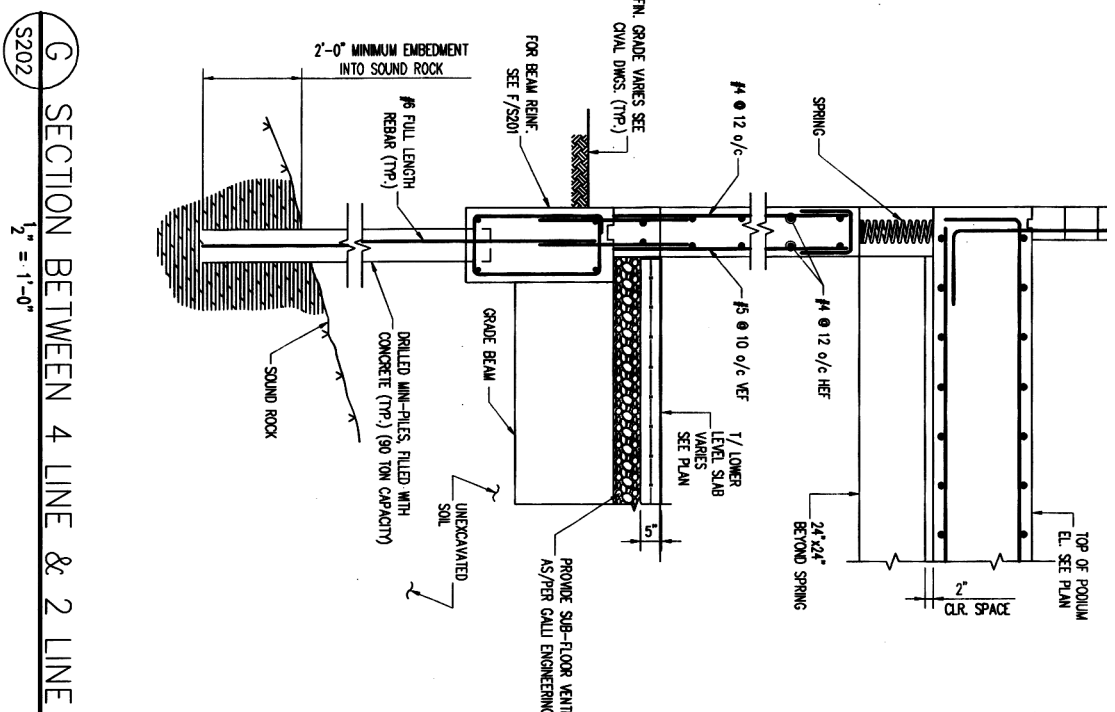
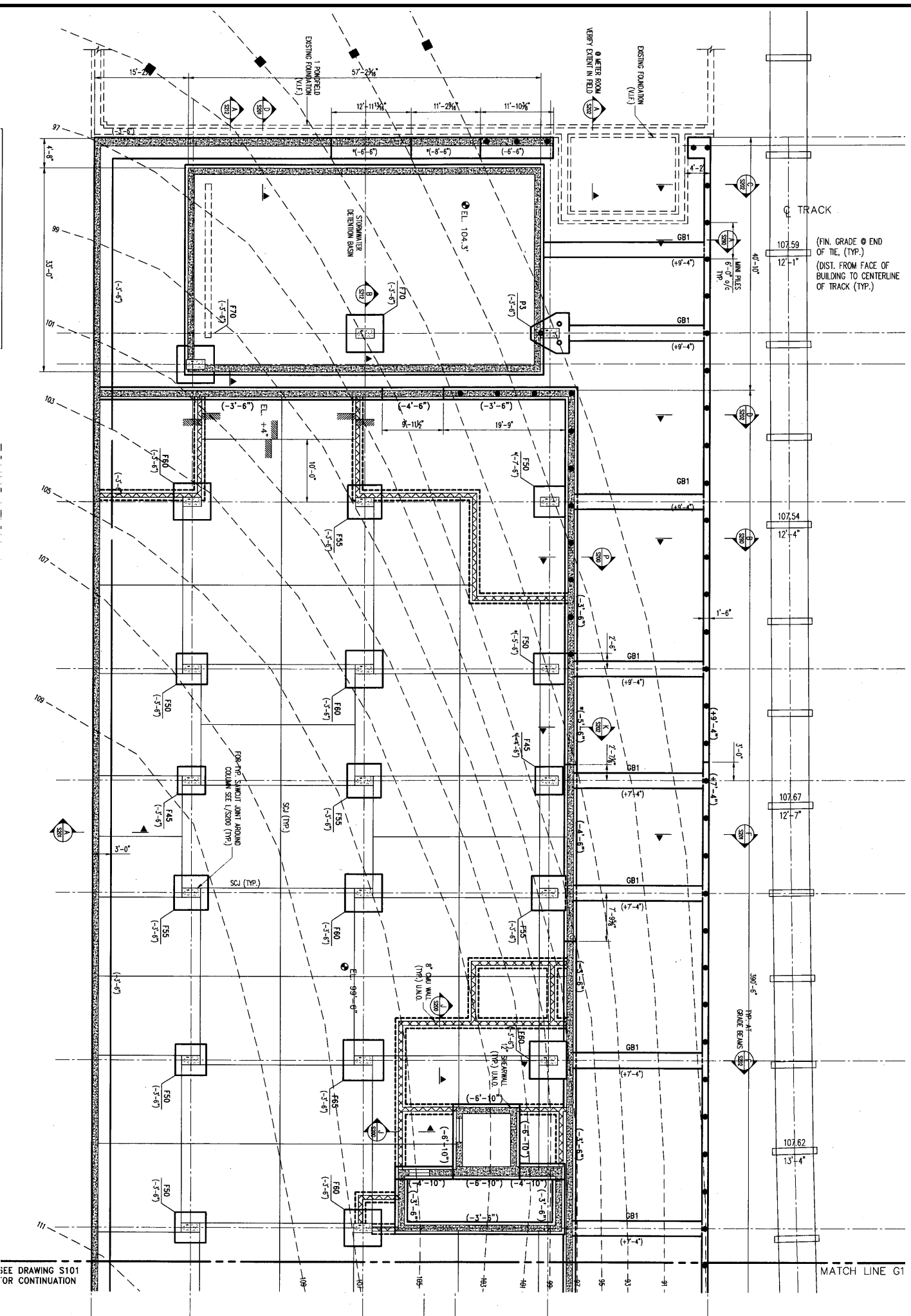
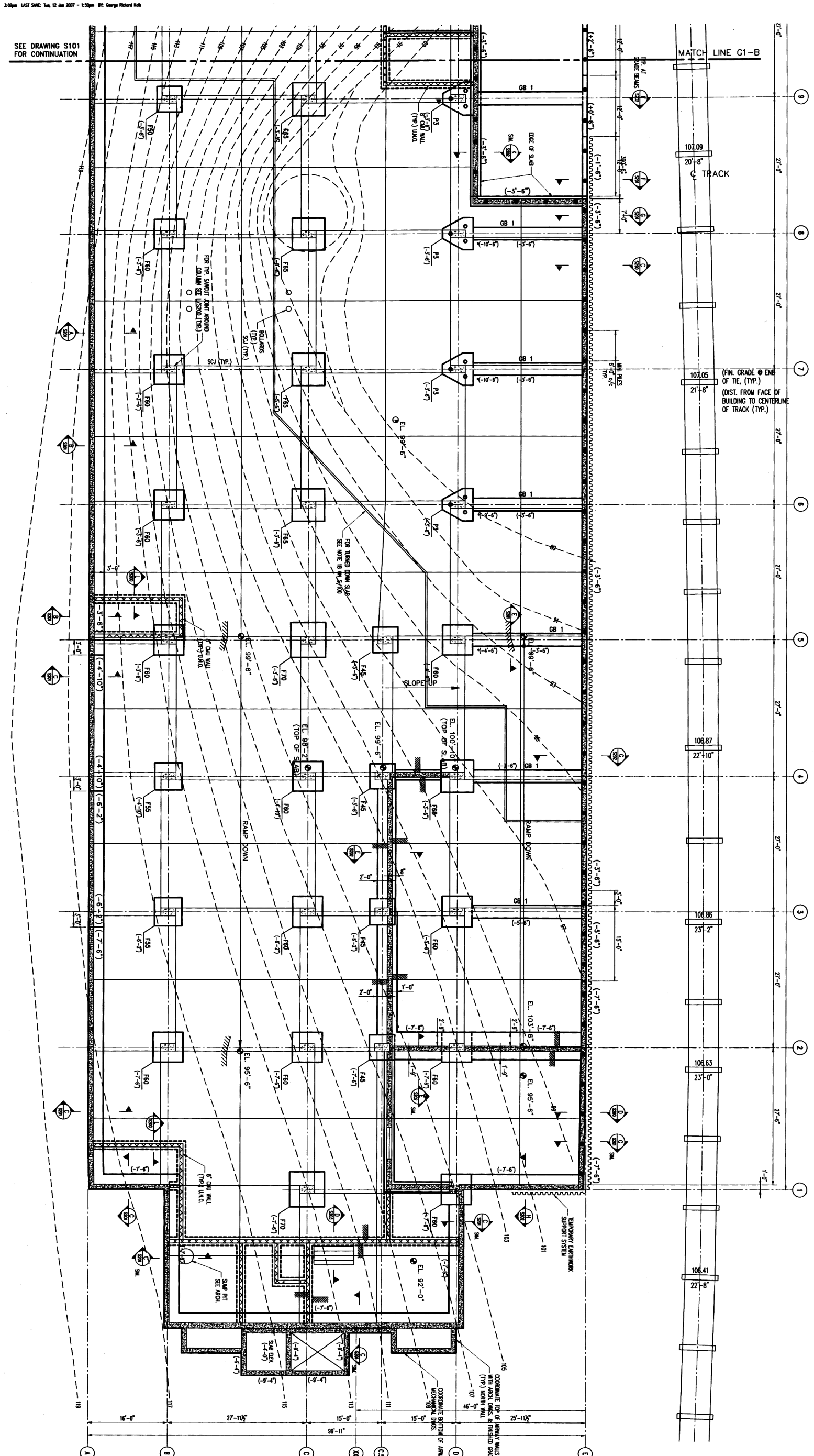
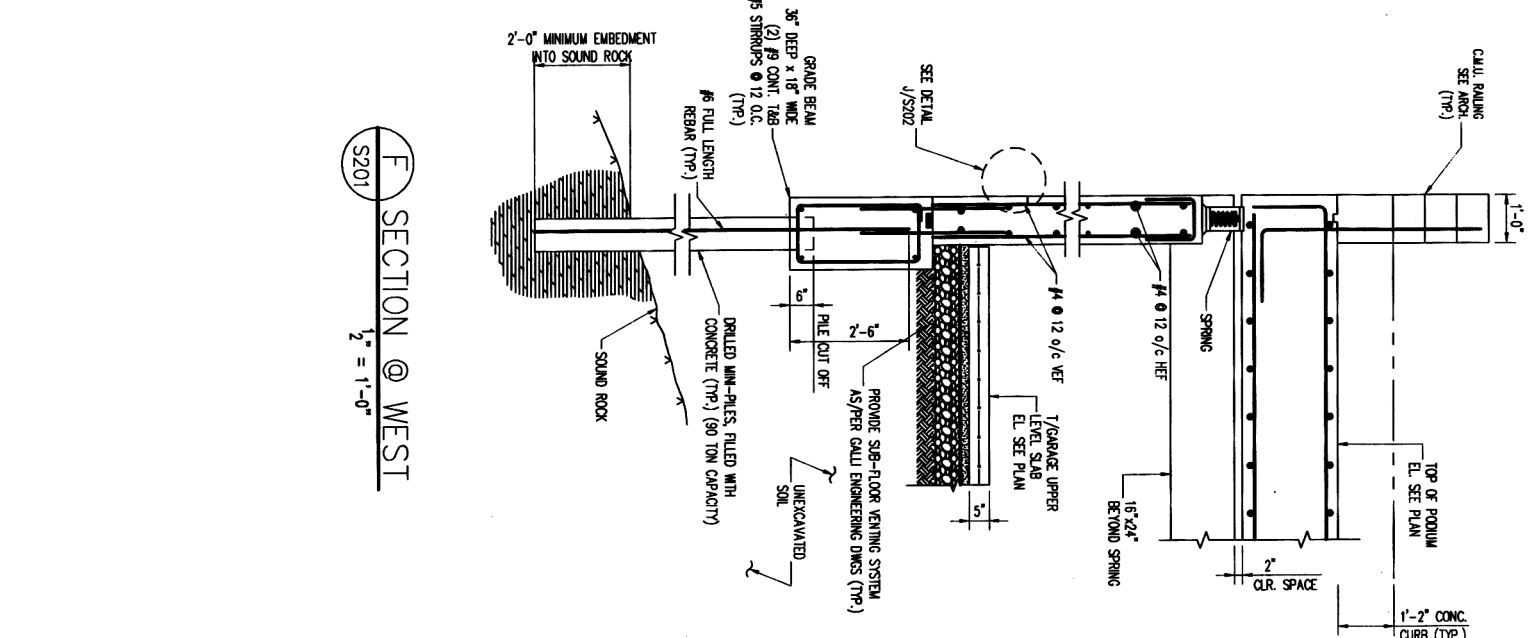
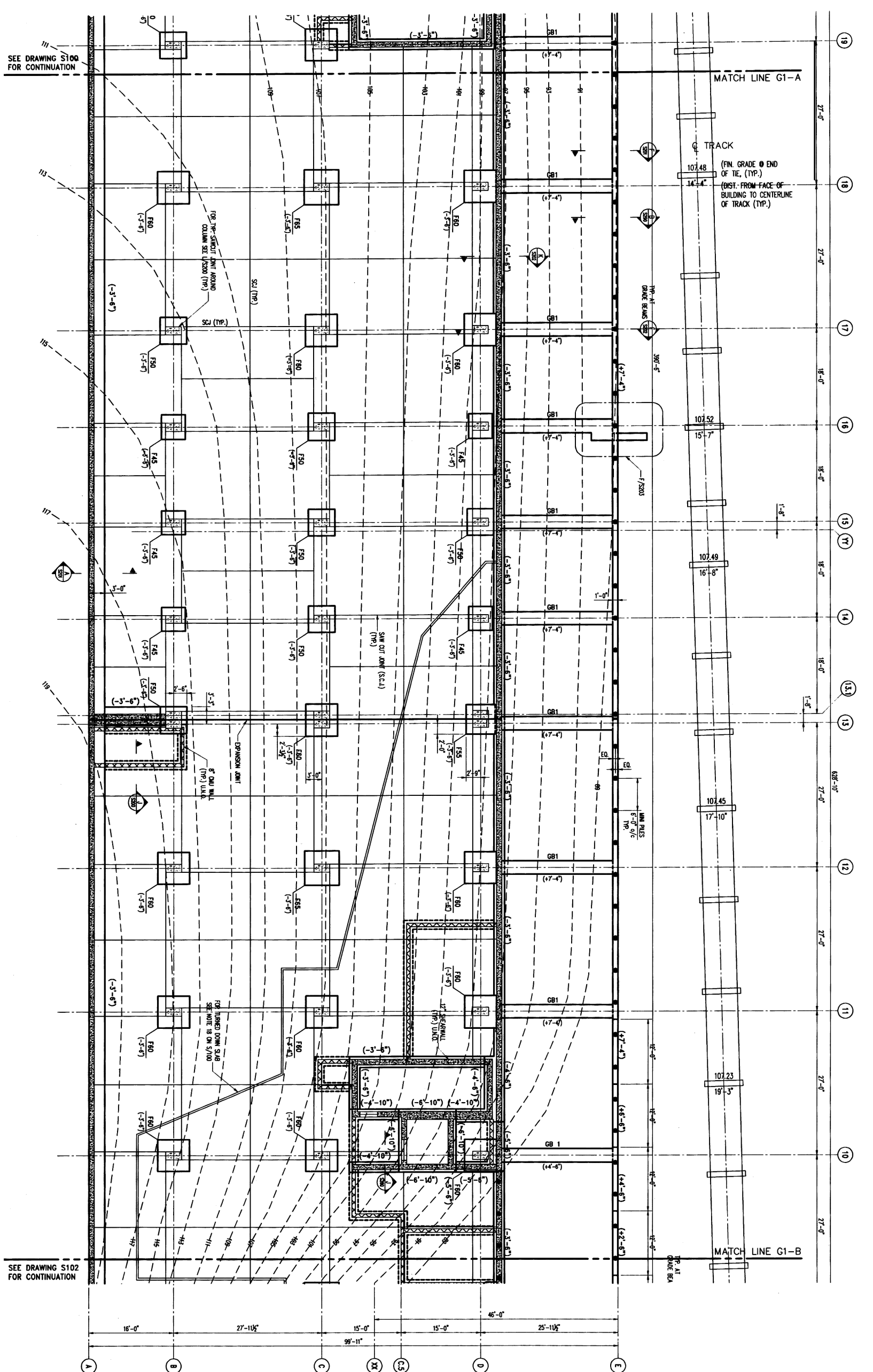
UNAUTHORIZED ALTERATION OF, OR ADDITION TO, THIS DOCUMENT IS A VIOLATION OF THE PROFESSIONAL ENGINEERING LAW OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.  
ANY ALTERATION TO THIS DOCUMENT MUST BE BY A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH THE STATE EDUCATION LAW. COPIES OF THIS DOCUMENT NOT MARKED WITH AN ORIGINAL OF THE PROFESSIONAL ENGINEERS LINKED TO THIS DOCUMENT SHALL BE CONSIDERED TO BE INVALID TRUE COPIES.

REV.	DATE	DESCRIPTION	BY
JDS	10/31/01		
DRAWN		JC	
CHECKED		RDG	
APPROVED		RDG	
SCALE			
<div><div><p><b>Galli engineering, P.C.</b></p><p>734 West Whitman Road, Suite 402A Middletown, New York 11767</p></div><div><p><b>5-27 KENSINGTON RD., BRONXVILLE, N.Y.</b></p><p><b>REMEDIAL ACTION WORK PLAN</b></p><p><b>BUILDING FOOTPRINT</b></p></div></div>			
DATE		SCALE	DRAWING NO.
1-24-14		1"=40'	<b>1</b>

## **APPENDIX F**

### **SHORING DIAGRAM**



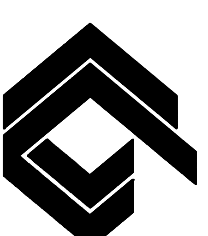


REV.	DATE			
JOB NO.	1031-01-001			
DRAWN	JC	5-27 KENSINGTON RD., BRONXVILLE, N.Y.		
CHECKED	RDS	<b>REMEDIAL ACTION WORK PLAN</b> <b>SHORING DETAILS</b>		
APPROVED	RDS			
SCALE				

UNAUTHORIZED ALTERATION OF, OR ADDITION TO, PLANS OR DOCUMENTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF ARTICLE 17 OF THE EDUCATION LAW, SECTION 2 OF THE NEW YORK STATE EDUCATION LAW.

ANY ALTERATION TO THIS DOCUMENT MUST BE DONE BY A PERSON ACTING UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL IN ACCORDANCE WITH THE STATE EDUCATION LAW.

COPIES OF THIS DOCUMENT NOT MARKED WITH AN ORIGINAL OF THE PROFESSIONAL ENGINEERS INKED SEAL, OR HIS EMBOSSED SEAL, SHALL NOT BE CONSIDERED TO BE VALID TRUE COPIES.



734 Walt Whitman Road, Suite 402A  
Melville, New York 11747

DATE	SCALE
------	-------

E

DRAWN

1

## **APPENDIX G**

### **SUB-SLAB VENTING SYSTEM**

## **Gateway Kensington LLC**

**5-27 Kensington Road, Bronxville, NY 10708**

### **Sub-Slab Vapor Barrier and Venting System Description**

The general arrangement of the venting system is shown on Drawing EV-1. Construction details are shown on Drawing EV-2. This specification is to be used in conjunction with the drawings and the Liquid Boot<sup>®</sup> specifications appended hereto. These provide detailed descriptions of materials and installation techniques. No changes are to be made in the field without prior approval of Galli Engineering.

The ventilation system will consist of two four-inch diameter PVC headers laid in sand or finely crushed gravel beneath the basement slab. One of these will serve as a fresh air supply header; the other a vent header for soil vapors laden air. These will be run along the length as shown on the General Arrangement. Two Geovent strips will extend perpendicular to the headers (one from each) parallel to the centerline of each individual unit as shown on the Plans. The Geovents will connect to an adapter and then to a 2" diameter PVC nipple and reducer before connection to the header. The vent header will extend beyond the building footprint and turn up into a fan enclosure at grade. A PVC riser will extend to above the roofline.

As soil vapors rise through the sub-surface, they will be blocked from entering the building and garage by the continuous impervious barrier and collected by the sub-slab collectors, and carried away, treated and vented to the atmosphere by the fan and riser.

#### **MATERIALS**

##### **Gas Permeable Aggregate**

Gas Permeable Aggregate to be used under interior slabs for backfill and bedding material for the sub-slab soil vapors ventilation system shall consist of rounded, hard, durable particles of stone or gravel meeting the manufacturer's specifications and will be supplied by the Excavation Contractor. Crushed material from on-site sources may be

used provided all wood, rebar, and putrescible material is removed and that the particle size and sharpness is consistent with the manufacturers recommendations. Aggregate shall be round, ¾" minus, and rolled smooth prior to pipe laying, geotextile placement, and spray application of the Liquid Boot® system.

Gas Permeable Aggregate shall meet the following gradation requirements:

Sieve Size	% Passing by Weight
1-1/2"	100
1"	90-100
¾"	55-85
3/8"	8-20
No. 4	0-5
No. 8	0-5
No. 200	0-2
ASTM C131 Test Grading	B

#### Cushion Layer

If aggregate is larger or coarser than that specified, a cushion layer of Geotextile will be placed. The cushion fabric (G-800) is a non-woven polypropylene geotextile and will be placed on the crushed rock sub-base material to protect subsequent layers and to bridge over voids in the aggregate while subsequent layers cure. This layer may or may not be required, depending on the quality of aggregate used.

#### Base Fabric Geotextile

A layer of Geotextile material will be placed above the gas permeable aggregate layer (or the cushion layer, if used) and shall be of a non-woven polypropylene type, such as Liquid Boot Base Fabric T-60, or approved equal.

### Geovent® Low Profile Piping

Geovent® is a fabricated assembly of spacers and textile coverings designed to provide a low-loss gas collector. Geovent® adapters will be used where the Geovent® transitions to 2" PVC piping.

### Polyvinyl Chloride (PVC) Piping

Polyvinyl Chloride (PVC) pipe for the underground gas vapor collection system shall be 4" diameter for header mains and 2" diameter for connector stubs, Schedule 40 solid pipe. Joints will be solvent welded. All fittings shall be of the same manufacturer, material, class, and Schedule as the pipe. Any threaded joints (if required) shall be provided with Teflon tape or flanged joints with nitrile or urethane gaskets. Solvent welded joints shall be made in accordance with the manufacturer's recommendations.

### Liquid Boot Vapor Barrier Membrane

The Vapor Barrier Membrane shall consist of Base Fabric T-60, 60 mils dry thickness of spray applied Liquid Boot®, and a protective course of G-800.

### Exterior Risers

Exterior risers shall be 3" diameter Schedule 40 PVC pipe. Joints will be solvent welded. All fittings shall be of the same manufacturer, material, class, and Schedule as the pipe. No threaded or flanged joints will be allowed. Solvent welded joints shall be made in accordance with the manufacturer's recommendations. All building penetrations shall be in accordance with the design drawings and provided with sleeves and/or firestop material in accordance with all applicable building standards and codes. Visible runs will be made of unmarked clean white pipe. No solvent cement runoff shall be visible on exposed runs.

## Blower

Because soil vapors concentration excursions within the explosive limits are possible, fans will be explosion proof to meet Class I, Group D, Division 1 criteria. Conduit, wiring, and devices will meet the same explosion-proof rating within ten feet of the fan enclosure. The fan shall be manufactured by Ametek Rotron Industrial Products and will be a Model EN101 sealed regenerative blower (or approved equal) with 0.5 h.p. horsepower electric motor, 3 phase, 230 VAC, 4.5 amps (max. 19 amps inrush at start-up) explosion proof motor. The blower will be capable of delivering 20 cubic feet per minute at a pressure of 12.5 inches water column. The blower shall have a cast aluminum blower housing, cover, impeller and manifold. The Flanges will cast iron (threaded), with a teflon lip. The electric motor shall be UL and CSA approved with permanently sealed ball bearings for explosive gas atmospheres: Class D Group 1 minimum and sealed blower assembly. The blower shall come complete with corrosion resistant surface treatments and sealing on its housing. Each blower assembly will come complete with flowmeters to read in standard cubic feet minute (SCFM), filters and moisture separators, pressure gauges, vacuum gauges and relief valve: air flow, pressure, temperature cut-off switches and an external muffler for additional silencing.

## Carbon Adsorption System

The carbon adsorption system will consist of two carbon canisters attached in series and one as a spare, manufactured by Siemens / Westates or approved equal. Each canister shall be a Model VS-200 with VoCarb P60 carbon, 22 inches in diameter and 34 inches in height, capable of holding 200 pounds of activated carbon at a flow rate of 100 CFM(max). Each canister shall include a false bottom and distributor screen to allow for even distribution and lower pressure drops. The canisters shall have open top drums to allow for easy carbon access and change-out. The canister shall have inlet 2" FNPT and outlet 2" MPT connections.

The activated carbon shall consist of approx. 200 pounds of granular activated Vo Carb P60 carbon per canister. Empty vessel weight is approx. 250 lbs.

## EXECUTION

### Gas Permeable Aggregate and Collection Pipe Network

The 4" diameter PVC fresh air and vent headers will be laid in trenches beneath the grade beams and will not have any dips or low points. "T" connections will be provided for connection to each Geovent strip. Following the completion of the building footers, the sub-base between each footer shall be excavated to a depth of 4" below the bottom of the slab. A 2" layer of round,  $\frac{3}{4}$ " stone will then be placed as bedding for the Geovent. The Geovent strips will then be placed (two per residential unit). PVC adapters and 2" diameter connector pipes will then be run to the fresh air and vent headers.

A 2" layer of gas permeable aggregate shall be placed and compacted as necessary on the geotextile. The collection pipe shall be assembled and placed as identified in the Plans, with 2" of aggregate below and above the centerline of the Geovent<sup>®</sup> and 2"-diameter PVC pipe. PVC transition pipe at interior riser penetration locations shall be assembled and placed with supports as necessary to maintain accurate locations for application of the gas vapor barrier and concrete slab. Following inspection, gas permeable aggregate shall be placed and backfilled to achieve 4 inches of gravel below the bottom of slab elevation.

### Spray-Applied Vapor Barrier

The spray-applied vapor barrier shall be installed as specified in the Plans and Specifications and in accordance with manufacturer's recommendations.

Base Fabric T-60 shall be placed on all areas to receive the product, followed by a 60-mil application of the product. Following the recommended curing time, thickness inspections shall be performed. Corrective thickness applications of the product will be applied as necessary and test locations sealed. Following curing and testing of the product, the protective Liquid Boot<sup>®</sup> G-800 layer shall be placed on top.

The gas vapor barrier shall be applied horizontally to create a continuous vapor barrier beneath the entire footprint of the building, with durable seals to every footing and penetration to ensure a single membrane layer. All horizontal application of the vapor barrier shall be on top of placed gas permeable aggregate and immediately below the poured slab.

The gas vapor barrier shall be applied vertically to all subsurface building walls and extend an additional 6 inches, forming a lateral barrier on all sides of the gas permeable layer.

#### Installation of the Vent Risers and Ventilator Caps

Vent risers shall be identified on the Plans. A minimum of one sign per floor and one on each roof location shall be permanently installed on each riser and shall read:

CAUTION: DO NOT TAP OR PUNCTURE  
SUB-SURFACE VAPOR VENT PIPE  
NOT FOR DOMESTIC USE

#### Protection

It is the responsibility of the Contractor to ensure that no damage occurs to components of the Soil vapors Mitigation System prior to, during, or following installation of the system, or during any subsequent performance or construction for the facility as identified on the contract drawings and plans. This includes the installation of all subsurface utilities required for the operation of the building systems. Any damages to the system occurring during performance of the Work shall be repaired and tested at no additional cost to the Owner.



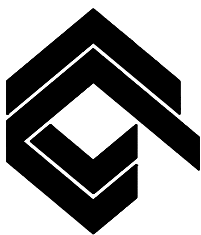
## Testing

It is the Contractor's responsibility to test the system to ensure that all components of the Soil vapors Mitigation System, including the vapor barrier, piping, and interior riser piping, comply with system intention and requirements as demonstrated by proper testing and documentation. The Contractor must submit results of testing on each system for approval by the Engineer.

1. Test Liquid Boot<sup>®</sup> spray-applied gas vapor barrier and Geovent<sup>®</sup> piping as per Liquid Boot<sup>®</sup> Specification.

Each of the interior risers shall undergo a pressure test to ensure that all components of the Soil vapors Mitigation System that pass through the facility interior can withstand 10 inches of water column pressure. A cleanout shall be permanently installed on each riser pipe within 12 inches of the pipe entry into the facility and prior to any additional joints, couplings, or pipe segments. A pressure-stop balloon shall be inflated between the foundation wall and the cleanout, creating an airtight seal. A temporary airtight seal shall be placed at the riser termination on the roof. A static pressure using gas (not water) of at least 10 inches of water column shall be applied to the pipe at the cleanout location and maintained for at least 30 minutes. All gauges, materials, and equipment for this test shall be provided by the Contractor. If the pipe riser does not successfully maintain pressure, it will be the responsibility of the Contractor to identify and seal all leaks. The test shall be performed following all application of sealants as required until a successful test results.

**GALLI ENGINEERING, P.C.**  
734 WALT WHITMAN RD., SUITE 402A  
MELVILLE, NY 11747  
631-271-9292 (P)631-271-9345  
[www.galleng.com](http://www.galleng.com)



Project Title	

**5-27 Kensington Road**  
**Bronxville, New York**

0409	18540	102102	ADDS SECTION C-5, FENDER, UNDER LTR, ADDS, MOIS.	6.0/207	WATER, AIR, HARDS, ADDS, LOVER, 396C
01607	REVIEW SET			6.0/207	WATER SET
02608	REMOVAL, SITE EXCAVATION & FOUNDATION REPAIR			6.0/207	WATER SET/FOUND SET
02640	THRESH, DOWN, SLAB, CONTAMINANT PREVENTOR			7.0/207	ADDITIONAL, W/
030207	246 CD SET			9.24/207	246 CD SET
04107	REVIEW SET				
042407	893400	WATER, 23000S, W/	SHALLS		

Project No.	0232
Date	12.22.06
Drawing By	JC
Scale	AS NOTED

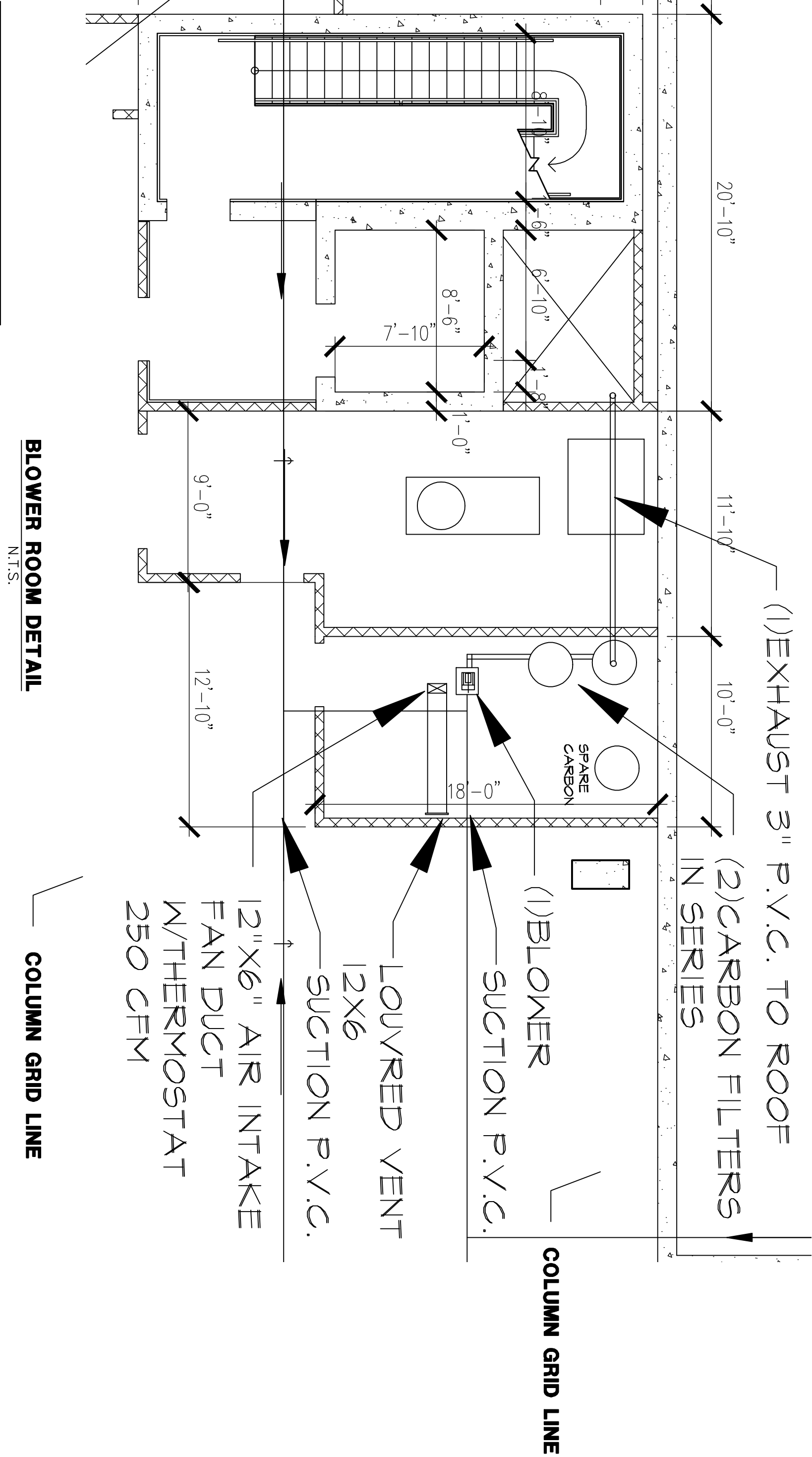
rawing Title  
SUB-SLAB VENTING

EV-1

UNAUTHORIZED ALTERATION OF, OR ADDITION TO, PLANS OR DOCUMENTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF ARTICLE 17 OF THE EDUCATION LAW, SECTION 1703 OF THE EDUCATION LAW, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

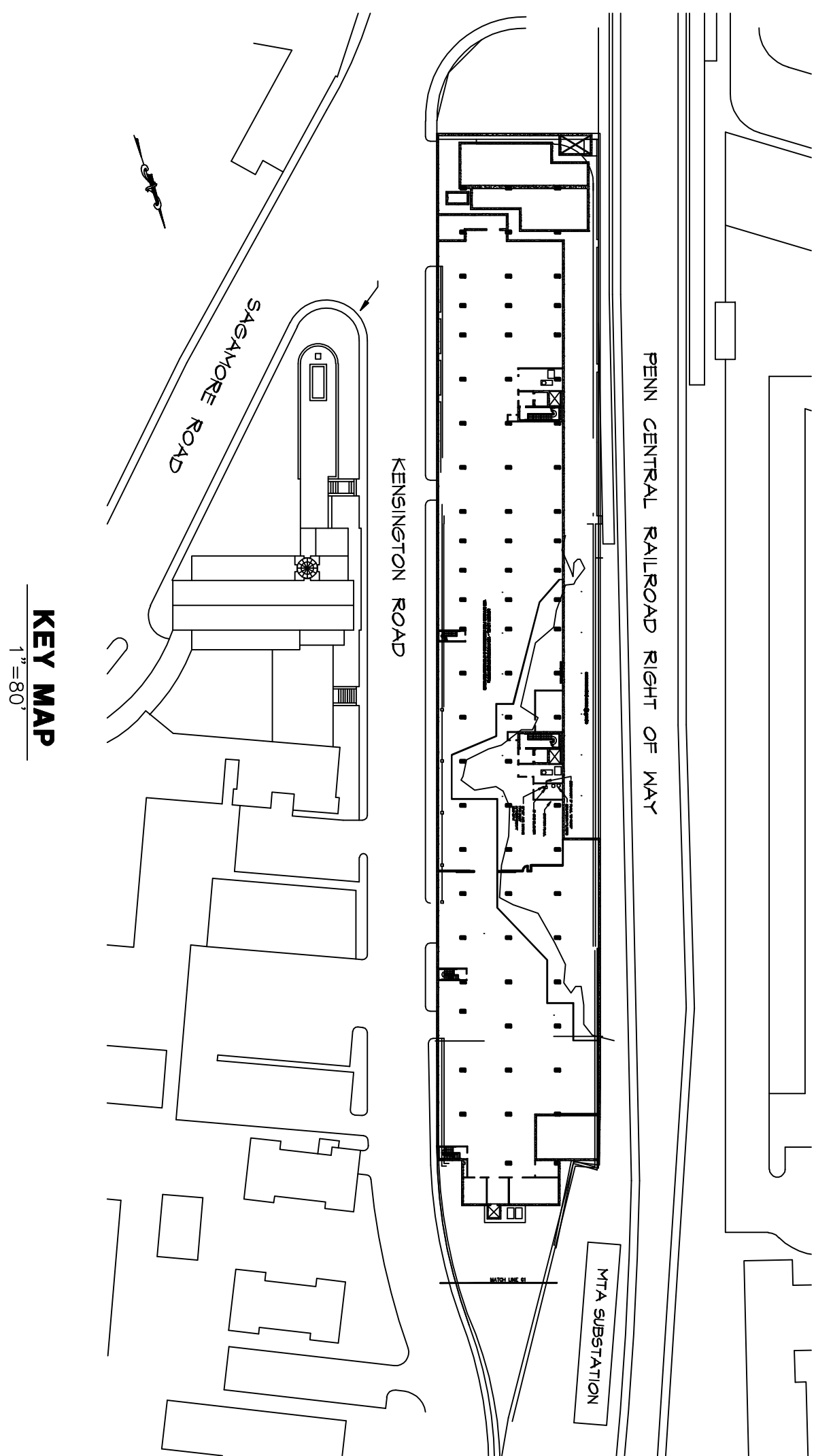
ANY ALTERATION TO THIS DOCUMENT MUST BE MADE BY THE DESIGNATED AUTHORITY OF THE SUPERVISOR OF THE LICENSED PROFESSIONAL IN ACCORDANCE WITH THE STATE EDUCATION LAW.

COPIES OF THIS DOCUMENT NOT MARKED WITH AN ORIGINAL OF THE PROFESSIONAL ENGINEERS INKED SEAL OR HIS EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE VALID TRUE COPIES.

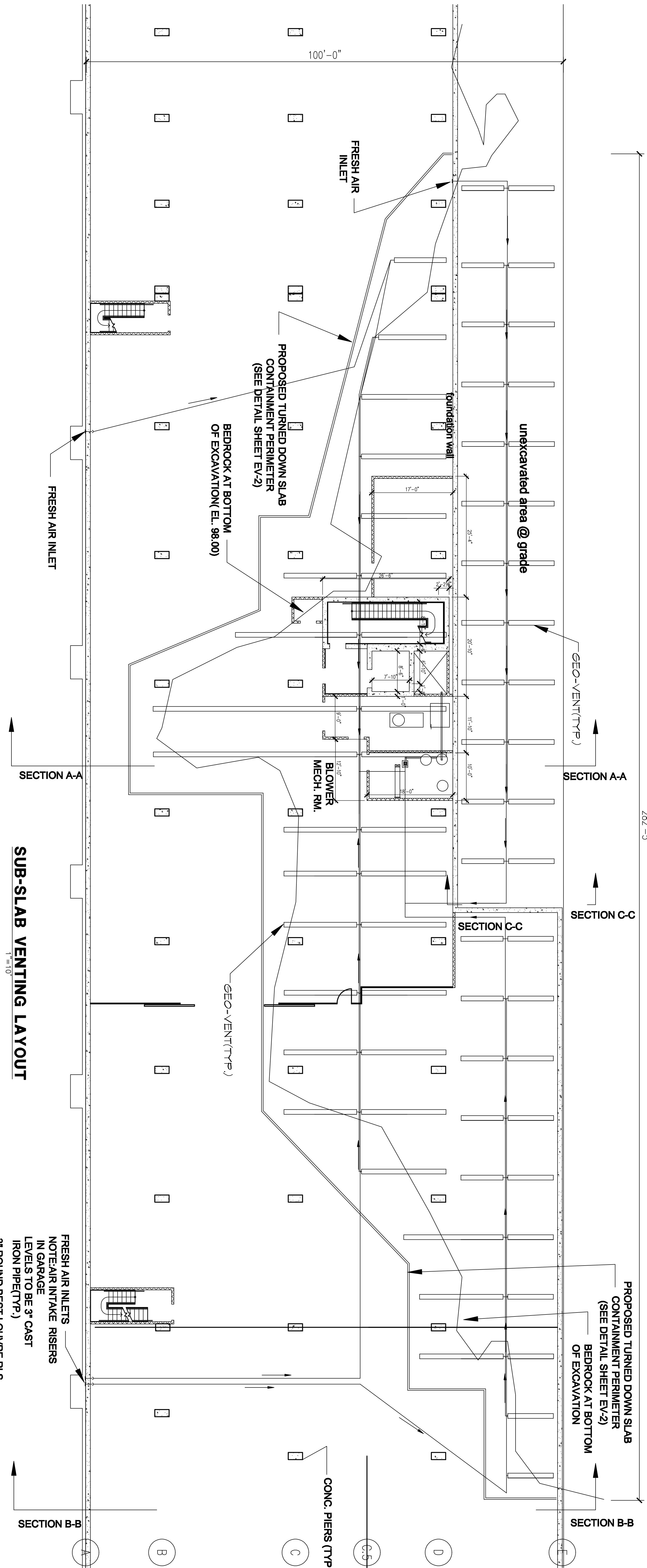


NOTE:

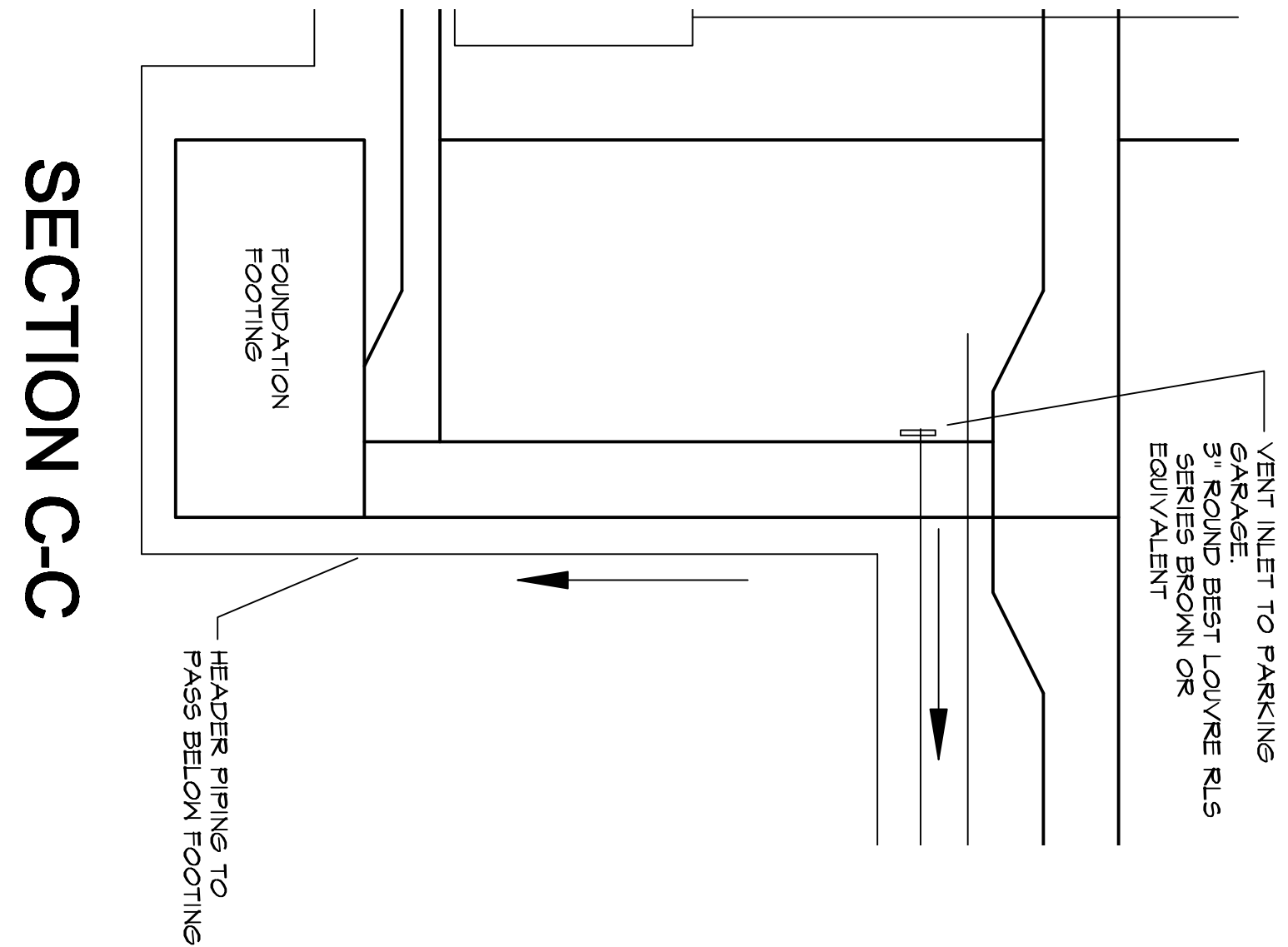
NON WOVEN GEOTEXTILE FABRIC  
DEMARCATION BARRIER TO BE  
INSTALLED ON COMPACTED SUB  
BASE OVER ENTIRE SUBSLAB  
VENTILATION AREA.



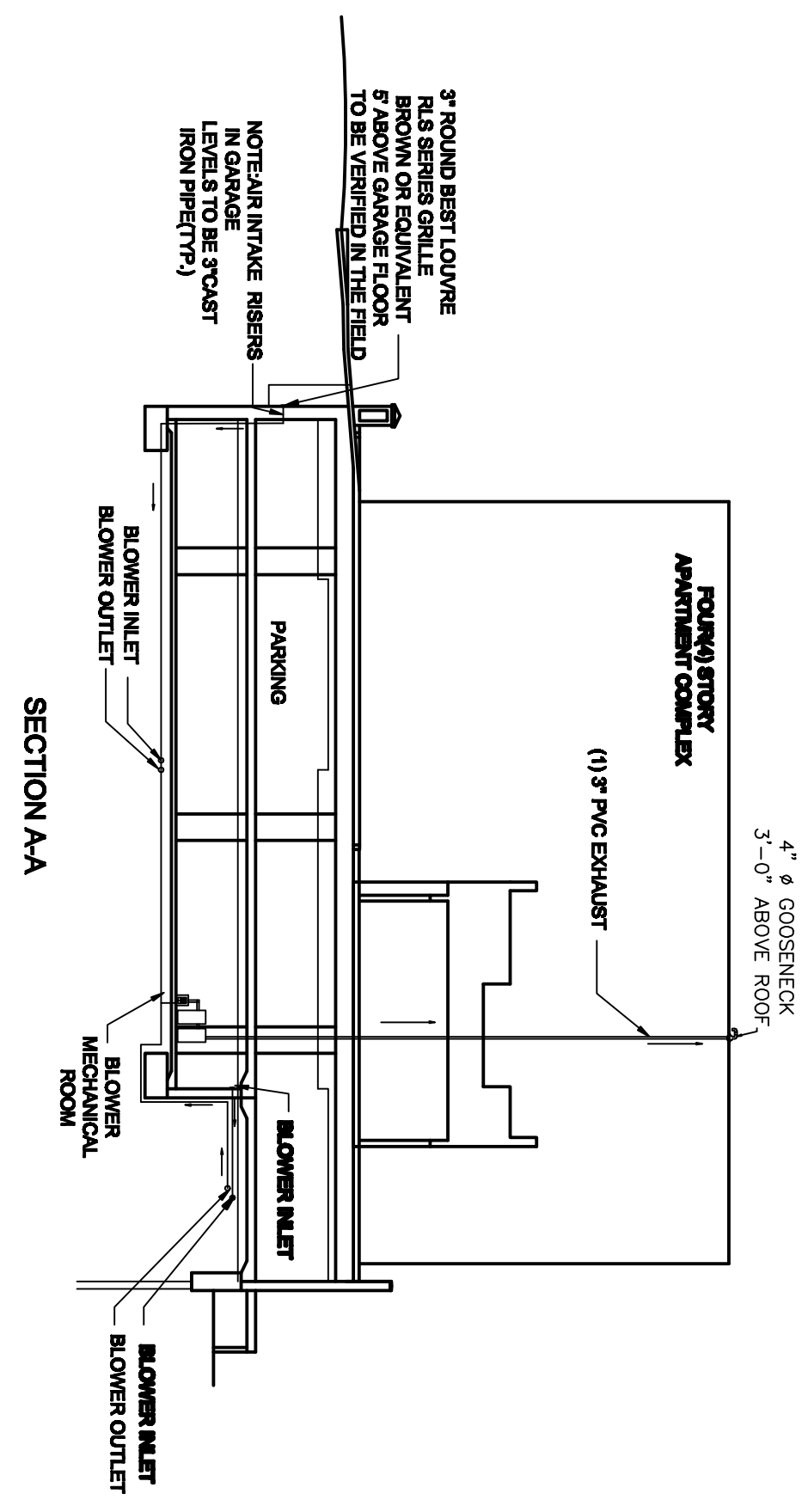
## KEY MAP



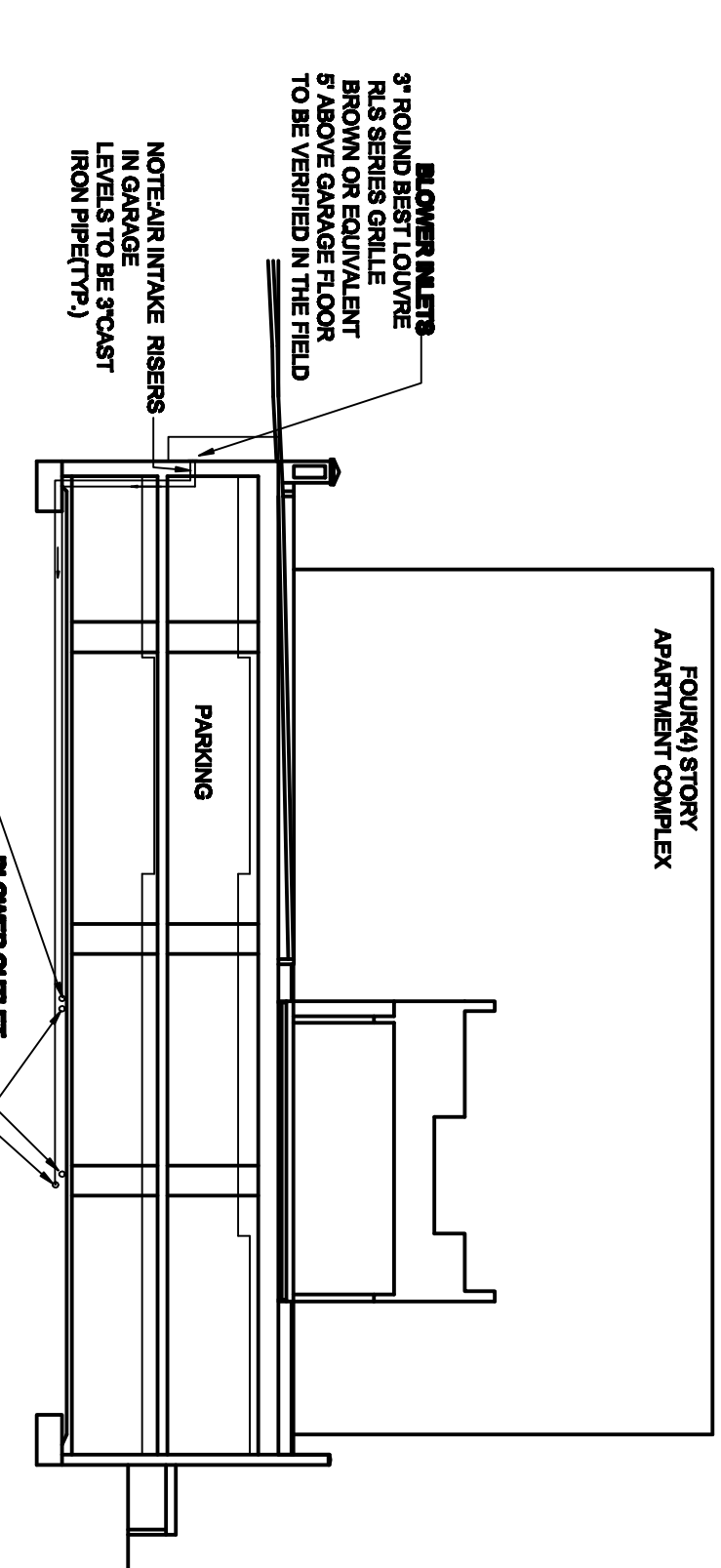
FRESH AIR INLETS —————  
NOTE: AIR INTAKE RISERS  
IN GARAGE  
LEVELS TO BE 3" CAST  
IRON PIPE(TYP.)  
3" ROUND BEST LOUVRE RLS  
SERIES GRILLE BROWN OR EQUIVALENT



## SECTION C-C



## SECTION A-A



## SECTIONS

EV-1



## **APPEDIX H**

### **PROJECT SCHEDULE**

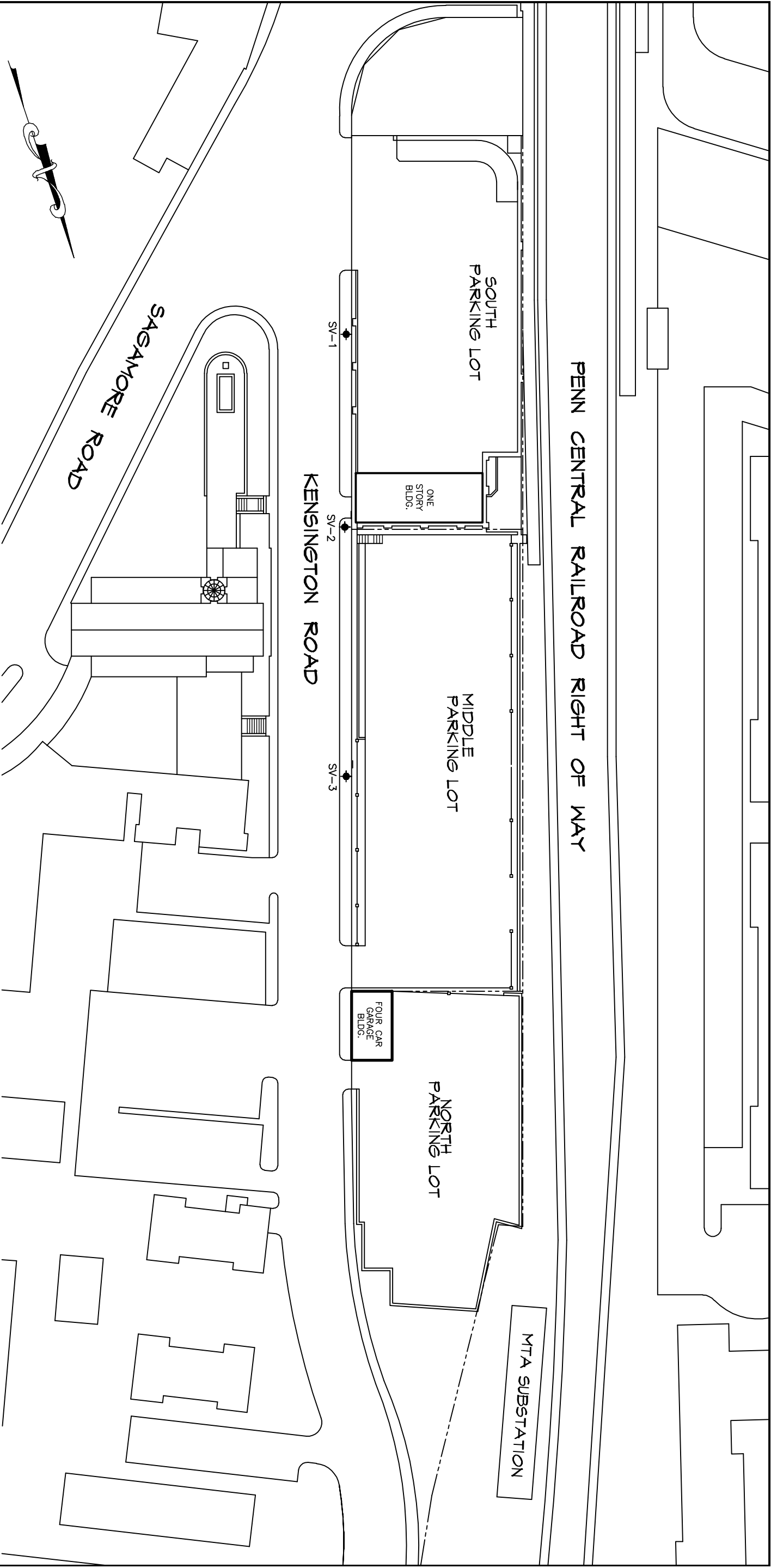
Exhibit 5  
Project Schedule  
5-27 Kensington Road Brownfield Program Application  
Gateway Kensington LLC

**Gateway Kensington LLC**  
**Brownfield Program Application**  
Project Schedule

[illegible]


## **APPENDIX I**

### **SOIL VAPOR SAMPLING LOCATIONS**



LEGEND

◆ SV-1 SOIL VAPOR  
SAMPLE LOCATION

5-27 KENSINGTON RD. BRONXVILLE, N.Y.			
SOIL VAPOR SAMPLING LOCATION PLAN			
JOB NO. 1031-01-001	 <div>Galli engineering, P.C. 734 Walt Whitman Road, Suite 402A Melville, New York 11747</div>		
DRAWN JC			
CHECKED RDG			
APPROVED RDG	DATE 1-24-14	SCALE 1"=60'	FIGURE NO. 1

## **APPENDIX J**

### **CITIZEN PARTICIPATION PLAN**





**GALLI ENGINEERING, P.C.**

---

**Brownfield Cleanup Program  
Site Number TBD**

**Citizen Participation Plan**

5-27 Kensington Road  
Village of Bronxville  
Westchester County, New York

January, 2014  
Rev. 1: June 11, 2014

## Table of Contents

<b>1. What is New York’s Brownfield Cleanup Program?</b>	<b>1</b>
<b>2. Citizen Participation Plan Overview</b>	<b>1</b>
<b>3. Site Information</b>	<b>3</b>
<b>4. Remedial Process</b>	<b>5</b>
<b>5. Citizen Participation Activities</b>	<b>7</b>
<b>6. Major Issues of Public Concern</b>	<b>8</b>
<b>Appendix A – Site Location Map and Site Map</b>	<b>9</b>
<b>Appendix B – Project Contacts and Document Repositories</b>	<b>10</b>
<b>Appendix C – Brownfield Site Contact List</b>	<b>12</b>
<b>Appendix D – Identification of Citizen Participation Activities</b>	<b>26</b>
<b>Appendix E – Brownfield Cleanup Program Process</b>	<b>27</b>

\* \* \* \* \*

**Note:** The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the brownfield site’s remedial process.

Applicant: **Gateway Kensington LLC (“Applicant”)**  
Site Name: **5-27 Kensington ("site")**  
Site Address: **5-27 Kensington Road, Bronxville, NY 10708**  
Site County: **Westchester County**  
Site Number: **TBD**

## **1. What is New York’s Brownfield Cleanup Program?**

New York’s Brownfield Cleanup Program (BCP) is a program designed to encourage the private sector to investigate, remediate (clean up) and redevelop brownfields. A brownfield is any real property where redevelopment or reuse may be complicated by the presence or potential presence of a contaminant. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal and financial burdens on a community. If the brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants that conduct brownfield site remedial activities.<sup>1</sup> An Applicant is a person whose request to participate in the BCP has been accepted by NYSDEC. The BCP contains investigation and remediation requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at: <http://www.dec.ny.gov/chemical/bcp>

## **2. Citizen Participation Plan Overview**

This Citizen Participation Plan (CPP) provides members of the affected and interested public with information about how NYSDEC will inform and involve them during the investigation and remediation of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Appendix A contains a map identifying the location of the site.

### *Project Contacts*

Appendix B identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site’s remedial program. The public’s suggestions about this Citizen Participation Plan and the Citizen Participation (CP) program for the site are always

---

<sup>1</sup> “Remedial activities”, “remedial action”, and “remediation” are defined as all activities or actions undertaken to eliminate, remove, treat, abate, control, manage, or monitor contaminants at or coming from a brownfield site.

welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

### *Document Repositories*

The locations of the site's document repositories also are identified in Appendix B. The document repositories provide convenient access to important project documents for public review and comment.

### *Site Contact List*

Appendix C contains the brownfield site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and remediation process. The brownfield site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming remedial activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The brownfield site contact list includes, at a minimum:

- chief executive officer and official(s) principally involved with relevant zoning and planning matters of each county, city, town and village in which the site is located;
- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which services the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility;
- document repositories.

Where the site or adjacent real property contains multiple dwelling units, the Applicant will work with NYSDEC to develop an alternative method for providing such notice in lieu of mailing to each individual. For example, the owner of such a property that contains multiple dwellings may be requested to prominently display fact sheets and notices required to be developed during the site's remedial process. This procedure would substitute for the mailing of such notices and fact sheets, especially at locations where renters, tenants and other residents may number in the hundreds or thousands, making the mailing of such notices impractical.

The brownfield site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix B. Other additions to the brownfield site contact list may be made on a site-specific basis at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

### *CP Activities*

Appendix D identifies the CP activities, at a minimum, that have been and will be conducted during the site's remedial program. The flowchart in Appendix E shows how these CP activities integrate with the site remedial process. The public is informed about these CP activities through fact sheets and notices developed at significant points in the site's remedial process.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a brownfield site, and the nature and progress of efforts to investigate and remediate a brownfield site.
- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a brownfield site's investigation and remediation.

The public is encouraged to contact project staff at any time during the site's remedial process with questions, comments, or requests for information about the remedial program.

This CPP may be revised due to changes in major issues of public concern identified in Section 6, or in the nature and scope of remedial activities. Modifications may include additions to the brownfield site contact list and changes in planned citizen participation activities.

## **3. Site Information**

### *Site Description*

The project site is located at 5-27 Kensington Road, in the Village of Bronxville, County of Westchester, State of New York. The site setting is predominately suburban. The project site consists of 1.67 acres of land, situated west-northwest of the intersection of Kensington Road and Sagamore Road. The property is currently developed as three contiguous parking lot parcels. It is bordered by Metro North Rail Road tracks to the west, a church and apartments across Kensington Road to the east, an office building to the south, and a Metro North transformer building to the north. The property is comprised of three lots, the southernmost lot (0.52 acres), the middle lot (0.62 acres), and the final lot (0.53 acres). All three lots are eligible for the Brownfield Cleanup Program as per NYSDEC. These lots encompass what is known as the "Brownfield Cleanup Program (BCP) Site".

### *Site History*

Past uses of this site have been documented since the turn of the 20th century. The subject property has been previously utilized for housing, a power plant, a gasoline station and an automobile repair facility. It is currently a municipal parking lot. Around 1905, the "Hotel Gramatan Power and Light Plant" was built on the area that is now the middle lot. Coal was used to fuel the power plant until 1961, when the plant switched over to fuel oil. Coal piles were identified on the Sanborn maps from the years 1918, 1932 and 1950. The "Gramatan Garage"

(Texaco gas station) was operated on site from circa 1958-1994. It was closed by the Village of Bronxville in March, 1994. Since the early 1990s, the land has operated as a municipal parking lot, owned by the Village of Bronxville.

### *Environmental History*

In preparation for development, extensive environmental investigations have been conducted on the subject property; including soil borings, ground penetrating radar, soil sample collection and analysis, monitoring well installation and groundwater sample collection and analysis.

The contamination present on the site is consistent with the past uses of the subject lots. A former gasoline station, an automotive repair shop and a parking facility have operated on the southern lot; and a coal burning power plant formerly existed on the middle lot. The power plant and other building structures have been demolished, and the debris has been graded and paved over to provide the land for the current parking lots.

Historical laboratory analysis of soil and groundwater samples collected from the south end of the subject property (former Gramatan Garage) have demonstrated the presence of elevated petroleum constituents. Laboratory analysis of soil samples collected from the area of the former heat, light and power plant have shown the presence of elevated total petroleum hydrocarbons. Both these areas of the subject property have been assigned spill numbers by the New York State Department of Environmental Conservation (NYSDEC).

Soil contaminants exceeding the New York State Recommended Soil Cleanup Objectives (RSCO) on all of the lots include the semi-volatile organic compounds (SVOCs): benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. These SVOCs are all Polycyclic Aromatic Hydrocarbons (PAHs). PAH is the general term applied to a group of compounds, comprised of several hundred organic substances with two or more aromatic rings. PAHs are major constituents of petroleum and its derivatives. Exposure to PAHs may result in a wide range of effects on biological organisms. While some PAHs are known to be carcinogenic, others display little or no carcinogenic activity. Other contaminants in the soils on site exceeding the RSCO are the heavy metals arsenic, cadmium, chromium, lead and mercury. Exposure to elevated levels of these metals has been shown to cause detrimental health effects to biological organisms. Potential exposure pathways for these contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter.

The groundwater samples in the south lot revealed contamination by volatile organic compounds (VOCs), SVOCs and metals. Specific contaminants above the NYS Groundwater Quality Standards include m,p-Xylene, arsenic, barium, cadmium, chromium, lead, mercury and silver.

The major source areas contributing to the contamination of the site are the former Gramatan Garage, as well as the former power plant. The power plant operated on site from circa 1905 until the late 1980s. The power plant operated during the time period that coal gasification was ongoing, and there is possible evidence of coal tar in the soil samples taken from the central lot.

Coal gasification contaminants include SVOCs and metals, and many of these contaminants were detected at a level above the NYSDEC RSCO. However, based on the results of the Toxicity Characteristic Leaching Procedure (TCLP) analyses, these soils do not meet the criteria for hazardous waste.

The property is not in a flood prone zone, the groundwater is not a source of potable water, and groundwater contamination appears to be minimal and isolated at this time.

#### **4. Remedial Process**

**Note:** See Appendix E for a flowchart of the brownfield site remedial process.

##### *Application*

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination onsite, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for restricted purposes.

To achieve this goal, the Applicant will conduct remedial activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting a remedial program at the site.

##### *Investigation*

If the Applicant conducts a Remedial Investigation (RI) of the site, it will be performed with NYSDEC oversight. The Applicant must develop a Remedial Investigation Workplan, which is subject to public comment as noted in Appendix D. The goals of the investigation are as follows:

- 1) Define the nature and extent of contamination in soil, surface water, groundwater and any other impacted media;
- 2) Identify the source(s) of the contamination;
- 3) Assess the impact of the contamination on public health and/or the environment; and
- 4) Provide information to support the development of a Remedial Work Plan to address the contamination, or to support a conclusion that the contamination does not need to be addressed.

The Applicant will prepare an RI Report after it completes the RI. This report will summarize the results of the RI and will include the Applicant's recommendation of whether remediation is needed to address site-related contamination. The RI Report is subject to review and approval by NYSDEC. Before the RI Report is approved, a fact sheet that describes the RI Report will be sent to the site's contact list.

NYSDEC will determine if the site poses a significant threat to public health and/or the environment. If NYSDEC determines that the site is a "significant threat," a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying community group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the eligible site.

For more information about the TAG Program and the availability of TAGs, go online at: <http://www.dec.ny.gov/website/der/guidance/tag/>

### *Remedy Selection*

After NYSDEC approves the RI Report, the Applicant will be able to develop a Remedial Work Plan if remediation is required. The Remedial Work Plan describes how the Applicant would address the contamination related to the site.

The public will have the opportunity to review and comment on the draft Remedial Work Plan. The site contact list will be sent a fact sheet that describes the draft Remedial Work Plan and announces a 45-day public comment period. NYSDEC will factor this input into its decision to approve, reject or modify the draft Remedial Work Plan.

A public meeting may be held by NYSDEC about the proposed Remedial Work Plan if requested by the affected community and if significant substantive issues are raised about the draft Remedial Work Plan. Please note that, in order to request a public meeting, the health, economic well-being or enjoyment of the environment of those requesting the public meeting must be threatened or potentially threatened by the site. In addition, the request for the public meeting should be made within the first 30 days of the 45-day public comment period for the draft Remedial Work Plan. A public meeting also may be held at the discretion of the NYSDEC project manager in consultation with other NYSDEC staff as appropriate.



### *Construction*

Approval of the Remedial Work Plan by NYSDEC will allow the Applicant to design and construct the alternative selected to remediate the site. The site contact list will receive notification before the start of site remediation. When the Applicant completes remedial activities, it will prepare a final engineering report that certifies that remediation requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the remediation is protective of public health and the environment for the intended use of the site. The site contact list will receive a fact sheet that announces the completion of remedial activities and the review of the final engineering report.

### *Certificate of Completion and Site Management*

Once NYSDEC approves the final engineering report, it will issue the Applicant a Certificate of Completion and the site contact list will receive a fact sheet. This Certificate states that remediation goals have been achieved, and relieves the Applicant from future remedial liability, subject to statutory conditions. The Certificate also includes a description of any institutional and engineering controls or monitoring required by the approved remedial work plan.

An institutional control is a non-physical restriction on use of the brownfield site, such as a deed restriction that would prevent or restrict certain uses of the remediated property. An institutional control may be used when the remedial action leaves some contamination that makes the site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination, such as a cap or vapor barrier.

Site management will be conducted by the Applicant as required. NYSDEC will provide appropriate oversight. Site management involves the institutional and engineering controls required for the brownfield site. Examples include: operation of a water treatment plant, maintenance of a cap or cover, and monitoring of groundwater quality.

## **5. Citizen Participation Activities**

CP activities that have already occurred and those that are planned during the investigation and remediation of the site under the BCP are identified in Appendix D: Identification of Citizen Participation Activities. These activities also are identified in the flowchart of the BCP process in Appendix E. NYSDEC will ensure that these CP activities are conducted, with appropriate assistance from the Applicant.

All CP activities are conducted to provide the public with significant information about site findings and planned remedial activities, and some activities announce comment periods and request public input about important draft documents such as the Remedial Work Plan.

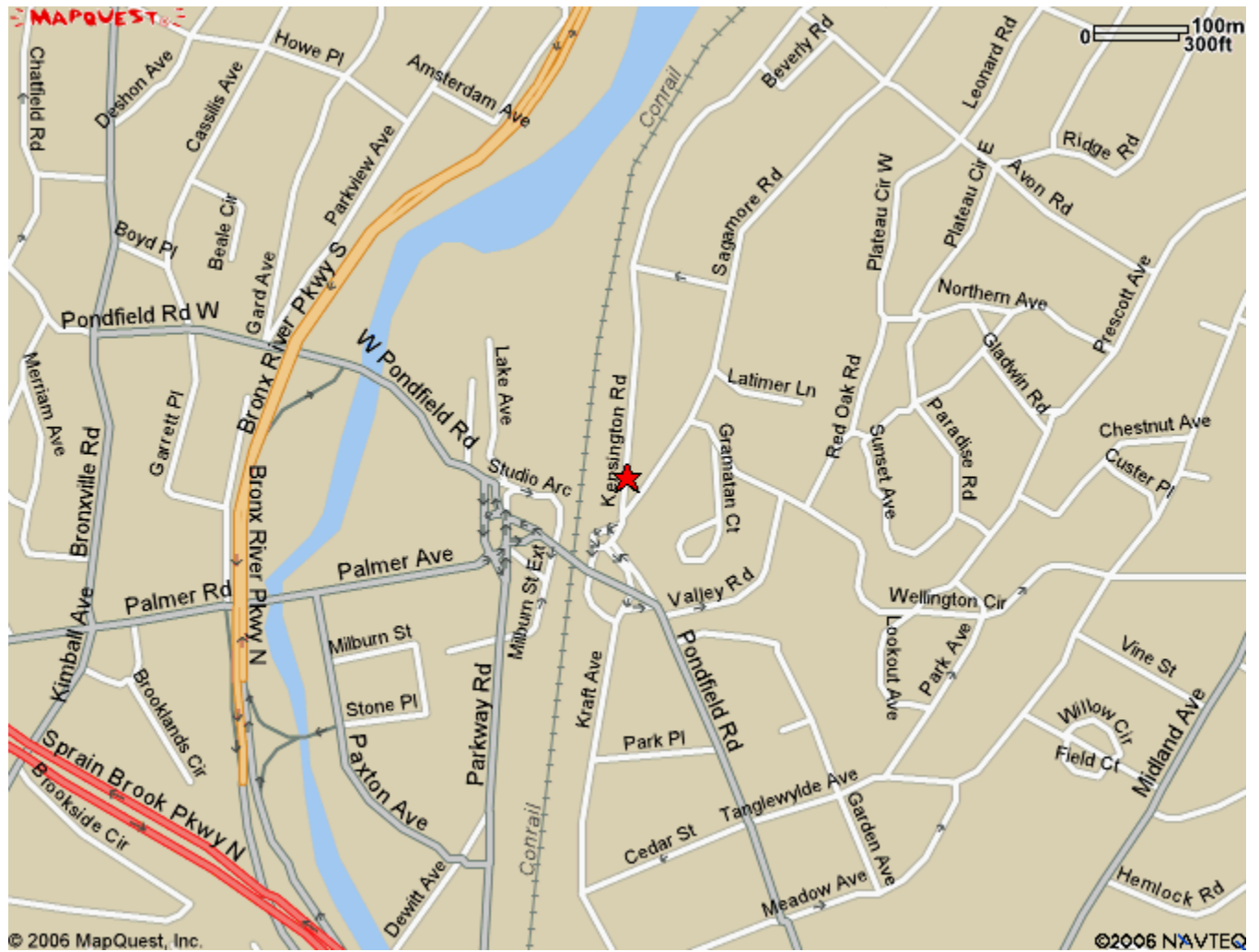
All written materials developed for the public will be reviewed and approved by NYSDEC for clarity and accuracy before they are distributed. Notices and fact sheets can be combined at the discretion, and with the approval of, NYSDEC.

## **6. Major Issues of Public Concern**

This section of the CP Plan identifies major issues of public concern, if any, that relate to the site. Additional major issues of public concern may be identified during the site's remedial process.

Issues of public concern for this project include noise impacts as a general issue; dust, including potential impacts on the organ located in Christ Church; general health concerns related to the removal of buried contaminated materials; monitoring of any contaminated soils left on site; concerns with possible groundwater contamination on site; and truck traffic through residential neighborhoods and the safety issues related to that traffic. The truck routes would be coordinated with Village Police.

## Appendix A – Site Location Map and Site Map



## **Appendix B – Project Contacts and Document Repositories**

### **Project Contacts**

For information about the site's remedial program, the public may contact any of the following project staff:

#### **New York State Department of Environmental Conservation (NYSDEC):**

Joshua P. Cook  
Project Manager  
NYSDEC Division of Environmental Remediation  
Remedial Bureau C, 11<sup>th</sup> Floor  
625 Broadway  
Albany, NY 12233-7014  
518-402-9564

Michael J. Knipfing  
Citizen Participation Specialist  
NYSDEC Region 3  
21 South Putt Corners  
New Paltz, NY 12561  
845-256-3154

#### **New York State Department of Health (NYSDOH):**

Carl Obermeyer  
Project Manager  
NYSDOH  
Monticello District Office  
50 North Street, Suite 2  
Monticello, NY 12701  
845-794-2045

#### **Post-Remediation Development:**

Galli Engineering  
35 Pinelawn Road, Suite 209E  
Melville, NY 11747  
631-271-9292  
Attn: Richard D. Galli

Gateway Kensington LLC  
Kevin McManus  
c/o McManus & Associates  
35 Main Street  
Newtown, CT 06470  
(914) 769-6500 ext. 216

## Document Repositories

The document repositories identified below have been established to provide the public with convenient access to important project documents:

Bronxville Public Library  
201 Pondfield Road  
914-337-7680

### Regular Hours

Monday, Wednesday, Friday	9:30 am - 5:30 pm
Tuesday	9:30 am - 9:00 pm
Thursday	1:00 pm - 9:00 pm
Saturday	9:30 am - 5:00 pm
Sunday	1:00 pm - 5:00 pm

### *Summer Changes*

*(June 25<sup>th</sup>, 2006 – September 4<sup>th</sup>, 2006)*

<i>Thursday</i>	<i>1:00 pm - 5:30 pm</i>
<i>Saturday</i>	<i>9:30 am - 1:00 pm</i>
<i>Sunday</i>	<i>Closed</i>

NYSDEC Region 3  
Division of Environmental Remediation  
21 South Putt Corners Road  
New Paltz, NY 12561  
845-256-3154

The documents currently available for review at the document repositories are the Phase I and Phase II Environmental Site Assessments prepared by Galli Engineering, the Brownfield Cleanup Agreement and this Citizen Participation Plan. As the project evolves, additional documents will be placed in those repositories and those in the site's contact list will be so advised.

## **Appendix C – Brownfield Site Contact List**

### STATE GOVERNMENT OFFICIALS

Martin Brand  
NYSDEC Regional Director  
21 S. Putt Corners Road  
New Paltz, NY 12561  
[mdbrand@gw.dec.state.ny.us](mailto:mdbbrand@gw.dec.state.ny.us)

Wendy Rosenbach  
NYSDEC Public Affairs Officer  
21 South Putt Corners Road  
New Paltz, NY 12561  
[warosenb@gw.dec.state.ny.us](mailto:warosenb@gw.dec.state.ny.us)

Michael J. Knipfing  
NYSDEC  
21 South Putt Corners Road  
New Paltz, NY 12561  
[mjknipfi@gw.dec.state.ny.us](mailto:mjknipfi@gw.dec.state.ny.us)

Ed Moore  
NYSDEC  
21 South Putt Corners Road  
New Paltz, NY 12561  
[elmoore@gw.dec.state.ny.us](mailto:elmoore@gw.dec.state.ny.us)

Dan Whitehead  
NYSDEC  
21 South Putt Corners Road  
New Paltz, NY 12561  
[dtwhiteh@gw.dec.state.ny.us](mailto:dtwhiteh@gw.dec.state.ny.us)

Tom Rudolph  
NYSDEC  
21 S. Putt Corners Rd  
New Paltz, NY 12561  
[trudolph@gw.dec.state.ny.us](mailto:trudolph@gw.dec.state.ny.us)

George Heitzman  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[gwhitezm@gw.dec.state.ny.us](mailto:gwhitezm@gw.dec.state.ny.us)

Rosalie Rusinko, Esq.  
NYSDEC  
100 Hillside Ave., Suite 1W  
White Plains, NY 10603  
[rkrusink@gw.dec.state.ny.us](mailto:rkrusink@gw.dec.state.ny.us)

Mike Ryan  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[mjryan@gw.dec.state.ny.us](mailto:mjryan@gw.dec.state.ny.us)

Scott Deyette  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[sxdeyett@gw.dec.state.ny.us](mailto:sxdeyett@gw.dec.state.ny.us)

Mary Young  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[mtyoung@gw.dec.state.ny.us](mailto:mtyoung@gw.dec.state.ny.us)

Karl Berger  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[kaberger@gw.dec.state.ny.us](mailto:kaberger@gw.dec.state.ny.us)

Larry Ennist  
NYSDEC  
625 Broadway  
Albany, NY 12233  
[ldennist@gw.dec.state.ny.us](mailto:ldennist@gw.dec.state.ny.us)

Charlotte Bethoney  
NYSDOH  
ESP, Corning Tower, Rm.1787  
Albany, NY 12237  
[cmb18@health.state.ny.us](mailto:cmb18@health.state.ny.us)

WESTCHESTER LOCAL ELECTED GOVERNMENT OFFICIALS

Anthony Colavita, Supervisor  
Town of Eastchester  
40 Mill Road  
Eastchester, NY 10709

Linda Doherty, Clerk  
Town of Eastchester  
40 Mill Road  
Eastchester, NY 10709

Mary C. Marvin, Mayor  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Harold Porr III, Administrator  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Donald Gray, Trustee  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Guy Longobardo, Trustee  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Anne W. Poorman, Trustee  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Robert S. Underhill, Trustee  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708



Vincent Pici, Bldg Inspector  
Village of Bronxville  
PO Box 7  
Bronxville, NY 10708

Hon. Charles Schumer  
US Senate  
Washington, DC 20510

Hon. Kirsten Gillibrand  
US Senate  
Washington, DC 20510

Representative Nita Lowey  
222 Mamaroneck Ave. Ste#310  
White Plains, NY 10605

State Senator George Latimer  
222 Grace Church St.  
Port Chester, NY 10573

Assemblyperson Amy Paulin  
700 White Plains Road, Ste#252  
Scarsdale, NY 10583

Gordon Burrows, Legislator  
Westchester County  
800 Michaelian Office Building  
White Plains, NY 10601

Tina Seckerson, Clerk  
County Legislature  
800 Michaelian Office Building  
White Plains, NY 10601

Robert Astorino, County Executive  
148 Martine Ave.  
White Plains, NY 10601

Timothy Idoni, County Clerk  
110 MLK Jr. Blvd  
White Plains, NY 10601

Dr. Sherlita Amler, Commissioner  
County Health Department

145 Huguenot Street  
New Rochelle, NY 10801

Edward Burrows, Commissioner  
County Planning Department  
148 Martine Ave.  
White Plains, NY 10601

Jay Pisco, Commissioner  
County Public Works  
148 Martine Ave.  
White Plains, NY 10601

Eileen Mildenberger, Director  
Economic Development  
148 Martine Ave.  
White Plains, NY 10601

## MEDIA CONTACTS

City Editor  
El Clarin  
48 Broadway  
Haverstraw, NY 10927

City Editor  
Rising Publications  
25 Warburton Ave.  
Yonkers, NY 10701

City Editor  
The Business Journal  
3 Gannett Drive  
White Plains, NY 10604

City Editor  
White Plains Reporter Dispatch  
1 Gannett Drive  
White Plains, NY 10604

News Director  
WRTN/WVOX  
1 Broadcast Forum  
New Rochelle, NY 10801

News Director  
Paragon Cable  
701-717 N. MacQuestein  
Mount Vernon, NY 10552

Hank Gross  
Mid-Hudson News Network  
42 Marcy Lane  
Middletown, NY 10941

News Director  
women's e news  
6 Barclay St. 5<sup>th</sup> Floor  
New York, NY 10007

City Editor  
Tri-State Pennysaver  
510 Fifth Avenue

Pelham, NY 10803

City Editor  
Associated Press  
148 Martine Ave. CB Press  
White Plains, NY 10601

City Editor  
Suburban Street News  
170 Hamilton Ave. Ste 211  
White Plains, NY 10601

City Editor  
Patent Trader-Journal News  
185 Kisco Avenue  
Mount Kisco, NY 10549-1409

City Editor  
Yonkers Jewish Chronicle  
584 North Broadway  
Yonkers, NY 10701

News Director  
Cablevision of Westchester  
2013 Crompond Road  
Yorktown Heights, NY 10598

News Director  
WRNN TV  
800 Westchester Ave., Suite S-640  
Rye Brook, NY 10573

City Editor  
Westmore News, Inc.  
33 Broad Street  
Port Chester, NY 10573

News Director  
WFAS-AM  
PO Box 551, 365 Secor Road  
Hartsdale, NY 10530

City Editor  
HomeTown Media Group  
200 William Street  
Port Chester, NY 10573

City Editor  
Gannett Suburban Newspapers  
1 Gannett Drive  
White Plains, NY 10604

City Editor, Metro Desk  
NY Times  
620 8<sup>th</sup> Avenue  
New York, NY 10018

City Editor  
Westchester County Press  
PO Box 152  
White Plains, NY 10602

News Director  
WHUD/WLNA  
PO Box 310  
Beacon, NY 12508

News Director  
News 12  
6 Executive Plaza  
Yonkers, NY 10701

Lisa Phillips, Bureau Chief  
WAMC  
318 Central Ave.  
Albany, NY 12206-2522

City Editor  
White Plains Times  
31 Mamaroneck Times  
White Plains, NY 10601

## ENVIRONMENTAL GROUPS

Scenic Hudson  
1 Civic Center Plaza  
Poughkeepsie, NY 12601

The Nature Conservancy  
Eastern NY Chapter  
265 Chestnut Ridge Road  
Mt. Kisco, NY 10549

Federated Conservationists of Westchester  
78 N. Broadway  
White Plains, NY 1060

Environmental Citizens Coalition  
33 Central Avenue  
Albany, NY 12210

Robert Funicello  
Director of Environmental Projects  
Dept of Environmental Facilities  
270 North Avenue  
New Rochelle, NY 10801

Sierra Club  
Atlantic Chapter  
353 Hamilton Street  
Albany, NY 12210

Karl Coplan, Esq.  
Pace/Riverkeeper  
78 N. Broadway  
White Plains, NY 10603

Laura Haight  
NYPIRG  
107 Washington Ave.  
Albany, NY 12210

Greenway Conservancy  
625 Broadway, 4<sup>th</sup> floor  
Albany, NY 12207

Westchester Environmental Coalition  
PO Box 488  
White Plains, NY 10602

Beczak Environmental Center  
21 Alexander Street  
Yonkers, NY 10701

Westchester County EMC  
414 Michaelian Office Building  
White Plains, NY 10601

WATER SUPPLIER

United Water of New Rochelle  
2525 Palmer Ave  
New Rochelle, NY 10801  
(914) 632-6900

THOSE REQUESTED TO BE PLACED ON SITE CONTACT LIST

(Residential contacts are confidential)

Galli Engineering  
35 Pinelawn Road, Suite 209E  
Melville, NY 11747  
Attn: Richard D. Galli

Gateway Kensington LLC  
Kevin McManus  
c/o McManus & Associates  
35 Main Street  
Newtown, CT 06470  
(914) 769-6500 ext. 216

Karen Timko  
Metro-North  
347 Madison Avenue  
New York, NY 10017

Martin Brand, Regional Director  
NYSDEC  
21 S. Putt Corners Road  
New Paltz, NY 12561

Wendy Rosenbach  
Public Affairs Officer  
NYSDEC  
21 S. Putt Corners Road  
New Paltz, NY 12561

Richard Baldwin  
NYSDEC  
21 South Putt Corners Rd.  
New Paltz, NY 12561

Joshua Cook  
NYSDEC  
625 Broadway  
Albany, NY 12233-7014

Robert Schick  
NYSDEC  
625 Broadway  
Albany, NY 12233-7014



Margaret Duke, Permits  
NYSDEC  
21 S. Putt Corners Rd.  
New Paltz, NY 12561

Rosalie K. Rusinko, Esq.  
NYSDEC  
100 Hillside Ave., Ste 1W  
White Plains, NY 10603-2860

Michael J. Knipfing  
NYSDEC  
21 S. Putt Corners Road  
New Paltz, NY 12561

Harold Evans  
NYSDEC  
625 Broadway  
Albany, NY 12233

Sal Ervolina  
NYSDEC  
625 Broadway  
Albany, NY 12233

Mary Young  
NYSDEC  
625 Broadway  
Albany, NY 12233

Gary Litwin  
NYSDOH  
547 River Street  
Troy, NY 12180

Michael Rivara  
NYSDOH  
547 River Street  
Troy, NY 12180

Carl Obermeyer  
NYSDOH  
50 North Street, Suite 2  
Monticello, NY 12701-1711  
Richard Morse

NYS Assembly Waste Commissions  
Agency Bldg. 4, Fifth Floor, ESP  
Albany, NY 12248

Hon. Hillary R. Clinton  
US Senate  
Washington, DC 20510

Hon. Charles Schumer  
US Senate  
Washington, DC 20510

Hon. Nita Lowey  
222 Mamaroneck Ave., Ste 310  
White Plains, NY 20515

Hon. Suzi Oppenheimer  
222 Grace Church St.  
Portchester, NY 10573

Hon. Amy Paulin  
700 White Plains Rd, Ste 252  
Scarsdale, NY 10583

Hon. Jeff Klein  
State Senate District #34  
L.O.B.  
Albany, NY 12247

Hon. Gordon W. Burrows  
County Legislator  
800 Michaelian Office Building  
White Plains, NY 10601

#### NEARBY SCHOOL OR DAY CARE FACILITIES

Bronxville Public School District  
177 Pondfield Road  
Bronxville, NY 10708  
(914) 395-0500

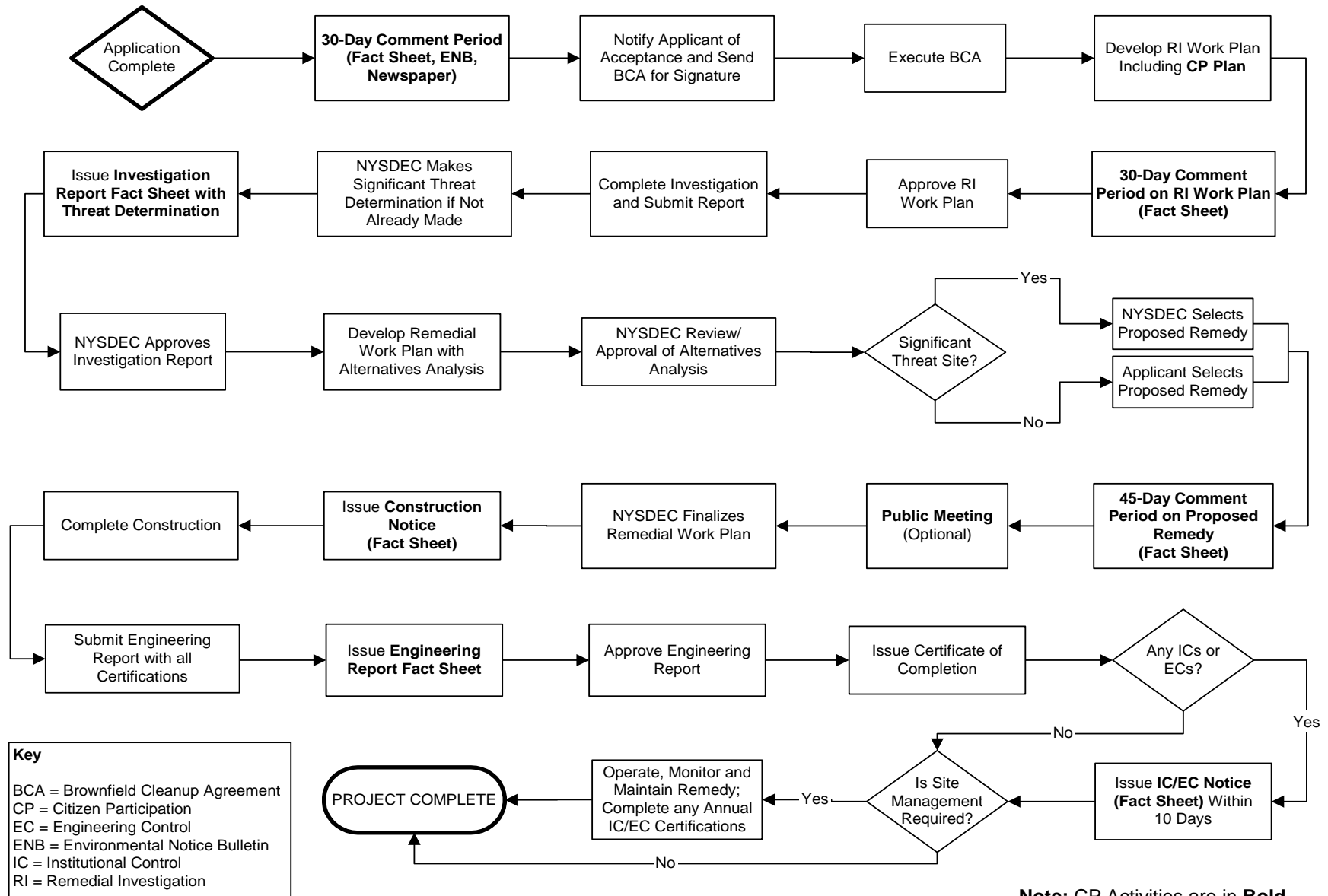
DOCUMENT REPOSITORY

Bronxville Public Library  
201 Pondfield Road  
Bronxville, NY 10708  
(914) 337-7680

## Appendix D – Identification of Citizen Participation Activities

Required Citizen Participation (CP) Activities	CP Activities Occur at this Point
<b>Application Process:</b> <ul style="list-style-type: none"> <li>• Prepare brownfield site contact list (BSCL)</li> <li>• Establish document repositories</li> <li>• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day comment period</li> </ul>	<p>At time of preparation of application to participate in BCP.</p> <p>When NYSDEC determines that BCP application is complete. The 30-day comment period begins on date of publication of notice in ENB. End date of comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice and notice to the BSCL should be provided to the public at the same time.</p>
<b>After Execution of Brownfield Site Cleanup Agreement:</b> <ul style="list-style-type: none"> <li>• Prepare citizen participation (CP) plan</li> </ul>	<p>Draft CP Plan must be submitted within 20 days of entering Brownfield Site Cleanup Agreement. CP Plan must be approved by NYSDEC before distribution.</p>
<b>After Remedial Investigation (RI) Work Plan Received:</b> <ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL about proposed RI activities and announcing 30-day public comment period on draft RI Work Plan</li> </ul>	<p>Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, comment periods will be combined and public notice will include fact sheet. 30-day comment period begins/ends as per dates identified in fact sheet.</p>
<b>After RI Completion:</b> <ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL describing results of RI</li> </ul>	<p>Before NYSDEC approves RI Report.</p>
<b>After Remedial Work Plan (RWP) Received:</b> <ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL about proposed RWP and announcing 45-day comment period</li> <li>• Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager in consultation with other NYSDEC staff as appropriate)</li> </ul>	<p>Before NYSDEC approves RWP. 45-day comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day comment period.</p>
<b>After Approval of RWP:</b> <ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL summarizing upcoming remedial construction</li> </ul>	<p>Before the start of remedial construction.</p>
<b>After Remedial Action Completed:</b> <ul style="list-style-type: none"> <li>• Mail fact sheet to BSCL announcing that remedial construction has been completed</li> <li>• Mail fact sheet to BSCL announcing issuance of Certificate of Completion (COC)</li> </ul>	<p>At the time NYSDEC approves Final Engineering Report. These two fact sheets should be combined when possible if there is not a delay in issuance of the COC.</p>

## Appendix E – Brownfield Cleanup Program Process



## **APPENDIX K**

### **HEALTH AND SAFETY PLAN**

# **HEALTH AND SAFETY PLAN (HASP)**

**January, 2014**

Site:

5-27 Kensington Road  
Section 11, Block 5, Lots 1, 6 and 16  
Bronxville, New York 10708

Prepared for:

Gateway Kensington LLC  
Kevin McManus  
c/o McManus & Associates  
35 Main Street  
Newtown, CT 06470  
(914) 769-6500 ext. 216

Prepared by:

Galli Engineering, P.C.  
734 Walt Whitman Road - Suite 402A  
Melville, New York 11747



## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	OBJECTIVE.....	1
1.2	AMENDMENTS .....	2
<b>2.0</b>	<b>HEALTH AND SAFETY PLAN CONTACTS .....</b>	<b>3</b>
2.1	PROJECT PERSONNEL .....	3
2.2	PROJECT PERSONNEL - DUTIES.....	4
2.2.1	PROJECT MANAGER .....	4
2.2.2	HEALTH AND SAFETY OFFICER .....	4
2.2.3	OTHER FIELD PERSONNEL .....	5
2.2.4	VISITORS.....	5
2.3	UTILITY INFORMATION .....	6
<b>3.0</b>	<b>HEALTH AND SAFETY RISKS .....</b>	<b>7</b>
3.1	HEALTH AND SAFETY SUMMARY .....	7
3.2	SITE TASKS .....	9
3.3	JOB TASK HAZARDS – ALL FIELD TASKS.....	9
3.3.1	PHYSICAL HAZARDS .....	9
3.3.2	ORGANIC VAPORS.....	10
3.3.3	FLAMMABLE VAPORS.....	10
3.3.4	OXYGEN .....	10
3.4	CONFINED SPACE ENTRY PROCEDURES.....	10
3.4.1	PERMIT PROGRAM.....	11
3.4.2	CONFINED SPACE MONITORING .....	12
3.4.3	ATTENDANT DUTIES.....	12
3.4.4	NON-ENTRY RESCUE .....	12
3.5	OCCUPATIONAL NOISE .....	13
3.6	THERMAL STRESS .....	13
3.6.1	HEAT STRESS .....	13
3.6.2	COLD STRESS.....	13
<b>4.0</b>	<b>TRAINING ASSIGNMENTS .....</b>	<b>18</b>
<b>5.0</b>	<b>PERSONNEL PROTECTIVE EQUIPMENT .....</b>	<b>20</b>
5.1	LEVELS OF PROTECTION.....	20
5.2	PROTECTIVE EQUIPMENT AND CLOTHING.....	21
<b>6.0</b>	<b>ENVIRONMENTAL MONITORING.....</b>	<b>20</b>
6.1	INITIAL MONITORING .....	23
6.2	DAILY MONITORING .....	23
6.3	USE AND MAINTENANCE OF SURVEY EQUIPMENT .....	24



<b>7.0</b>	<b>COMMUNITY AIR MONITORING PLAN.....</b>	<b>25</b>
<b>8.0</b>	<b>SITE CONTROL .....</b>	<b>29</b>
8.1	SITE CONTROL MEASURES .....	29
8.2	COMMUNICATIONS.....	29
8.3	SAFE WORK PRACTICES .....	30
8.3.1	<i>USE OF HEAVY EQUIPMENT .....</i>	<i>30</i>
<b>9.0</b>	<b>DECONTAMINATION PROCEDURES.....</b>	<b>33</b>
9.1	EQUIPMENT DECONTAMINATION .....	33
<b>10.0</b>	<b>CONTINGENCY PLANNING.....</b>	<b>34</b>
10.1	EMERGENCY RESPONSE.....	34
10.2	PERSONAL INJURY .....	34

## **ATTACHMENTS**

ATTACHMENT A HEALTH AND SAFETY PLAN AMENDMENT SHEET

ATTACHMENT B ACCIDENT INVESTIGATION FORM

ATTACHMENT C MONITORING DAILY LOGS

ATTACHMENT D CONFINED SPACE ENTRY PERMIT

ATTACHMENT E VAPOR MONITORING FORM

ATTACHMENT F NOISE MONITORING FORM

## **TABLES**

TABLE 2.1	GALLI ENGINEERING PERSONNEL	3
TABLE 3.1.1	ENVIRONMENTAL MONITORING	8
TABLE 3.1.2	HAZARD SUMMARY	9
TABLE 3.6.1	HOT WEATHER WORK	15
TABLE 3.6.2	COLD WEATHER WORK	17
TABLE 7.2	HAND SIGNALS	25

## MSDS DEFINITIONS

TLV-TWA	<b><u>Threshold Limit Value – Time Weighted Average</u></b> – The time-weighted average concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed without adverse effect.
PEL	<b><u>Permissible Exposure Limit</u></b> – Time-weighted average concentrations similar to (and in many cases derived from) the Threshold Limit Values.
REL	<b><u>Recommended Exposure Limit</u></b> – as defined by NIOSH similar to the Threshold Limit Values.
IDLH	<b><u>Immediately Dangerous to Life or Health</u></b> – Any atmospheric condition that poses an immediate threat to life, or which is likely to result in acute or immediate severe health effects. Oxygen deficiency is IDLH.
LEL	<b><u>Lower Explosive Limit</u></b> – The minimum concentration of vapor in air below which propagation of a flame will not occur in the presence of an ignition source.
UEL	<b><u>Upper Explosive Limit</u></b> – The maximum concentration of vapor in air above which propagation of a flame will not occur in the presence of an ignition source.
FP	<b><u>Flash Point</u></b> – The lowest temperature at which the vapor of a combustible liquid can be made to ignite in air.
VP	<b><u>Vapor Pressure</u></b> – The pressure characteristic at any given temperature of a vapor in equilibrium with its liquid or solid form, often expressed in millimeters of mercury (mm Hg).
Odor Threshold	A property displayed by a particular compound. Low detection indicates a physiological sensation due to molecular contact with the olfactory nervous system (based on 50% of the population).
IP	<b><u>Ionization Potential</u></b> – The energy required to form an ion by removal of a given electron from an atom.

## CONTAMINANTS PROFILE

Chemical	Exposure Route	Symptoms of Overexposure
Arsenic	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"> <li>• Stomach ache, nausea, vomiting, diarrhea.</li> <li>• Fatigue, abnormal heart rate.</li> <li>• Skin changes- redness and swelling.</li> </ul>
Barium	Inhalation Ingestion	<ul style="list-style-type: none"> <li>• Difficulty breathing.</li> <li>• Muscle weakness, abnormal heart rate.</li> <li>• Stomach irritation.</li> </ul>
Cadmium	Inhalation Ingestion	<ul style="list-style-type: none"> <li>• Stomach irritation, vomiting, diarrhea.</li> <li>• Lung damage.</li> </ul>
Chromium	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"> <li>• Nasal irritation and nosebleeds.</li> <li>• Upset stomach.</li> <li>• Skin ulcers, swelling and redness of skin.</li> </ul>
Zinc	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"> <li>• Stomach cramps, nausea, diarrhea.</li> <li>• "Metal Fume Fever".</li> <li>• Skin irritation.</li> </ul>
Mercury	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"> <li>• Lung damage, nausea, vomiting, diarrhea.</li> <li>• Increase in blood pressure and/or heart rate.</li> <li>• Skin rash, eye irritation.</li> </ul>
Lead	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"> <li>• Abdominal discomfort, nausea and/or constipation, diarrhea, metallic taste.</li> <li>• Weakness, muscle pains, irritability, headache.</li> <li>• Dizziness.</li> </ul>

PAH's (Polycyclic Aromatic Hydrocarbons)	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"><li>• Risk of lung and skin cancer.</li></ul>
PCB's (Polychlorinated Biphenyls)	Inhalation Ingestion Skin Contact	<ul style="list-style-type: none"><li>• Rash on skin.</li><li>• Liver damage.</li></ul>

## EMERGENCY FIRST AID

1. Survey the situation. Do not endanger your own life. **DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STANDBY PERSON IS PRESENT.**
2. Call 911 or the fire department **IMMEDIATELY.** Explain the physical injury, chemical exposure, fire or release.
3. Decontaminate the victim without delaying life-saving procedures.
4. If the victim's condition doesn't appear to be critical, but seems to be more severe than minor cuts, trained Emergency Medical Services (EMS) personnel should transport he/she to the nearest hospital. Let the doctor assume the responsibility for determining the severity of the injury. If the condition is obviously serious, EMS must transport the victim.
5. Notify the Project Manager.

EMERGENCY FIRST AID PROCEDURES	
To Stop Bleeding	Cardiopulmonary Resuscitation (CPR) BY TRAINED PERSONS ONLY
1. Give medical statement.	1. Give medical statement.
2. Assure airway, breathing and circulation.	2. Arousal: Check for consciousness.
3. Use <b>DIRECT PRESSURE</b> over the wound with clean dressing or your hand (use nonpermeable gloves). Direct pressure will control most bleeding.	3. Open airway with chin-lift.
4. Bleeding from an artery or several injury sites may require <b>DIRECT PRESSURE</b> on a <b>PRESSURE POINT</b> . Use pressure points for 30-60 seconds to help control severe bleeding.	4. Look, listen and feel for breathing.
5. Continue primary care and seek medical aid as needed.	5. If breathing is absent, give 2 full rescue breaths.
	6. Check the pulse for 5 to 10 seconds.
	7. If pulse is present, continue rescue breathing: <b>1 breath every 5 seconds.</b>

## HOSPITAL DIRECTIONS AND INFORMATION

### HOSPITAL DIRECTIONS

Start out going South on Kensington Road toward Sagamore Road.

Turn slight right onto Sagamore Road. Pass through 1 roundabout.

Turn slight right onto Pondfield Road.

Enter next roundabout and take 3rd exit onto Palmer Avenue.

End at Lawrence Hospital Center  
55 Palmer Avenue.

### HOSPITAL INFORMATION

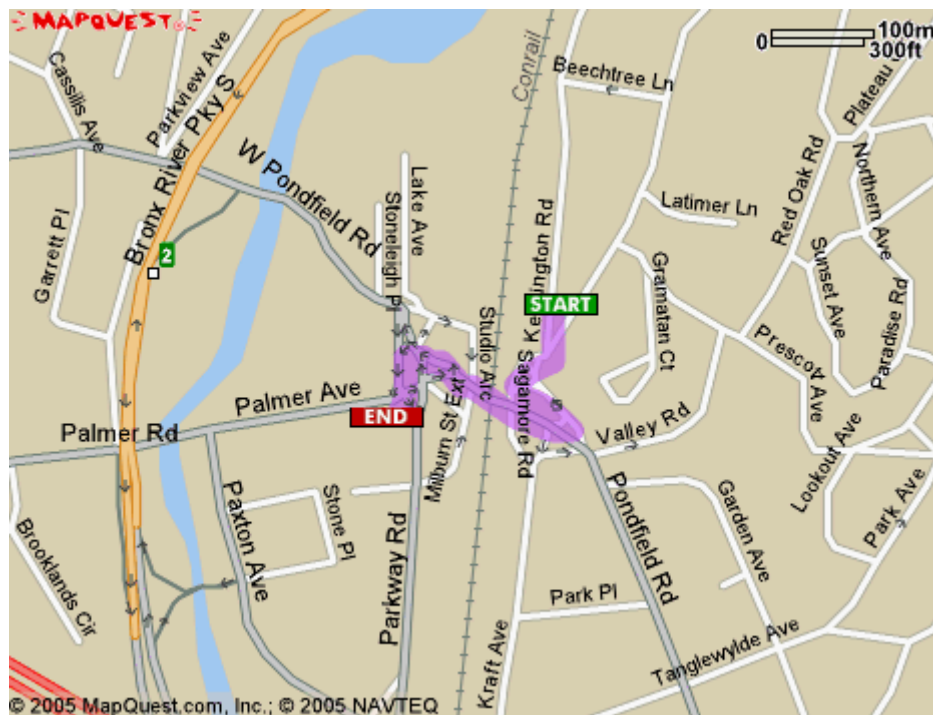
**NAME:** Lawrence Hospital Center

**ADDRESS:** 55 Palmer Avenue

**CITY, STATE:** Bronxville, NY

**PHONE:** 914-787-1000

**EMERGENCY ROOM:** 914-787-1035





## **EMERGENCY CONTACTS**

Ambulance:	911	Project Manager:	(631) 271-9292 Ken Brooks
Fire:	911	Health/ Safety Rep:	(914) 769-6500 Kevin McManus
Police:	911	Client Contact:	(914) 769-6500 Kevin McManus

Poison Control: 1-800-222-1222

Hospital Name: Lawrence Hospital Center  
Hospital Phone: 914-787-1000  
Emergency Room: 914-787-1035

CHEMTREX 1-800-424-9300  
National Response Center 1-800-424-8802  
USEPA (24 Hour hotline) 1-800-424-9346

## **POLICE INFORMATION**

Village of Bronxville Police Department

Telephone: Dial 911 914-337-0500

## **1.0    INTRODUCTION**

Galli Engineering, P.C. has developed a Health and Safety Plan (HASP) for this remedial action in order to ensure that all site activities conform to an integrated and consistent approach which will minimize the danger to human health, the environment, equipment and property, and which will ensure compliance with safety, health and environmental regulations.

This document addresses items specified under various Federal, State, and Local regulations, as well as accepted safety standards. This document covers Galli Engineering employees, any subconsultants, employees of Gateway Kensington LLC, contractors, any subcontractors, material and equipment vendors, and site visitors. It will be made available to all on-site personnel and visitors who may be exposed to hazardous conditions.

The purpose of this Health and Safety Plan (HASP) is to define procedures for identifying environmental risks and providing adequate protection from those risks during site work. All personnel on site must be informed of site emergency response procedures and any potential fire, explosion, health, or safety hazards associated with on-site activities. This HASP covers environmental risks associated with the site remediation being conducted on the site. Those risks include exposure to contaminants present in soil and groundwater; heat; cold; and heavy equipment operation. It does not address general construction safety issues as required by OSHA.

### **1.1    OBJECTIVE**

The primary objective of this HASP is to ensure the well-being of all field personnel and the community surrounding this site during the cleanup of the site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein.

Galli personnel have the authority to stop any work performed at this site if work is not performed in accordance with the requirements of this Health and Safety Plan, or to require any person acting in an unsafe manner to leave the site. This provision is granted as a condition of Galli Engineering's oversight of the project, and is granted without limitation. It is understood that failure to leave the site after request by the Project Manager (PM) or the Health and Safety Officer (HSO) may subject the offending person to disciplinary action, up to, and including arrest and criminal prosecution.

## **1.2 AMENDMENTS**

Changes in the scope of work of this project and/or site conditions could result in the need for expanded or changed coverage in this HASP. In such a case, the HASP must be amended in writing on the Health and Safety Plan Amendment Sheet (Attachment A) and approved by the Project Manager and Health and Safety Officer. As these amendments become effective, the Health and Safety Officer will hold "tailgate meetings" with project personnel to ensure their familiarization with updated procedures.

## **2.0 HEALTH AND SAFETY PLAN CONTACTS**

All team members will have experience in hazardous waste site operations commensurate with the field activities for which they are responsible. All team members have participated in a 40-hour hazardous waste training program in accordance with OSHA requirements 29 CFR Part 1910.

### **2.1 PROJECT PERSONNEL**

The following Galli Engineering personnel are assigned to this project in the capacities indicated.

**TABLE 2.1  
GALLI ENGINEERING PERSONNEL**

<b>TITLE</b>	<b>NAME</b>	<b>TELEPHONE</b>
Project Manager	Ken Brooks, P.E.	(631) 271-9292
Health and Safety Officer	Kevin McManus	(914) 796-6500

#### **Client Contact Information:**

Client Name: Gateway Kensington LLC  
Kevin McManus  
c/o McManus & Associates  
35 Main Street  
Newtown, CT 06470

Contact: Kevin McManus  
(914) 796-6500 ext. 216

## **2.2 PROJECT PERSONNEL - DUTIES**

Galli Engineering, P.C. will oversee all phases of the remediation project on behalf of the client. The following management structure will be instituted for the purpose of successfully and safely completing this project.

### **2.2.1 PROJECT MANAGER**

The Project Manager is ultimately responsible for ensuring that all project participants abide by the requirements set forth in this plan. He will oversee and direct field activities and be responsible for ensuring compliance with this plan. Specifically, the Project Manager will be responsible for implementing the project and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

- coordinating the activities of all subcontractors, to include informing them of appropriate personal protective equipment requirements
- selecting a Health and Safety Officer and field personnel for the remedial work to be undertaken on the site
- providing authority and resources to ensure that the Health and Safety Officer is able to implement and manage safety procedures
- preparing reports and recommendations about the project to the client, oversight agencies, and affected Galli Engineering personnel
- ensuring that all persons allowed to enter the site (e.g., EPA, contractors, state officials, visitors) are made aware of the potential hazards associated with the substances known or suspected to be on site
- ensuring that the Health and Safety Officer is aware of all of the provisions of this HASP and is instructing all personnel on site about the safety practices and emergency procedures defined in the plan and
- ensuring that the Health and Safety Officer is making an effort to monitor site safety, and has designated a Field Team Leader to assist with the responsibility when necessary
- ensuring that the tasks assigned are being completed as planned and on schedule

### **2.2.2 HEALTH AND SAFETY OFFICER**

The Health and Safety Officer (HSO) will be responsible for providing technical coordination for the health and safety program. The HSO will act in an advisory capacity

reporting to the Project Manager as appropriate. He shall be responsible for the implementation of the HASP on site. Specific duties will include:

- monitoring the compliance of field personnel for the routine and proper use of the PPE that has been designated for each task
- stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public
- monitoring personnel who enter and exit the site and all controlled access points
- reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager
- dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public, and reporting the same to the Project Manager
- reporting any accidents or violations of the HASP to the Project Manager, and documenting the same in the project records
- knowing emergency procedures, evacuation routes and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments
- coordinate upgrading and downgrading of PPE with the Project Manager and Health and Safety Officer, as necessary, due to changes in exposure levels, monitoring results, weather, and other site conditions
- perform air monitoring with approved instruments in accordance with requirements stated in this HASP
- approving the selection of the types of Personal Protective Equipment (PPE) to be used on site for specific tasks
- conducting air monitoring for compliance with all company health and safety policies

### **2.2.3 OTHER FIELD PERSONNEL**

All field personnel shall be responsible for acting in compliance with all safety procedures outlined in the Health and Safety Plan. Any hazardous work situations or procedures shall be reported to the Health and Safety Officer so that corrective steps can be taken.

### **2.2.4 VISITORS**

All site visitors will be made aware of the provisions of the HASP by a pre-entry briefing given by the Project's Management Staff. Visitors will be expected to comply with relevant OSHA requirements. Visitors will also be expected to provide their own PPE required by the HASP.

## **2.3 UTILITY INFORMATION**

Galli Engineering representatives are responsible for contacting appropriate agencies prior to conducting on-site activities, when applicable. Where utilities may be present, the appropriate companies will be contacted sufficiently in advance so as not to interrupt work schedules.

Gas Company- Con Edison- 24 Hour Emergency Hotline 1-800-752-6633

Electric Company- Con Edison- 24 Hour Emergency Hotline 1-800-752-6633

Telephone Company- Verizon

Water Company- United Water of New Rochelle 914-632-6900

Other- As Applicable

### **3.0 HEALTH AND SAFETY RISKS**

The hazards posed on this site are due to physical elements (falls, slips, electrocution, equipment failure and cave-in), exposure to contaminants in soil; heat and cold; or physical injury from mechanical equipment. Mechanical equipment used for excavating poses a risk due to moving parts and/or pinch hazards. In order to reduce these risks, operations will only be conducted in previously surveyed and designated areas.

The contaminants expected to be present are volatile organic compounds (VOC's), semi volatile organic compounds (SVOC's), and priority pollutant metals (PP Metals).

### **3.1 HEALTH AND SAFETY SUMMARY**

The primary contaminants of concern include SVOC's and PP Metals. Modified Level D is the minimum acceptable level of protection for this site. For the purposes of this plan, Modified Level D PPE includes work clothing dictated by the weather, long sleeve shirt and pants, safety-toe shoes and hard hats. Where appropriate, gloves, eye protection, and chemical resistant suits will also be worn. High visibility vests will be worn when appropriate.

To minimize the risks from materials expected on site, environmental monitoring will be conducted throughout the investigation.



TABLE 3.1.1 ENVIRONMENTAL MONITORING			
Instrument	Function	Measurement	Action
Photoionization Detector (PID)	Measures total organic vapors	0-5 ppm	• Level D required
		5 ppm–25 ppm	• Stop work until levels drop below 5 ppm
		> 25 ppm	• Stop work and notify HSO
Oxygen/Combustible Gas Meter (O <sub>2</sub> /LEL)  <b>NOTE:</b> Combustible gas meter readings obtained in an oxygen deficient atmosphere will not be accurate, and are to be disregarded. Leave the area immediately.	Measures oxygen level (O <sub>2</sub> ) and lower explosive limit (% LEL)	O <sub>2</sub> 19.5-22%	• Acceptable conditions – Continue normal activity
		O <sub>2</sub> <19.5%	• <b>Leave area immediately</b> • Notify PM and HSO if unable to achieve acceptable conditions
		O <sub>2</sub> >22%	• <b>Leave area immediately:</b> this atmosphere is extremely flammable • Notify PM and HSO
		LEL<10%	• Acceptable conditions – Continue normal activity
		LEL>10%	• <b>Leave area immediately</b> • Contact PM and HSO for guidance on venting and other safety measures
* NOTE: Instruments must be calibrated according to manufacturer’s recommendations			

**TABLE 3.1.2**

**HAZARD SUMMARY**

<b>JOB TASK</b>	<b>MINIMUM PPE</b>	<b>MONITORING FREQUENCY</b>
Excavation Oversight	Modified Level D	Start-up of work, each 30 min.

**3.2 SITE TASKS**

The field tasks at this site (current and subsequent work stages) may include:

- Excavating and backfilling
- Installation of soil venting system
- Vapor screening

**3.3 JOB TASK HAZARDS – ALL FIELD TASKS**

The following hazards may be encountered during any of the tasks that may be carried out on site:

**3.3.1 PHYSICAL HAZARDS**

Physical hazards exist where heavy machinery (such as an excavator) is operating, where objects such as manhole cover may be opened, or from any field activity, that involves moving or lifting. Protection from physical hazards is best afforded by always being alert and aware of activities in one's area, warning others and by wearing hard hats, long sleeved clothing, steel-toed work boots and eye protection when appropriate. Workers will be informed of any potential trip and fall hazards during regular health and safety meetings. Whenever possible, trip and fall hazards will be eliminated or clearly identified with yellow caution tape or barricades.

### **3.3.2 ORGANIC VAPORS**

The inhalation of volatile organic vapors during operations can pose a potential health hazard. Hazard reduction procedures include monitoring the ambient air with a PID and/or FID and use of Personal Protective Equipment. Workers should stand upwind of contamination sources whenever possible. In no event will any confined space entry be performed prior to monitoring the space for oxygen.

### **3.3.3 FLAMMABLE VAPORS**

The Fire Department may be reached at 911. Presence of flammable vapors can pose a potential fire hazard as well as a health hazard. Hazard reduction procedures include monitoring the ambient air with an LEL meter. If the LEL reading exceeds 10%, leave the site immediately and contact the fire department, the Health and Safety Officer and the Project Manager. Type ABC Fire Extinguishers will be present on site at all times.

### **3.3.4 OXYGEN**

Atmospheres that contain a level of oxygen less than 19.5% pose an immediate danger to life or health due to oxygen deficiency. If oxygen is less than 19.5%, do not enter the space. Atmospheres that contain greater than 23% pose extreme fire hazards. All personnel encountering atmospheres that contain more than 23% oxygen must evacuate the site immediately and notify the fire department.

## **3.4 CONFINED SPACE ENTRY PROCEDURES**

All confined space entries will comply with OSHA 29 CFR 1910.146. A confined space is an area that presents special hazards to anyone working within. Storage tanks, subsurface vaults, and some basements and sheds are examples of confined spaces.

Confined spaces are areas having the following characteristics:

1. Is large enough that a person may enter and work.
2. Is not designed for continuous occupancy and may:
  - contain or have the potential to contain a hazardous atmosphere
  - have the potential to engulf or entrap an occupant
  - contain other hazards
  - have unfavorable natural ventilation
3. Has limited means of entrance and exit. Examples:
  - tanks
  - silos
  - digesters
  - vaults (4 feet deep and deeper)
  - trenches (4 feet deep and deeper)
  - hoppers
  - pits
  - diked areas (may hold dense gases)
  - tunnels
  - cisterns
  - wells

All confined spaces will require permit entry as described below.

### **3.4.1 PERMIT PROGRAM**

A permit will be required whenever a confined space needs to be entered. The permit form is presented in Attachment D. Elements of the permit include: the purpose for the entry, identity of the permit space, date and duration of entry, the names of authorized entrants and attendants, environmental monitoring required and the results of that monitoring, the type of protective equipment to be worn, measures to be taken to isolate the space and the name of the person conducting, monitoring and authorizing the entry. Isolation of space involves controlling live energy through a “lock-out” and “tag-out” procedure; removing of flammable vapors to deprive potential fire through purging and displacement of oxygen to deprive a potential fire through the process of inerting.

### **3.4.2 CONFINED SPACE MONITORING**

Monitoring will be continuous during the time the space is occupied. Entry will not be permitted (or will be discontinued) if the oxygen level is less than 19.5% or greater than 23%; if the LEL reaches 10%; if the PID reads above 20 ppm; or if toxic levels reach the Threshold Limit Value (TLV).

Organic, toxic, or combustible vapors may be trapped in a confined space resulting in exposure to any person entering the space. Anoxic conditions (a lack of oxygen) may also occur as oxygen is displaced or consumed. Prior to and during work in a confined space, the space must be monitored for the hazards described previously. Specifically, monitoring must determine:

- oxygen level
- combustible vapors (LEL)
- toxic vapors or dusts

### **3.4.3 ATTENDANT DUTIES**

Prior to entry, at least one attendant will be designated for each person entering a confined space. These attendants will remain in constant visual contact with the entrants, looking for signs of exposure. They will have no other assigned duties except for environmental monitoring of the space. In no instance are they permitted to enter the space or leave their post.

### **3.4.4 NON-ENTRY RESCUE**

Employees will not be permitted to enter confined spaces without appropriate rescue equipment. The entrant must don a retrieval harness to which a tether will be attached. As appropriate, the tether will be tied to a fixed object on the surface, or to a tripod. In the event that an entrant shows signs of exposure, the attendant will sound the alarm and begin non-entry rescue. After the entrant is rescued from the confined space, as a precaution, they will be transported to the hospital for evaluation.

### **3.5 OCCUPATIONAL NOISE**

Workers will be protected from excessive noise exposure by means of equipment maintenance, noise monitoring, and hearing conservation programs that comply with 29 CFR 1910.95. Hearing protection will be required if the sound level equals or exceeds 85 decibels as a time weighted average on the A-weighted scale or if the sound level exceeds 140 decibels regardless of the duration of exposure. Sound level will be measured with a sound level meter during site activities. The decibel level will be measured using a slow response setting on the A-weighted scale. If required, hearing protection will be worn during work tasks involving heavy equipment, internal combustion engines, drilling rigs, or other sources of elevated noise levels.

### **3.6 THERMAL STRESS**

#### **3.6.1 HEAT STRESS**

During warmer seasons, work may need to be conducted under conditions of excessive heat. At these times, work schedules may be adjusted to cooler times of day and to allow workers time for rest and intake of fluids.

Heat stress can occur even in moderate temperatures and may result in any or all of the following:

1. Heat Rash: A result of continuous exposure to heat, humid air, stagnant air, or chafing clothes. Heat rash is uncomfortable and decreases the ability of the body to tolerate heat.
2. Heat Cramps: A result of the inadequate replacement of body electrolytes lost through perspiration. Signs of heat cramps include severe spasms and pain in the extremities and abdomen.
3. Heat Exhaustion: A result of increased stress on vital organs as they attempt to meet the body's cooling demands. Signs include shallow breathing; pale, cool and moist skin; profuse sweating; and dizziness.
4. Heat Stroke: A result of an overworked cooling system. Heat stroke is the most serious form of heat stress. Body surfaces must be cooled and medical

attention must be obtained immediately to prevent severe injury or death. Signs include red, hot dry skin; absence of perspiration; nausea; dizziness and confusion; strong, rapid pulse; and coma.

Occurrence of heat stress depends on such factors as environmental conditions, clothing, workload, an on-site worker's physical condition and characteristics, and the type of PPE required for the work task. Some types of PPE are heavy, increase the body's expenditure of energy, and reduce the efficiency of the body's normal heat exchange mechanisms.

Heat stress may be of particular concern when the wet-bulb air temperature exceeds 70 °F. Depending on the degree and nature of possible heat stress to be encountered on site, the HSO will choose from the following heat stress control actions:

- Ensure that all rest periods are taken in a shaded rest area, if possible.
- Regulate rest periods, and ensure that workers will not be assigned other tasks during rest periods.
- Notify all workers of health hazards and the importance of adequate rest, acclimatization, and proper diet; teach workers to recognize heat stress and to conduct first aid to prevent heat stress.

The following chart based on wet bulb temperature, contains general guidelines that can be used to pace hot-weather field work:

**TABLE 3.6.1**  
**HOT WEATHER WORK**  
**Wet Bulb Temperature**

<b>Work-Rest Regimen</b>	<b>Degrees Fahrenheit (°F)</b>		
	<b>Light Work</b>	<b>Moderate Work</b>	<b>Heavy Work</b>
Continuous Work	86	80	77
75 % Work – 25 % Rest, each hour	87	82	78
50 % Work – 50 % Rest, each hour	89	85	82
25 % Work – 75 % Rest, each hour	90	88	86

Source: Adapted from ACGIH, 1994

### **3.6.2 COLD STRESS**

Cold stress may be of particular concern when a wind chill-adjusted temperature of 40 °F or less is expected. The following guidelines describe different forms of cold stress, conditions under which cold stress may occur, and preventive measures:

Personnel working outdoors in temperatures at or below freezing (or even higher temperatures) may be frostbitten. Working in extreme cold even for a short time may cause severe injury to the surface of the body or may result in profound generalized cooling, causing hypothermia and possibly death. Areas of the body that have a high surface area-to-volume ratio, such as ears, fingers, and toes, are most susceptible to frostbite. Local injury from cold is included in the generic term “frostbite.” Frostbite symptoms can be categorized according to the following degrees of severity:

- Superficial frostbite causes the skin to have a waxy appearance and to be firm to the touch while the tissue underneath is resilient.
- Deep frostbite causes tissues to be cold, pale, and solid. This degree of frostbite is extremely serious.
- Systemic hypothermia manifests itself in five stages of symptoms:
  - 1) shivering;
  - 2) apathy, listlessness, sleepiness, and sometimes rapid cooling of the body to less than 95 °F;
  - 3) unconsciousness, glassy eyes, and slow respiration and pulse;
  - 4) freezing of the extremities; and
  - 5) death.
- Trench foot or immersion foot occurs when feet are kept cold and wet for an extended period of time. Feet become pale, cold, and possibly without pulse. During recovery, feet become red, hot, and swollen from excessive blood flow.

Ambient temperatures and wind velocity influence the development of a cold injury. Wind chill (the chilling effect of moving air) should be taken into consideration along with the air temperature when determining whether or not outdoor work is safe. Thermal socks, long



cotton or thermal underwear, hard-hat liners, and other cold-weather gear can help prevent hypothermia. Blankets, warm drinks (other than caffeinated drinks), and warm rest areas are essential.

The following chart shows the wind chill factor for varying temperatures and wind speeds.

TABLE 3.6.2  
COLD WEATHER WORK



## Wind Chill Chart



		Temperature (°F)																		
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63	
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72	
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77	
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81	
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84	
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87	
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89	
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91	
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95	
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times

30 minutes

10 minutes

5 minutes

Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V<sup>0.16</sup>) + 0.4275T(V<sup>0.16</sup>)

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Source: Adapted from National weather service, 2001

**Note:** Wind Chill Temperature is only defined for temperatures at or below 50 degrees F and wind speeds above 3 mph. Bright sunshine may increase the wind chill temperature by 10 to 18 degrees F

#### **4.0 TRAINING ASSIGNMENTS**

All personnel conducting on-site activities must document training to the satisfaction of the HSO as follows:

- All personnel conducting site investigation shall have a minimum of three days of field experience under the direct supervision of a trained, experienced person.
- Employees conducting confined space activities must have completed training as required in 29 CFR 1910.146. Confined space attendants must be additionally familiar with non-entry rescue techniques. Training must be kept current with annual retraining.
- Employees involved in trenching operations must have completed training in trenching and shoring as per 29 CFR 1926.650. Training must be kept current with annual retraining.

Before on-site activities begin, a briefing will be presented by the HSO for all personnel who will participate in on-site activities. The following topics will be addressed during the briefing:

- Name of the HSO and the designated alternate
- Site history
- Hazardous chemicals that may be encountered during on-site activities
- Physical hazards that may be encountered on site
- Training requirements
- Levels of protection to be employed for work tasks
- Work tasks
- Environmental surveillance equipment in use
- Action levels and identification of situations requiring an upgrade or downgrade in levels of protection
- Site control measures, including site control zones, communications, and SWPs
- Emergency communication signals and codes
- Accident emergency procedures including:
  - Fire and explosion emergency procedures
  - Emergency telephone numbers
  - Emergency routes

Any other health and safety-related topics that may arise before on-site activities begin will also be discussed at the briefing.

Issues that arise during implementation of on-site activities will be addressed during “tailgate” safety meetings to be held daily, before the shift begins. Any changes in procedures or site-specific health and safety related matters will be addressed during these meetings.

## **5.0 PERSONNEL PROTECTIVE EQUIPMENT**

PPE will be worn to protect field personnel from known or suspected physical hazards, and air and soil borne contamination. The levels of personal protection to be used for work tasks have been selected based on known or anticipated physical hazards, and concentrations of contaminants that may be encountered on site, and their chemical properties, toxicity, exposure routes, and contaminant matrices. The following sections describe levels of protection; protective equipment and clothing; limitations of protective clothing; the duration of work tasks; and respirator selection, use, and maintenance. Because minimal hazards are anticipated, all activities will initially be performed with a modified “Level D” protection.

### **5.1 LEVELS OF PROTECTION**

Personnel will wear protective equipment when site activities involve known or suspected atmospheric contamination; when vapors, gases, or particulates may be generated by site activities; or when direct contact with skin-affecting substances may occur.

Levels of protection and necessary components for each are classified under four categories according to the degrees of protection afforded:

- Level D: This level of PPE is worn as a work uniform, not in any area with respiratory or skin hazards. This level provides minimal protection against chemical hazards.
- Level C: This level of PPE will not be used on this project unless warranted by site conditions.
- Levels B and A involve protective suits and supplied air and will not be used on this site.

## 5.2 PROTECTIVE EQUIPMENT AND CLOTHING

The following general levels of protection and the associated PPE ensembles have been selected for use by field personnel during field activities. The PPE used for a specific job will be selected for its protection from the anticipated contaminants. Because the overall anticipated hazard level is low, initial field work will be performed using “Level D” protection. Based upon the collection of additional soil samples and subsequent testing, there may be a need to upgrade the level of protection. If the site conditions or the results of air monitoring performed during on-site activities warrant “Level C” protection, all field personnel will withdraw from the site, immediately notify the HSO, and wait for further instructions. A description of equipment and clothing required for “Level D” protection is provided below.

Protective clothing shall be furnished for on-site personnel consisting of:

### Modified Level D Equipment:

(\* refers to optional equipment, if applicable)

- Work clothing as dictated by weather
- Pants and shirt
- Gloves\*
- Hardhat
- Safety glasses\*
- Safety shoes or boots; chemical-resistant, steel toe and shank
- Outer, disposable, chemical resistant boots\*
- Face shield\*

Upgrade as necessary to Level C when air monitoring Action Levels are exceeded.

### Level C Equipment:

(\* refers to optional equipment, if applicable)

- Full-face or half-mask air purifying, canister-equipped respirator (NIOSH approved)
- Hooded chemical-resistant clothing
- Coveralls\*
- Gloves, inner, chemical-resistant

Gloves, outer, chemical-resistant  
Safety boots; chemical-resistant, steel toe and shank  
Disposable outer, chemical-resistant boot covers\*  
Hardhat  
Escape air mask\*  
Face shield\*  
2 way radios (worn under outside protective clothing)\*

All prescription eyeglasses in use on the Site shall be safety glasses. Prescription lens inserts shall be provided for full face respirators.

Footwear used on-site shall be steel-toed, steel shank safety shoes or boots, with chemical resistant soles.

All on-site personnel shall wear a hardhat when engaging in construction or excavation activities.

All personnel protective equipment worn on-site shall be decontaminated or properly disposed of at the end of the work day. The HSM is responsible for ensuring all reusable personnel protective equipment is decontaminated and sanitized before being reissued.

It is the responsibility of a contractor to provide respirators for their employees. Respirators shall be individually assigned and not interchanged between workers.

Cartridges, canisters and filters shall be changed daily or upon breakthrough, whichever occurs first. A procedure for assuring periodic cleaning, maintenance and change-out of filters shall be provided by the Contractor.

Modified Level D shall be the minimum level of protection set for all primary operations performed at the Site, unless an upgrade is required in accordance with the provisions set forth in the Air Monitoring program.

## **6.0 ENVIRONMENTAL MONITORING**

Air monitoring will be periodically performed to protect field personnel and the public against exposure to airborne hazardous substances and to determine appropriate levels of PPE for work tasks. The following sections discuss initial air monitoring, daily air monitoring, monitoring parameters, use and maintenance of survey equipment, heat stress monitoring, and cold stress monitoring.

### **6.1 INITIAL MONITORING**

Initial monitoring of the work area will be performed prior to site work. This testing will determine background levels, and determine if any immediate hazards exist. Monitoring will be performed using real-time field survey instrumentation, including a PID, an oxygen level meter, and an LEL meter.

### **6.2 DAILY MONITORING**

Air monitoring will be performed during all site activities. This type of monitoring will be performed as a minimum requirement when the following situations arise:

- Daily at all locations where work will occur.
- At all active excavation points.
- When work begins on a different portion of the site.
- When contaminants other than those previously identified are encountered.
- When a different type of operation is initiated.
- When workers experience physical difficulties.

Required survey instrumentation, sampling procedures, and monitoring procedures are specified below. Sampling methods will be subject to periodic review by the HSO.



### **6.3 USE AND MAINTENANCE OF SURVEY EQUIPMENT**

All personnel using field survey equipment will be familiar with its operation and limitations. Maintenance and calibration will be performed in accordance with manufacturer guidelines by a designated individual familiar with the devices. Repairs, maintenance, and routine calibration of these devices will be recorded in an equipment maintenance logbook that will be signed by the service technician. The equipment maintenance logbook for each instrument will be kept in that instrument's case.

The Health and Safety Officer will be responsible for ensuring that survey equipment is kept clean, fully charged, and ready for use.

## **7.0 COMMUNITY AIR MONITORING PLAN**

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

Due to the nature of known contaminants at the site, real-time air monitoring for volatile organic compounds (VOC's) and particulates levels at the perimeter of the exclusion zone or work area will be necessary.

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

Periodic monitoring for VOC's will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving

a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

#### VOC Monitoring, Response Levels and Actions

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

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or

residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

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

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

#### Particulate Monitoring, Response Levels and Actions

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ( $\text{mcg}/\text{m}^3$ ) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed  $150 \text{ mcg}/\text{m}^3$  above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than  $150 \text{ mcg}/\text{m}^3$  above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust

suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150/mcg/m<sup>3</sup> of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

## **8.0 SITE CONTROL**

The site is not available to the public. No special site control measures need to be implemented beyond the existing fence. All visitors will have had to obtain an escort before entering the property.

### **8.1 SITE CONTROL MEASURES**

To protect members of the general public as well as workers, access to the site will be restricted to authorized personnel. Any visitors to the area must present proper identification and be authorized to be on site by the HSO. Visitors must comply with all provisions of this HASP. The HSO will identify work areas that visitors or personnel are authorized to enter and will enforce site control measures.

### **8.2 COMMUNICATIONS**

The following hand signals will be employed by site personnel in emergency situations or when verbal communication is difficult.

**TABLE 7.2**  
**HAND SIGNALS**

SIGNAL	DEFINITION
Hands clutching throat	Out of air or cannot breathe
Hands on top of head	Need assistance
Thumbs up	Okay, I am all right, or I understand
Thumbs down	No or negative
Arms waving upright	Send backup support
Gripping partner's wrist	Exit area immediately

### **8.3 SAFE WORK PRACTICES**

SWP requirements for site activities include the following:

- Basic equipment includes but is not limited to the following: first aid kit, portable eyewash, and ABC extinguishers.
- All personnel will be required to wash their hands and faces before eating, drinking, smoking, or applying cosmetics.
- Containers will be moved only with the proper equipment and will be secured to prevent dropping or loss of control during transport.
- Smoking, matches and lighters will not be permitted in confined spaces or within 75 feet of any flammable or explosive materials.
- Site personnel will not work alone, and will observe each other for signs of toxic exposure and heat or cold stress. Indications of adverse effects include but are not limited to the following:
  - Changes in complexion and skin discoloration
  - Changes in coordination
  - Changes in demeanor
  - Excessive salivation and papillary response
  - Changes in speech patterns

Site personnel will inform each other of non-visual effects of illness, such as the following:

- Headache
- Dizziness
- Nausea
- Blurred vision
- Cramps
- Irritation of eyes, skin, or the respiratory tract

#### **8.3.1 USE OF HEAVY EQUIPMENT**

Truck-mounted heavy equipment and field trucks are among the types of equipment that may be used during site investigation. Heavy equipment can present a substantial hazard to workers. General requirements for motor vehicles and material-handling equipment are provided in the Construction Industry Standards, 29 CFR 1926, Subpart O. Any or all of the following precautions will be followed when heavy equipment is in use:

- Heavy equipment will be inspected by the operator before each work shift. The Health and Safety Officer will ensure compliance with this precaution.
- Chains, hoists, slings and wire rope will be inspected daily for signs of wear, kinking, corrosion, or other damage.
- Equipment operators will be instructed to report any abnormalities, such as equipment failure, oozing liquids and unusual odors to their supervisors or the HSO.
- Only qualified and licensed personnel will operate heavy equipment.
- Hard hats and steel-toed boots will be worn at all times around heavy equipment.
- Workers will not assume that the equipment operator is keeping track of their exact location. Workers will never walk directly behind or to the side of heavy equipment without the operator's knowledge.
- Workers will maintain visual contact with equipment operators at all times.
- When an operator must maneuver equipment in tight quarters, the presence of a second person will be required to ensure adequate clearance. If much backing is required, two ground guides will be used: one in the direction the equipment is moving, and the other in the operator's normal field of vision to relay signals.
- Hand-signal communications will be established when verbal communication is difficult. One person per work team will be designated to give hand signals to equipment operators.
- Equipment with an obstructed rear view must have an audible alarm that sounds when the equipment is moving in reverse (unless a spotter guides the operator).
- Parking brakes will be kept engaged when equipment is not in use.
- Blades, buckets, dump bodies, and other hydraulic systems will be kept fully lowered when equipment is not in use.
- Equipment cabs will be kept free of all nonessential and loose items.
- Seat belts must be present in all vehicles having rollover protective structures (ROPS).
- With certain exceptions, all material-handling equipment will be provided with ROPS.
- Material-handling equipment that lacks a ROPS will not be operated on a grade unless the grade can safely accommodate the equipment involved.
- Only chains, hoists, straps, and other equipment that safely aids transport of heavy materials will be used.
- Tools will be stored in clean, secure areas to prevent damage, loss, or theft.
- Workers will not use equipment that they are not familiar with. This precaution applies to heavy as well as light equipment.
- Loose-fitting clothing and loose, long hair will be prohibited around moving machinery.
- Workers will make sure that no underground or overhead power lines, sewer lines, gas lines, or telephone lines present a hazard in the work area.
- All personnel who are not essential to work activities will be kept out of the work area.
- Workers will be aware of their footing at all times.
- Workers will remain alert at all times.
- Any equipment that is defective will be immediately taken out of service.



Access within an “established work zone” radius of any on-site operation is prohibited to all but Galli Engineering, P.C. field personnel and approved subcontractors. Adequate safety instruction signs shall be placed in areas where admittance is restricted due to a hazardous environment.

## **9.0 DECONTAMINATION PROCEDURES**

All operations conducted at this site should be considered as having the potential to contaminate personnel and equipment. To prevent the transfer of any contamination to vehicles, administrative areas and personnel, the following procedures must be followed.

All areas with excavations or where investigation work is being conducted will be considered contaminated until proven otherwise. These areas will be designated with barrier tape, cones, and barricades as appropriate, and will be considered the “hot zone.” Decontamination will occur in an adjacent “support zone” with suitable protection of uncontaminated areas. Items taken into the “hot zone” will be thoroughly decontaminated or disposed of as contaminated waste.

### **9.1 EQUIPMENT DECONTAMINATION**

Heavy equipment such as backhoes will be rinsed clean with water to remove visible soil.

## **10.0 CONTINGENCY PLANNING**

It is possible that new work could reveal the presence of additional contamination beyond that already delineated. In such a case, the person discovering the contamination (probably by smell or by observing stained soil) shall immediately notify the Health and Safety Officer and Galli Engineering to determine if new or additional remedial actions may be necessary. Do not perform any further work in an area outside the defined work area. The site must not be re-entered until back-up help, monitoring equipment and/or personal protective equipment is on hand and re-entry is authorized by appropriate project personnel.

### **10.1 EMERGENCY RESPONSE**

The HSO will be notified of any on-site emergencies and will be responsible for ensuring that appropriate emergency procedures are followed. First aid equipment is located on-site. In the event of an accident or emergency situation, immediate action must be taken by the first person to recognize the event. That person, or his designee, must notify the Health and Safety Officer about the situation immediately after emergency procedures are implemented.

### **10.2 PERSONAL INJURY**

If an injury occurs, the HSO will be notified immediately. Appropriate first aid will be administered and, if necessary, the injured individual will be transported to the designated medical facility. If the injury is life threatening or involves several persons, the Health and Safety Officer will notify the hospital via telephone, giving available details of the accident and injuries sustained. If the injury does not affect the safety or performance of site personnel, operations may continue. The individual contractor on his OSHA 200 Log of Occupational Injuries and Illnesses and on the Accident Investigation Form must document the injury.

FACILITY:

DATE:

TIME:

SETTING	SOUND		
	ELAPSED TIME		
	1 MINUTE	2 MINUTES	3 MINUTES
	dBA	dBA	dBA
SPL			
MAX			
MIN			
LEQ			

SETTING	VIBRATION			
	ELAPSED TIME/DISPLACEMENT			
	1 MINUTE		2 MINUTES	
	dBA	DISP (in.)	dBA	DISP (in.)
SPL				
MAX				
MIN				
LEQ				

## **ATTACHMENT A**

### **HEALTH AND SAFETY PLAN AMENDMENT SHEET**

This section will be used to provide additional or updated information as site conditions or approved conditions warrant.

## **HEALTH AND SAFETY PLAN AMENDMENT SHEET**

Project Name:

Project Number:

Location:

Changes in field activities or hazards:

Proposed Amendment:

Proposed by: \_\_\_\_\_

Date

Approved by: \_\_\_\_\_

Date

Project Manager: \_\_\_\_\_

Date

Declined by: \_\_\_\_\_

Date

Amendment Number:

Amendment Effective Date:

**ATTACHMENT B**

**ACCIDENT INVESTIGATION FORM**

## ACCIDENT INVESTIGATION FORM

TO: Project Manager DATE: \_\_\_\_\_

FROM: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

PROJECT: \_\_\_\_\_ ACTIVITY: \_\_\_\_\_

NAME: \_\_\_\_\_ EMPLOYEE: \_\_\_\_\_

Location of incident: \_\_\_\_\_

Brief description of accident: \_\_\_\_\_

\_\_\_\_\_

Cause of incident: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Medical treatment received: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Physician's recommendations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



---

---

---

Date Returned to work: \_\_\_\_\_

---

---

Action taken:

---

---

---

---

## **ATTACHMENT C**

## **DAILY LOGS**

## DAILY LOG

Date: \_\_\_\_\_ Prepared By: \_\_\_\_\_

[illegible]

Environmental Sampling Results:

PARAMETER	TIME	SAMPLE LOCATION	RESULT

Signed: \_\_\_\_\_

## **ATTACHMENT D**

### **CONFINED SPACE ENTRY PERMIT**

<b><u>Confined Space Entry Permit</u></b>			
Location and description of confined space:			
Reason for entry:			
Permit issued to:			
Supervisor's Name:			
Attendant's name:			
Permit issuer's name:			
% oxygen:	% lower explosive limit	ppm CO:	H2S:
<b><u>Requirements:</u></b>			
Emergency Rescuer	yes	no	
Continuous Gas Monitor	yes	no	
Barrier for ground openings	yes	no	
Warning signs	yes	no	
Safety Harness with life line	yes	no	
Tripod/Hoist/Pulley	yes	no	
Access (ladders/other)	yes	no	
Eye protection	yes	no	
Respiratory protection	yes	no	
Continuous Ventilation	yes	no	
Body Protection	yes	no	
Hand Protection	yes	no	
Foot Protection	yes	no	
Weather Protection	yes	no	
Ground Fault Circuit	yes	no	
Interruptions	yes	no	
Lockout of Hazardous Energy	yes	no	

**ATTACHMENT E**

**VAPOR MONITORING FORM**

<b>VAPOR MONITORING FORM</b>
------------------------------

Project Name:
---------------

Project Number: \_\_\_\_\_

Contaminants:	
---------------	--

[illegible]



**ATTACHMENT F**

**NOISE MONITORING FORM**

FACILITY:

DATE:

TIME:

SETTING	SOUND		
	ELAPSED TIME		
	1 MINUTE	2 MINUTES	3 MINUTES
	dBA	dBA	dBA
SPL			
MAX			
MIN			
LEQ			

SETTING	VIBRATION			
	ELAPSED TIME/DISPLACEMENT			
	1 MINUTE		2 MINUTES	
	dBA	DISP (in.)	dBA	DISP (in.)
SPL				
MAX				
MIN				
LEQ				

**APPENDIX L**

**REMEDIAL INVESTIGATION REPORT**

**Galli, February 2007**



# **Remedial Investigation Report**

---

**April 2007**

**Privileged and Confidential Information**

**Disclose Only to Authorized Parties**

Conducted at:

**The Kensington  
5 - 27 Kensington Road  
Bronxville, New York 10708  
Section 11, Block 5, Lots 1, 6 and 16**

Prepared for:

**Spectrum Kensington, LLC  
115 Stevens Avenue  
Valhalla, New York 10595**

Prepared by:

**Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, NY 11747**

## TABLE OF CONTENTS

<b>1.0</b>	<b>SITE BACKGROUND .....</b>	<b>1</b>
<b>2.0</b>	<b>PREVIOUS ENVIRONMENTAL INVESTIGATIONS .....</b>	<b>3</b>
<b>3.0</b>	<b>REMEDIAL INVESTIGATION .....</b>	<b>14</b>
3.1	Scope of Work .....	14
3.2	Site Physiography.....	15
3.3	Monitoring Well Installation .....	17
3.4	Groundwater Sample Collection for Laboratory Analysis .....	18
3.5	Soil Borings.....	19
3.6	Soil Sample Collection .....	19
3.6.1	<i>Analytical Test Methods</i> .....	20
<b>4.0</b>	<b>ROUTES OF EXPOSURE AND SENSITIVE RECEPTORS .....</b>	<b>22</b>
4.1	Adverse Impacts to Environmental Resources .....	25
<b>5.0</b>	<b>LABORATORY ANALYTICAL RESULTS .....</b>	<b>26</b>
5.1	<i>Groundwater Analytical Results</i> .....	26
5.2	<i>Soil Sample Analytical Results</i> .....	30
<b>6.0</b>	<b>CONCLUSIONS.....</b>	<b>34</b>

## **APPENDICES**

Appendix A	Historical Soil Boring and Monitoring Well Location Plan
Appendix B	Laboratory Analytical Reports
Appendix C	Soil Boring Logs
Appendix D	Monitoring Well Installation Logs
Appendix E	Monitoring Well Sampling Logs
Appendix F	Geographic Coordinates of Sample Locations
Appendix G	Laboratory ELAP Certification
Appendix H	Topographic Map
Appendix I	Geotechnical Borings Location Plan with Bedrock Profile Geotechnical Boring Logs

## 1.0 SITE BACKGROUND

The Kensington is located at 5-27 Kensington Road in the Village of Bronxville, Westchester County, New York, in a predominantly suburban setting. The property consists of 1.63 acres of land, situated west-northwest of the intersection of Kensington Road and Sagamore Road. The property is currently used as three contiguous parking lot parcels. (See Appendix A for site map and Appendix H for topographic map). It is bordered by Metro North Rail Road tracks to the west, a church and apartments across Kensington Road to the east, an office building to the south, and a Metro North transformer building to the north.

The Brownfield Cleanup Program Site (BCP Site) consists of the parcels of land on lots 6 and 16. Lot 1 is not part of the Brownfield site, but it is part of the overall project. Thus, the BCP site and Lot 1 together comprise the “subject property”.

Spectrum Kensington, LLC proposes to redevelop this land in the heart of Bronxville. “The Kensington”, as the development will be known, will comprise 54 residential condominiums with a 300 space subsurface parking garage, and courtyard areas.

The land is situated in a general north-south direction. The topographic gradient of the land is to the west-southwest. The bedrock is composed of folded and faulted metamorphic rock from the Precambrian to Triassic age. Gneiss and schist are the dominant rock types. The bedrock is overlain by unconsolidated glacial deposits of Pleistocene age. These glacial deposits are a mixture of clays, silts, sands and boulders. Depth to bedrock ranges from ½ foot below land surface to 24 feet below land surface. The bedrock trend slopes down from east to west. No surface water features are in close proximity to the subject site. The Bronx River is 2,400 feet to the northwest.

Past uses of this site have been documented since the turn of the 20th century. The subject property has been previously utilized for housing, a power plant, a gasoline station and an automobile repair facility. It is currently a municipal parking lot. Around 1905, the “Hotel Gramatan Power and Light Plant” was built on the area that is now the middle lot. Coal was used to fuel the power plant until 1961, when the plant switched over to fuel oil. Coal piles were identified on the Sanborn maps from the years 1918, 1932 and 1950. The “Gramatan Garage” (Texaco gas station) was operated on site from circa 1958-1994. It was closed by the Village of

Bronxville in March, 1994. Since the early 1990s, the land has operated as a municipal parking lot, owned by the Village of Bronxville.



## **2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS**

In preparation for development, extensive environmental investigations have been conducted on the subject property; including soil borings, ground penetrating radar, soil sample collection and analysis, monitoring well installation and groundwater sample collection and analysis.

Some contamination has been found to be present on the site, consistent with the past uses of the subject lots. A former gasoline station, an automotive repair shop and a parking facility have operated on the southern lot (Lot 16); and a coal burning power plant formerly existed on the middle lot (Lot 6). The power plant and other building structures have been demolished, and the debris has been graded and paved over to provide the land for the current parking lots.

Galli Engineering conducted a Phase I Environmental Site Assessment of the subject property on October 23, 2003. As part of the investigation, Galli Engineering reviewed the available subject property documentation as provided by the client. A summary of the pertinent environmental information is provided below.

### Environmental Risk Limited:

Environmental Risk Limited (ERL) prepared an Environmental Site Assessment report, dated February 1989, for the Gramatan Garage site (5 Kensington Road, Lot 16) on behalf of the Village of Bronxville. ERL also identified the site as a Texaco gasoline station and an automotive repair facility. The site was developed with two contiguous buildings consisting of 6,344 and 878 square feet. The ground floor was used for interior parking as well as for the gasoline station and an automotive repair facility. A ramp at the south end of the site led to parking on the roof top of the buildings.

The ERL report identified the presence of two 2,000-gallon USTs containing unleaded gasoline; one 3,000-gallon UST containing unleaded gasoline; and one 3,000-gallon UST containing diesel fuel. These tanks were reportedly installed circa 1970. Additionally, one 275-gallon AST containing virgin motor oil was located at the site. At the time of the ERL report, the USTs had recently been integrity tested and the two 3,000-gallon USTs failed testing.

A floor drain was also reported for the lower interior parking area, but was subsequently sealed and covered over with asphalt pavement. The date of closure of the floor drain is not reported and the point of discharge is unknown. Used motor oil and waste (spent) solvents were also

reportedly handled and stored on-site until removal by Westchester Waste.

ERL identified the covered floor drain and USTs as concerns at the site, and recommended a Phase II Environmental Site Assessment (ESA) be performed. ERL suggested that the Phase II ESA be performed in conjunction with the removal of the two 3,000-gallon USTs. ERL recommended that the soil in the tank excavation be observed by a qualified professional to determine the presence of soil contamination and whether there was a need for additional groundwater assessment work.

#### Empire Soils Investigations, Inc.:

A tank closure report for the Gramatan Garage entitled "Buried Gasoline Tank Removal", dated November 1989, was prepared by Empire Soils Investigations, Inc. (ESI) on behalf of Lawrence Hospital (former subject property owners). The report indicates that in October 1989 one UST was removed from beneath the floor at the southeast corner of the garage building. Corrosion holes were noted in the removed UST. Two soil samples were collected from the excavation and were screened with a photoionization detector (PID) to detect the presence of volatile organic compounds. The PID readings were 60 and 210 parts per million (ppm). One soil sample was collected for subsequent laboratory analysis according to USEPA method 8020 (volatile organic compounds) from the tank excavation; however, at the time the ESI report was prepared the laboratory results were not available. No additional soils were removed since the excavation was within the garage structure. As an alternative, ESI recommended the installation of a passive soil vapor venting system, and also recommended that a monitoring well should be installed to document groundwater quality.

A supplemental letter from ESI, dated November 17, 1989, directed to Lawrence Hospital indicated that the analytical laboratory results from the soil sample were attached. Elevated concentrations of volatile organic compounds (VOCs) were detected; however, at the time ESI indicated that the New York State Department of Environmental Conservation (NYSDEC) did not have established cleanup guidelines or criteria for soils. Refer to Table 1a for a summary of the available soil analytical data collected for the subject property for this and one subsequent investigation. Both the above referenced report and letter were submitted to the NYSDEC in December 1989.

The NYSDEC responded, in a letter dated January 11, 1990, that required: (1) the installation of three monitoring wells ten feet into the groundwater at the locations designated by the

NYSDEC (two to the east of the building in the area of the UST excavation, and one inside the building to the west-northwest of the former UST location); (2) the collection of groundwater samples from the monitoring wells to be analyzed according to USEPA method 503.1 and gauging of the groundwater levels to be used for groundwater flow determination; and 3) installation of the soil vapor venting (extraction) system, the operation of which will be either passive or active as dictated from review of the laboratory analysis of the groundwater samples. The site was assigned spill number 88-08146.

Telephone conversation records prepared by the NYSDEC, dated March 5 and April 3, 1990, for Gramatan Garage indicated that the “vapor extraction system went into operation at the end of January”, and the monitoring wells were installed and groundwater samples were collected in March 1990. An odor was reportedly noted by the sampling personnel.

**Table 1a Summary Of The Available Soil Analytical Data****Empire Soils Investigation, October 1989-June 1992**

RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels"

ppb – parts per billion (ug/kg)    ppm – parts per million (mg/kg)

Date Sample Collected		October 1989	June 1992				
Compound	RSCO* ug/kg (ppb)	UST Excavation ug/kg	B-1 (12-14 feet) ug/kg	B-3 (6-7 feet) ug/kg	B-4a (1-2 feet) ug/kg	B-7 (10-12 feet) ug/kg	B-11 (15-17 feet) ug/kg
Benzene	60	3,770	Not Sampled in 1992 by ESI				
Toluene	1,500	93,300					
Ethylbenzene	5,500	38,900					
p and m -xylene	1,200	247,000					
o- xylene	1,200	107,000					
cumene	-	8,420					
n-Propylbenzene	3,700	21,500					
1,3,5- Trimethylbenzene	3,300	63,000					
Tert-Butylbenzene and 1,2,4- Trimethylbenzene	10,000	287,000					
sec-Butylbenzene	10,000	7,970					
n-Butylbenzene	-	59,700					
Total xylenes	1,200	Not sampled in	84,000	-	-	-	-
TPH	n/a	1989 by ESI	-	27,000	6,500	13,000	4,200

An ESI letter report, dated July 1, 1991, indicated that the requested monthly site monitoring was being performed, and water level measurements, product thickness and PID readings were reported for June 1991. The depth to the water table ranged between 10.1 and 18.4 feet below the top of the well casings. A sheen was noted for all three wells and PID measurements taken at the wells ranged from 3.2 to 4.8 ppm. This letter also stated that "the replacement soil venting system yielded an average reading of 18 ppm upon repair". No elevations were provided for the well casings.

An ESI letter report, dated July 10, 1991, indicated that the monthly monitoring as well as collection of the quarterly groundwater monitoring samples was completed on July 9, 1991. The depth to the water table ranged between 18.14 and 20.02 feet below the top of the well casings. A heavy sheen was noted for all three wells and PID measurements taken at the wells ranged from 4 to 10 ppm.

An ESI letter report, dated January 2, 1992, provided a summary of site conditions. This summary letter indicated that previous work at the site consisted of: (1) removal of one UST in October 1989; (2) installation of a passive soil venting system in January 1990 beneath the garage floor; (3) removal of two additional USTs (also showed corrosion) and abandonment in place of one UST in April 1991; and (4) monthly site monitoring and quarterly groundwater sample collection and analysis. Based on the work performed at the site, ESI indicated that there is "multiple-source petroleum contamination of groundwater at the site". No site plan indicating the location or designation of the wells was available. ESI reported groundwater flow as north to south, and that the slope of the water table is sufficiently steep that there would not be "backflow" of contaminants from the excavation area to up gradient monitoring well MW-103.

A summary of the quarterly groundwater monitoring data collected from the site during the period from March 1990 through November 1991 was also attached to the letter and is provided in the table below.

**Table 1b ESI Quarterly Groundwater Monitoring Data - March 1990 Through November 1991**  
**Gramatan Garage, Bronxville, New York**

Well No.	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Total BTEX (ug/L)
		GWS*	GWS*	GWS*	GWS*	-
		1.0 ug/L	5.0 ug/L	5.0 ug/L	5.0 ug/L	
MW-101	3/16/90	<50	56	1,030	2,723	3,809
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	9/28/90	<50	<50	<50	1,100	1,100
	1/22/91	<5	<5	32	320	352
	4/14/91	2.8	<0.5	<0.5	35	37.8
	7/09/91	<50	<50	530	920	1,450
	11/6/91	<2,000	<1,000	<1,000	<2,000	<6,000
MW-102	3/16/90	196	148	<5	770	1,123
	5/29/90	8,700	16,000	2,200	14,000	40,900
	9/28/90	4,500	4,500	3,800	28,000	52,300
	1/22/91	7,700	12,000	1,300	10,000	31,000
	4/14/91	6,100	11,000	1,700	16,000	34,000
	7/09/91	6,300	13,000	10,000	140,000	169,300
	11/6/91	3,800	<500	2,500	20,000	26,300
MW-103	3/16/90	<5	8	166	236	412
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	9/28/90	<2.5	<2.5	<2.5	<5	ND
	1/22/91	<0.5	<0.5	<0.5	<1	ND
	4/14/91	<0.5	<0.5	<5	<5	ND
	7/09/91	<500	<500	<500	<1,500	<3,000
	11/6/91	<4,000	<500	<500	<3,000	<8,000
Notes:						
ug/l – micrograms per liter or parts per billion (ppb) ND = None Detected						
Analyses of 3/16/90 via EPA method 503.1, remaining data via EPA method 602						
GWS* - New York State Department of Environmental Conservation Groundwater Quality Standards						

Soil Mechanics Drilling Corporation:

Soil Mechanics Drilling Corporation (SMDC) performed a more comprehensive subsurface soil investigation for the entire subject property in June 1992. A total of thirteen soil borings were advanced on three parking lot parcels. Soil samples were collected from five of the soil borings for subsequent laboratory analysis for the presence of benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons (TPH), and polychlorinated biphenyls (PCBs). Based on review of available soil analysis data, elevated BTEX concentrations were detected in the area of the former USTs associated with Gramatan Garage, and elevated TPH concentrations were detected in the soil samples collected from the area associated with the former Lawrence Park Heat, Light and Power Company facility.

Laboratory analysis data for three groundwater samples was also provided by SMDC. Monitoring wells designated MW-1 through MW-3 (former wells MW-101, MW-102, MW-103) were sampled and BTEX compounds above the NYSDEC groundwater standards were detected in the groundwater sample collected from MW-1. Elevated concentrations of TPH were detected in the groundwater sampled collected from MW-2 and MW-3. Monitoring well MW-1 is located in the street easement area to the southeast of the parking lot; monitoring well MW-2 is located approximately sixty feet to the north of MW-1; and MW-3 is located at the center of the south end of the south parking lot.

The NYSDEC was notified of the results of the SMDC investigation, and a new spill number (93-14613) was assigned to the area corresponding to the former Lawrence Park Heat, Light and Power Company facility. No groundwater data was collected from the area of the former Lawrence Park Heat, Light and Power Company facility. A work plan for site remediation, prepared by Stoller Environmental Engineering, P.C./Sadat Associates, Inc. was submitted to the NYSDEC in March 1994, was amended in April 1994 when it was subsequently approved.

The work plan recommended the excavation and removal of contaminated soil, and installation of monitoring wells at the former power plant area to determine the condition of groundwater. The work plan provided for the collection of endpoint samples once the excavation of contaminated soil was completed. The work plan also indicated that samples would be collected from the existing monitoring wells. However, this work plan was never implemented.

In addition to the historical subject property documentation, new findings of the Galli Engineering Phase I ESA included:

- The available historical information identified four gasoline tanks located at the south central portion of the subject property in the early 1900s, which were associated with the Gramatan Garage facility. Only one of these tanks was identified on the 1950 Sanborn Map; however, a filling station facility with three tanks was identified at the southwest corner of the Gramatan Garage facility. At the time, this area of the subject property curved out to the east and the tanks and dispenser associated with this facility may have partially extended out into the area that is currently part of Kensington Road. The next available Sanborn Map in 1989 shows the expansion of the previous garage structure into a two-story parking facility. Based on review of previous site investigation reports and the available EDR database report information, two 3,000-gallon and two 2,000-gallon tanks were installed at the garage facility circa 1970. Three of these tanks were removed; one in 1989 and two in 1991, and one was abandoned in place in 1991. No information pertaining to the removal of the other tanks discussed above was available. Additionally, one of the previous environmental reports makes mention of a floor drain in the garage facility that has since been covered over by pavement. In addition to the garage facility having tanks, automotive repair was performed at the site for a significant period of time. Floor drains are often a route for contaminants to reach the subsurface environment. Galli Engineering recommended that ground penetration radar be used at the south end of subject property to identify the location of the known abandoned tank and any other potential tanks or subsurface structures.
- Based on the available historical information, the heat, electric and power generating plant was demolished by the Village of Bronxville and a large amount of the demolition material and rubble was reportedly left on-site and re-graded to pave the area as a parking lot. Soil borings previously advanced at the site in 1992 indicate the presence of between six inches to six feet of demolition debris beneath the paving and foundation structures reportedly remain intact. Soil samples collected from borings performed by others within the former building foot print area have documented the presence of total petroleum hydrocarbons. Galli Engineering recommended that ground penetration radar be used to determine the extent of debris buried beneath the parking lot which would require separate disposal from that of contaminated soils.
- The building located between the south and central parking lots and portions of the building on the southeast corner of the north parking lot were not accessible at the time of the site inspection. Galli Engineering recommended that the interiors of these buildings be inspected to determine the presence of any hazardous substances or asbestos-containing materials (ACM).
- Based on the age of the subject property buildings, there is reason to suspect the presence of lead containing paint and asbestos-containing materials (ACM). Painted surfaces and suspect ACM were not sampled but may contain regulated concentrations of lead or asbestos, respectively. Renovation work or demolition of the buildings requires testing be performed prior to the disturbance of suspect ACM. Testing should be conducted to determine the presence of lead in paint and asbestos in building materials.



These conclusions were a basis for a Phase II Environmental Site Assessment which was performed in October, 2003 by Galli Engineering. Galli, along with subcontractors, collected groundwater samples from the two existing monitoring wells (MW-4 and MW-5; formerly wells MW-102 and MW-101, respectively), advanced soil borings, collected soil samples, performed ground penetrating radar across the entire site and performed geotechnical borings on the subject property.

A total of two groundwater samples were taken from the existing monitoring wells and submitted for analysis for volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 624; semi-volatile organic compounds (SVOCs) according to US EPA Method 625; polychlorinated biphenyls (PCBs) according to US EPA Method 608; and 8 RCRA metals (except mercury) according to US EPA Method SW6010B; and mercury according to US EPA Method SW7470A. The groundwater analytical results revealed the presence of VOC's, SVOC's and Priority Pollutant (PP) Metals in varying concentrations. Arsenic, barium, cadmium, chromium, lead, mercury, silver and m,p-Xylene were detected above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Seventy soil samples were collected for field screening with a PID, during the Phase II assessment performed by Galli Engineering in October, 2003 and twenty-two of those samples were selected for laboratory analysis. Soil samples were analyzed for the presence of volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471. The soil sample analytical results revealed the presence of VOC's, SVOC's, PP Metals and PCB's in varying concentrations. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo-a,h-anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, arsenic, cadmium, chromium, lead and mercury were detected above the NYSDEC RSCO's. Field screening results are listed in Appendix C.

The bedrock profile indicated a general downward gradient from east to west, with higher elevations along Kensington Road, and lower elevations near the rail road tracks. A depression in the bedrock is located in the northern part of the middle lot. (See Appendix I for bedrock profile and geotechnical boring logs).

Depth to bedrock on the southern lot ranged from 6-22 feet below land surface. The profile of the southern lot revealed greater depths to bedrock on the northwest side and lower depths on the southeast side. Depth to bedrock on the middle lot ranged from 1-24 feet below land surface. The bedrock profile is highest along the west, and lowest along the east side. On the northern lot, the depth ranged from ½ -19 feet, with the greater depths to bedrock along the northeast side and lower depths along the southwest side.

The contamination consists of elevated levels of petroleum constituents in the soil on the south lot where underground storage tanks (UST's) were located. See Historical Soil Boring and Monitoring Well Location Plan - Appendix A, for locations. In the central lot, (the area of the former power plant) there are elevated concentrations of total petroleum hydrocarbons (TPH) in the soil. PCB contaminants were also detected in this area, from soil samples taken at a depth of 4-8 feet, but the contamination was below the Recommended Soil Cleanup Objectives (RSCO) expressed in the New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum #4046, "Determination of Soil Cleanup Objectives and Cleanup Levels". The contaminated soils are present on the surface, just below the parking lot pavement, as well as the subsurface.

Soil contaminants exceeding the New York State RSCO on the BCP site include the semi-volatile organic compounds (SVOC's): benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo-a,h-anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. These SVOC's are all Polycyclic Aromatic Hydrocarbons (PAHs). PAH is the general term applied to a group of compounds, comprised of several hundred organic substances with two or more aromatic rings. PAHs are major constituents of petroleum and its derivatives. Exposure to PAHs may result in a wide range of effects on biological organisms. While some PAHs are known to be carcinogenic, others display little or no carcinogenic activity. Other contaminants in the soils on site exceeding the RSCO are the heavy metals arsenic, cadmium, chromium, lead and mercury. Exposure to elevated levels of these metals has been shown to cause detrimental health effects to biological organisms. Potential exposure pathways for these contaminants include ingestion of soil, skin contact with soil or inhalation of particulate matter, and ingestion of contaminated water.

The major source areas contributing to the contamination of the site are the locations of former Gramatan Garage and the former power plant. The power plant operated on site from circa 1905 until the late 1980s.

The groundwater samples in the south lot revealed contamination by volatile organic compounds (VOC's), SVOC's and metals. Specific contaminants above the NYS Groundwater Quality Standards include m,p-Xylene, arsenic, barium, cadmium, chromium, lead, mercury and silver in MW-2, and mercury in MW-1. The locations of the monitoring wells are shown on the Historical Soil Boring and Monitoring Well Location Plan in Appendix A.

There are open DEC spill numbers associated with these parcels of land; spill #88-08146 corresponds to the former Gramatan Garage area, and spill #93-14613 corresponds to the former power plant area.

### **3.0 REMEDIAL INVESTIGATION**

In order to fully delineate the nature and extent of contamination and fill in data gaps from earlier studies, Galli Engineering prepared a Remedial Investigation Workplan. The Workplan was submitted in July, 2006 and approved by the NYSDEC in August, 2006. The Remedial Investigation fieldwork was conducted on October 17 and 18 and November 2, 7, and 17, 2006. This work was conducted in accordance with Division of Environmental Remediation Draft Technical Guidance for Site Investigation and Remediation (DER-10).

#### **3.1 Scope of Work**

The following scope of work is an outline of the process and steps that Galli Engineering performed in the remedial investigation of the Site.

The Scope of Work outlined in the Workplan was as follows:

1. Installed three off-site groundwater monitoring wells to the west and southwest;
2. Developed the wells in accordance with NYSDEC protocols;
3. Collected groundwater samples from the two existing monitoring wells and the three newly installed monitoring wells;
4. Performed laboratory analysis of groundwater samples for volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 8260B + TICs; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270C Acid and Base/Neutral extractable + TICs; polychlorinated biphenyls (PCBs) according to US EPA Method 8080; and 8 RCRA metals (except mercury) according to US EPA Method 7000 series; and mercury according to US EPA Method SW7470A;
5. Installed twelve soil borings on the lots using a *geoprobe*;
6. Collected one soil sample from each of the twelve borings;
7. Performed laboratory analysis of soil samples for volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270 Acid and Base/Neutral extractable; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471.
8. Evaluated laboratory data;

9. Prepared this Remedial Investigation Report.

The remedial investigation has several goals:

1) define the nature and extent of contamination in soil, groundwater, soil vapor and any other impacted media; 2) identify the source(s) of the contamination; 3) track the groundwater off-site to determine if groundwater contamination is spreading 4) assess the impact of the contamination on public health and/or the environment; and 5) provide information to support the development of a Remedial Work Plan to address the contamination.

### **3.2 Site Physiography**

#### Physiography and Topography

The subject property is located within the New England Upland physiographic province. Elevations in the area surrounding the subject property range from approximately 72 to 251 feet above mean sea level (msl).

The United States Geologic Survey (USGS) 7.5 minute series topographic map of Mount Vernon, New York indicates that the topographic gradient for the subject property is generally to the west-southwest. The average elevation of the subject property is approximately 114 feet above msl.

#### Geology

The Westchester County region is distinguished by complex folded and faulted rocks ranging from pre-Cambrian to Triassic age. Metamorphic gneiss and schist bedrock is dominant in the area, but other bedrock types occur. Bedrock is overlain by unconsolidated deposits of Pleistocene age associated with the Nebraskan, Kansan, Illinoian, and Wisconsinian glacial stages. These deposits consist of a mix of clays, silts, and sands, with boulders.

Site specific geological information was reviewed for the subject property and the depth to bedrock at: 1) the north parking lot property ranged from approximately half a foot below the land surface (bls) at the northeastern perimeter of the property to approximately nineteen feet

bls at the southwestern portion of the lot; 2) the central parking lot ranged from approximately one foot bls at the east central perimeter of the lot to approximately twenty-four feet bls on the west central perimeter with the exception of a depression to a depth of 24 feet bls at the north central portion of the lot; and 3) the south parking lot property ranged from approximately six feet bls at the northeastern corner to a depth of approximately twenty-two feet at the west central perimeter of the lot. The over all bedrock trend is from the east-northeast to the west-southwest.

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) information indicates that the soils on the subject property are classified as Urban Land where the land surface is predominantly covered by roads, building footprints and other impervious surfaces, or for areas that are highly developed. This soil type is described as gravelly to fine sandy loam. Soils encountered included a mixture of sands, silts and clays (glacial till).

There are no surface water features located on the subject property lots. The subject property is located within the Bronx River Drainage Basin, and is physically located approximately 2,400 feet to the east-southeast of the Bronx River. No other surface water features are in close proximity to the subject property. The Bronx River is not used as a source of drinking water.

Surficial aquifers are located in the Westchester County area; however, these aquifers are not currently used as a significant source of potable water. Potable drinking water is provided to the Village of Bronxville by New Rochelle Water Company, which obtains potable water via an extensive reservoir and aqueduct system from upstate New York. A total of ten USGS wells are identified within a 1.0-mile radius of the subject property. No Public Water Supply wells are indicated.

### **3.3 Monitoring Well Installation**

On November 2 and 7, 2006, a total of three monitoring wells were installed. These are designated MW-1, MW-2 and MW-3 on the Historical Soil Boring and Monitoring Well Location Plan in Appendix A. Monitoring wells were advanced by Soil Testing, Inc. using a drill rig equipped with a hollow stem auger.

The monitoring wells were installed with 2" diameter Schedule 40 PVC to approximately 20' or 60' below land surface, depending on the well depth, with the screen set to intersect the water table in saturated soils above the bedrock and finished at the surface with flush mount 6" well box. The screen slot size was 20 mil. Well logs were constructed for each monitoring well, and are presented in Appendix D. After installation, each well was developed in accordance with NYSDEC protocols until the turbidity was less than 50 NTU.

Monitoring wells MW-4 and MW-5 (formerly MW-102 and MW-101, respectively) were installed in 1990 by Empire Soils Investigation (ESI). Details on the monitoring wells are stated in a letter from the NYSDEC in which they directed ESI to "install three monitoring wells ten feet into the groundwater at the locations designated by the NYSDEC (two to the east of the building in the area of the UST excavation, and one inside the building to the west-northwest of the former UST location.)" Based on measured bedrock elevations on the site, and information from the well logs, it appears that these wells were installed in the overburden soils and did not reach bedrock. (See Appendix I for bedrock profile). MW-4 and MW-5 (formerly MW-102 and MW-101, respectively) were installed to the east of the former Gramatan Garage building, in the area of the UST excavation. These wells were developed concurrently with MW-1 through MW-3, on November 10, 2006 in preparation for sampling activities on November 17, 2006.

<b>Table 3.1</b> <b>Monitoring Well Physical</b> <b>Characteristics</b>	
Well Number	Casing Elevation
MW-1	108.42'
MW-2	104.60'
MW-3	104.65'
MW-4	115.40'
MW-5	113.03'

<b>Table 3.2</b> <b>Monitoring Well Gauging Table</b> <b>November 17, 2006</b>		
Well Number	Depth to Water	Water Elevation
MW-1	28.40'	80.02'
MW-2	18.19'	86.41'
MW-3	8.41'	96.24'
MW-4	10.40'	105.00'
MW-5	13.60'	99.43'

### 3.4 Groundwater Sample Collection for Laboratory Analysis

On November 17, 2006, a representative of Galli Engineering collected groundwater samples from each of the monitoring wells for subsequent laboratory analysis. The depth to groundwater was measured from the top of the well casing in each of the monitoring wells using a Heron water level meter. After gauging, three volumes of groundwater were purged from each of the wells using a dedicated disposable bailer. Water quality parameters (pH, specific conductivity, turbidity, dissolved oxygen, temperature and salinity) were measured and recorded using a Horiba U-10 water quality meter prior to purging, during purging, and prior to sampling.

Groundwater samples were collected from each of the monitoring wells using a dedicated disposable Teflon bailer. The groundwater samples were transferred into: 1) two clean 40-ml glass vials with Teflon septa; 2) one clean 250-ml plastic container containing nitric acid preservative; and 3) two clean 1,000-ml amber glass containers. The groundwater samples



were designated MW-1 through MW-5 corresponding to the sample collection location.

Each sample jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses: volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 8260B + TICs; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270C Acid and Base/Neutral extractable + TICs; polychlorinated biphenyls (PCBs) according to US EPA Method 8080; and priority pollutant metals (except mercury) according to US EPA Method 7000 series; and mercury according to US EPA Method SW7470A. Each groundwater sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative. Groundwater samples were not filtered prior to being analyzed by the laboratory.

### **3.5 Soil Borings**

As part of this remedial investigation, Laurel Environmental advanced twelve soil borings at the subject property on October 17 and 18, 2006 using a vehicle mounted *Geoprobe* unit equipped with a direct push hydraulic driven probe for sample collection. Soil samples were collected using a single-use environmental grade disposable plastic sleeve inserted into the *Geoprobe* macrocore soil sample probe. Soil samples were transferred from *Geoprobe* sleeve using a single-use environmental grade disposable plastic scoop and placed into clean glass jars fitted with Teflon lined caps. These soil borings were advanced until refusal at bedrock and were designated soil borings SB-1 through SB-12. Twelve soil borings were attempted and ten borings were completed. The other two borings met early refusal and no sample could be collected. All the soil boring locations are shown on the Historical Soil Boring and Monitoring Well Location Plan provided in Appendix A and the sample coordinates are listed in Appendix F.

### **3.6 Soil Sample Collection**

A total of twenty-eight soil samples were collected from the twelve soil borings for field

screening with a photoionization detector (PID) during October 17 and 18, 2006. Each of the samples were placed into a clean Ziploc bag. The soil samples collected for field screening were placed in a sample collection staging area to allow for samples to equilibrate with ambient temperature. The headspace of each of the soil samples was then screened for the presence of volatile organic vapors using a broadband photoionization detector (PID). The PID was zero calibrated and checked with a known concentration of isobutylene prior to screening soil samples at the subject property. Field screening results are listed in Appendix C.

After field screening, a total of ten soil samples were selected for subsequent laboratory analysis from the soil borings. One sample was selected from each completed boring. The samples were placed into clean 2-ounce, 4-ounce and 8-ounce glass jars fitted with Teflon lined caps using a single-use environmental grade disposable plastic scoop.

Each jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses: volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270 Acid and Base/Neutral extractable; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471. Each soil sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative.

### **3.6.1 Analytical Test Methods**

The groundwater samples collected from the subject property on November 17, 2006 were maintained in a secure refrigerator until hand delivery to Environmental Testing Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis. The deliverables were ASP Category B. The groundwater samples were analyzed for the presence of volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 8260B + TICs; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270C Acid and Base/Neutral extractable + TICs; polychlorinated biphenyls (PCBs) according to US EPA Method 8080; and priority pollutant metals (except mercury) according to

US EPA Method 7000 series; and mercury according to US EPA Method SW7470A, to determine if any contamination has emanated off-site from the subject property. One trip blank and one field blank were collected for quality control purposes.

The ten soil samples collected from the subject property on October 17 and 18, 2006 were maintained in a secure refrigerator until hand delivery to Environmental Testing Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis. These soil samples were analyzed for the presence of volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270 Acid and Base/Neutral extractable; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471. One trip blank and one field blank were collected for quality control purposes.

## **4.0 ROUTES OF EXPOSURE AND SENSITIVE RECEPTORS**

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from the site. An exposure pathway has five elements: 1) a contaminant source; 2) contaminant release and transport mechanisms; 3) a point of exposure; 4) a route of exposure; and 5) a receptor population.

The environmental media for this site include soil, air and groundwater. Transport mechanisms can include wind and rain, creating airborne particulates and runoff of contaminants from soils, respectively (although the site is currently capped with an asphalt parking lot); and exposure to contaminated soils at depth would not occur until the site is excavated. Therefore, a potential exposure exists during site work.

Contaminated soil is an area of concern for this site. Groundwater is not an exposure threat, since the property is not in a flood prone zone and the groundwater is not a source of potable water. Compounds of concern, determined based on soil sampling activities, include total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH's). Potential exposure routes include ingestion of contaminated soil, dermal contact, and inhalation of contaminated dust or volatile vapors emanating from the soil. People that could come in contact with the contaminated media during remedial work are site workers and local residents. Currently, the site is capped with an asphalt parking lot, and residents utilizing the parking lot do not come in contact with any of the contaminated soils.

Contaminants identified as part of this investigation include polycyclic aromatic hydrocarbons (PAH's) and total petroleum hydrocarbons (TPH). These contaminants include volatile organic compounds (VOC's). Total Petroleum Hydrocarbons is a term used to describe a broad family of several hundred chemical compounds that originally come from crude oil. They are called hydrocarbons because almost all of them are made entirely from hydrogen and carbon. The extent of absorption of TPH by inhalation, oral, and/or dermal routes varies because of the wide range of physical/chemical properties observed for these chemicals. The extent of absorption by the various routes depends on the volatility, solubility, lipophilicity, and other properties of the specific TPH chemical or mixture.

The point of exposure relating to the contamination would be any exposed contaminated soils. Routes of exposure include breathing (inhalation), eating or drinking (ingestion), or contact with the skin (dermal contact).

TPH can enter and leave the body when breathed in air; swallowed in water, food, or soil; or through contact. Most components of TPH will enter the bloodstream rapidly when breathed in as a vapor or mist or when swallowed. Some TPH compounds are widely distributed by the blood throughout the body and quickly break down into less harmful chemicals. Others may break down into more harmful chemicals. Other TPH compounds are slowly distributed by the blood to other parts of the body and do not readily break down. Upon contact with TPH compounds, they are absorbed more slowly and to a lesser extent than when inhaled or swallowed. Most TPH compounds leave the body through urine or upon exhalation of air containing the compounds.

PAHs can enter the body through the lungs when breathing air that contains them (usually stuck to particles or dust). Cigarette smoke, wood smoke, coal smoke, and smoke from many industrial sites may contain PAHs. People living near hazardous waste sites can also be exposed by breathing air containing PAHs. However, it is not known how rapidly or completely the lungs absorb PAHs. Drinking water and swallowing food, soil, or dust particles that contain PAHs are other routes for these chemicals to enter the body, but absorption is generally slow when PAHs are swallowed. Under normal conditions of environmental exposure, PAHs could enter the body if skin comes into contact with soil that contains high levels of PAHs (this could occur near a hazardous waste site) or with used crankcase oil or other products (such as creosote) that contain PAHs. The rate at which PAHs enter the body by eating, drinking, or through the skin can be influenced by the presence of other compounds that people may be exposed to at the same time with PAHs. PAHs can enter all the tissues of a person's body that contain fat. They tend to be stored mostly in the kidneys, liver, and fat. Smaller amounts are stored in the spleen, adrenal glands, and ovaries. PAHs are changed by all tissues in the body into many different substances. Some of these substances are more harmful and some are less harmful than the original PAHs. Results from animal studies show that PAHs do not tend to be stored in the body for a long time. Most PAHs that enter the body leave within a few days, primarily in the feces and urine.

PAHs are released to the environment through natural and synthetic sources with emissions largely to the atmosphere. Natural sources include emissions from volcanoes and forest fires.

Synthetic sources provide a much greater release volume than natural sources; the largest single source is the burning of wood in homes. Automobile and truck emissions are also major sources of PAHs. Environmental tobacco smoke, unvented radiant and convective kerosene space heaters, and gas cooking and heating appliances may be significant sources of PAHs in indoor air. Hazardous waste sites can be a concentrated source of PAHs on a local scale. Examples of such sites are abandoned wood-treatment plants (sources of creosote) and former manufactured-gas sites (sources of coal tar). PAHs can enter surface water through atmospheric deposition and from discharges of industrial effluents (including wood-treatment plants), municipal waste water, and improper disposal of used motor oil. Several PAHs have been detected at hazardous waste sites at elevated levels. In air, PAHs are found sorbed to particulates and as gases. Particle-bound PAHs can be transported long distances and are removed from the atmosphere through precipitation and dry deposition. PAHs are transported from surface waters by volatilization and sorption to settling particles. The compounds are transformed in surface waters by photooxidation, chemical oxidation, and microbial metabolism. In soil and sediments, microbial metabolism is the major process for degradation of PAHs. Although PAHs are accumulated in terrestrial and aquatic plants, fish, and invertebrates, many animals are able to metabolize and eliminate these compounds. Bioconcentration factors (BCFs), which express the concentration in tissues compared to concentration in media, for fish and crustaceans are frequently in the 10-10,000 range. Food chain uptake does not appear to be a major source of exposure to PAHs for aquatic animals. The greatest sources of exposure to PAHs for most of the United States population are active or passive inhalation of the compounds in tobacco smoke, wood smoke, and contaminated air, and ingestion of the compounds in foodstuffs. The general population may also be exposed to PAHs in drinking water and through skin contact with soot and tars. Higher than background levels of PAHs are found in foods that are grilled or smoked. Estimates of human exposures to PAHs vary. The average total daily intake of PAHs by a member of the general population has been estimated to be 0.207 µg from air, 0.027 µg from water, and 0.16-1.6 µg from food. The total potential exposure to carcinogenic PAHs for adult males in the United States was estimated to be 3 µg/day. Smokers of unfiltered cigarettes may experience exposures twice as high as these estimates. Persons living in the vicinity of hazardous waste sites where PAHs above background levels have been detected may also be exposed to higher levels.

#### **4.1 Adverse Impacts to Environmental Resources**

This site and any adjacent or downgradient properties do not contain any of the following resources:

- a. Any endangered, threatened or special concern species or rare plants or their habitat
- b. Any NYSDEC designated significant habitats or rare NYS Ecological Communities
- c. Tidal or freshwater wetlands
- d. Stream, creek or river
- e. Pond, lake, lagoon
- f. Drainage ditch or channel
- g. Other surface water feature
- h. Other marine or freshwater habitat
- i. Forest
- j. Grassland or grassy field
- k. Parkland or woodland
- l. Shrubby area
- m. Urban wildlife habitat
- n. Other terrestrial habitat

The contamination at this site does not have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concerns species or other fish and wildlife resource.

## **5.0 LABORATORY ANALYTICAL RESULTS**

The laboratory results for the soil and groundwater samples collected from the subject property on October 17 and 18, and November 17, 2006 are discussed below.

### **5.1 Groundwater Analytical Results**

Monitoring wells MW-1, MW-2 and MW-3 are located off-site to the west and southwest from the middle property lot (as shown in Appendix A – Historical Soil Boring and Monitoring Well Location Plan).

Monitoring wells MW-4 and MW-5 are located in the vicinity of the southeast portion of the south parking lot. These wells were installed in 1990, near the area of the former UST excavation.

Laboratory results of the groundwater samples were analyzed and assessed in accordance with 6 NYCRR Chapter X, Part 703 “Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations” and NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1): “Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations”.

Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals were detected at varying concentrations in the groundwater samples collected from the monitoring wells. No VOCs were detected above the analytical method detection limit in any of the groundwater samples. MW-4 and MW-5 had some VOCs that were detected below the NYSDEC Ambient Water Quality Standards and Guidance Values (Ambient Limits).

SVOCs were detected above the ambient limits in MW-4 and MW-5. Benzo(a)anthracene and chrysene were detected in MW-4 and MW-5 above the ambient limits. Benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene and indeno(1,2,3-cd)pyrene were detected above the ambient limits in MW-5. No PCBs were detected in any of the groundwater samples.

Some metals were detected at varying concentrations above and below their Ambient Limits in each of the monitoring wells.



Chromium was detected in groundwater samples MW-2 and MW-3 at concentrations of 0.40 mg/L and 0.094 mg/L, respectively. The chromium concentrations detected in these samples are above the NYSDEC Ambient Water Quality Standard and Guidance Value for chromium.

Lead was detected in groundwater samples MW-2, MW-3, MW-4 and MW-5 at concentrations of 0.036 mg/L, 0.088 mg/L, 0.038 mg/L and 0.17 mg/L respectively. The lead concentrations detected in these groundwater samples are above the NYSDEC Ambient Water Quality Standard and Guidance Value for lead.

Mercury was detected in groundwater sample MW-5 at a concentration of 0.0011 mg/L. The mercury concentration in this sample was above the above the NYSDEC Ambient Water Quality Standard and Guidance Value for mercury.

Nickel was detected in groundwater sample MW-2 at a concentration of 0.25 mg/L, which is above the NYSDEC Ambient Water Quality Standard and Guidance Value for nickel.

All other metals detected were below their NYSDEC Ambient Water Quality Standards and Guidance Values. A summary of groundwater laboratory data is presented in the table below. The laboratory analytical results are available for review in Appendix B.

The metals contamination present in the samples was likely due to the high turbidity of some groundwater samples, which was a result of using a bailer during sampling activities.

During sampling, non-aqueous phase liquid (NAPL) was detected in MW-5. This well had a hydrocarbon odor and petroleum product was detected in this well. Since MW-4 and MW-5 were installed in the area of the UST excavation, the source of this NAPL could be attributed to the former USTs located at the Gramatan garage.

Based on water elevations measured on November 17, 2006, groundwater flow was determined to be in a west-southwest direction, and samples collected from monitoring wells installed downgradient (MW-1, MW-2, MW-3) as part of this investigation did not detect any gasoline or petroleum constituents during laboratory analysis. Groundwater impact appears to be isolated to the area of MW-4 and MW-5.

**Galli Summary of Groundwater Laboratory Data**  
November 17, 2006

<b>Compound</b>	<b>NYSDEC Groundwater Limits 6 NYCRR Part 703</b>	<b>NYSDEC TOGS 1.1.1 Standards and Guidance Values</b>	<b>MW-1</b>	<b>MW-2</b>	<b>MW-3</b>	<b>MW-4</b>	<b>MW-5</b>
<b>VOCs</b>	<b>ug/L</b>	<b>ug/L</b>	<b>ug/L</b>	<b>ug/L</b>	<b>ug/L</b>	<b>ug/L</b>	<b>ug/L</b>
Chloroform	7	7	-	-	-	0.86 Y	-
p-Diethylbenzene	n/a	n/a	-	-	-	-	1.65 Y
1,2,4,5-Tetramethylbenzene	n/a	5	-	-	-	-	1.73 Y
<b>SVOCs</b>	<b>NYSDEC Groundwater Limits ug/L</b>	<b>NYSDEC Standards and Guidance Values ug/L</b>	<b>MW-1 ug/L</b>	<b>MW-2 ug/L</b>	<b>MW-3 ug/L</b>	<b>MW-4 ug/L</b>	<b>MW-5 ug/L</b>
Diethylphthalate	n/a	50	0.42 J	0.23 J	0.22 J	-	0.37 J
Di-n-butylphthalate	n/a	n/a	0.40 J	0.20 J	-	0.28 J	0.67 J
Bis(2-Ethylhexyl)phthalate	5	5	1.28 JB	0.82 JB	0.71 JB	0.67 JB	22.4 B
Fluoranthene	n/a	50	-	-	-	0.23 J	2.34 Y
Benzo(a)anthracene	n/a	0.002	-	-	-	<b>0.30 J</b>	<b>0.87 J</b>
Chrysene	n/a	0.002	-	-	-	<b>0.21 J</b>	<b>1.66 Y</b>
Acenaphthene	20	20	-	-	-	-	0.29 J
Fluorene	n/a	50	-	-	-	-	0.55 J
Phenanthrene	n/a	50	-	-	-	-	0.57 J
Anthracene	n/a	50	-	-	-	-	0.20 J
Pyrene	n/a	50	-	-	-	-	2.31 Y
Benzo(b)fluoranthene	n/a	0.002	-	-	-	-	<b>1.48 Y</b>

Benzo(k)fluoranthene	n/a	0.002	-	-	-	-	<b>1.10 Y</b>
Benzo(a)pyrene	n/d	ND	-	-	-	-	<b>1.19 Y</b>
Indeno(1,2,3-cd)pyrene	n/a	0.002	-	-	-	-	<b>0.87 J</b>
Dibenzo(a,h)anthracene	n/a	n/a	-	-	-	-	0.45 J
Benzo(g,h,i)perylene	n/a	n/a	-	-	-	-	1.24 Y
Carbazole	n/a	n/a	-	-	-	-	0.39 J
<b>PCBs</b>	<b>NYSDEC Groundwater Limits ug/L</b>	<b>NYSDEC Standards and Guidance Values ug/L</b>	<b>MW-1 ug/L</b>	<b>MW-2 ug/L</b>	<b>MW-3 ug/L</b>	<b>MW-4 ug/L</b>	<b>MW-5 ug/L</b>
			None Detected				
<b>PP METALS</b>	<b>NYSDEC Groundwater Limits mg/L</b>	<b>NYSDEC Standards and Guidance Values mg/L</b>	<b>MW-1 mg/L</b>	<b>MW-2 mg/L</b>	<b>MW-3 mg/L</b>	<b>MW-4 mg/L</b>	<b>MW-5 mg/L</b>
Mercury	0.0007	0.0007	-	-	0.00028	0.00022	<b>0.0011</b>
Antimony	0.003	0.003	-	-	-	-	-
Arsenic	0.025	0.025	-	-	-	-	-
Beryllium	0.003	0.003	-	-	-	-	-
Cadmium	0.05	0.005	-	<b>0.0084</b>	<b>0.0061</b>	-	-
Chromium	0.05	0.05	0.024	<b>0.40</b>	<b>0.094</b>	-	0.035
Copper	0.2	0.2	0.031	0.19	0.13	0.028	0.19
Lead	0.025	0.025	0.020	<b>0.036</b>	<b>0.088</b>	<b>0.038</b>	<b>0.17</b>
Nickel	0.1	0.1	0.024	<b>0.25</b>	0.073	0.0062	0.029
Selenium	0.01	0.01	-	-	-	-	-
Silver	0.05	0.05	-	-	-	-	0.011
Thallium	0.0005	0.0005	-	-	-	-	-
Zinc	5	5	0.071	0.25	0.19	0.036	0.87

- Analyte not detected. ug/L = micrograms per liter, mg/L = milligrams per liter

Values in bold exceed the NYSDEC ambient groundwater limits- Analyte not detected. J – Analyte detected below analytical method detection limits (quantitation limits). B – Analyte detected in associated method blank. Y – The concentration reported was detected below the lowest calibration standard concentration. ug/kg = micrograms per kilogram, mg/kg = milligrams per kilogram.

## **5.2 Soil Sample Analytical Results**

The soil laboratory analytical results were evaluated in accordance with the New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives "Restricted Use Soil Cleanup Objectives - Restricted Residential".

Volatile organic compounds (VOCs) were detected in all of the soil samples, but below their respective Soil Cleanup Objectives (SCOs).

Semi-volatile organic compounds (VOCs) were detected at varying concentrations in all of the soil samples collected. SVOCs were detected above SCOs in SB-4 which was collected from the middle lot.

The Priority Pollutant Metal lead was detected slightly above its SCO in soil borings SB-4 and SB-11. Mercury was detected above its SCO in soil boring SB-4. PCBs were detected below the SCO in SB-3 and SB-4.

In the northern lot, the level of VOC and SVOC contamination is minimal; none of the compounds exceeded their respective SCOs. SVOC contamination appears to be localized to the southern and middle parking lots. Priority Pollutant Metals were found in all three parking lots, but at levels just above their respective SCOs.

Soil samples were collected at four foot intervals from each boring for screening with a PID, except in the instance of refusal. The highest PID reading from each boring was collected and sent to the laboratory for analysis. In the instances that the samples did not have a PID reading, these samples were composited from each four foot interval until termination of the boring, and were sent to the laboratory for analysis. Field screening results are available for review in Appendix C.

Compound	TAGM 4046 RSCOs	Restricted Residential Soil Cleanup Objectives	SB-1	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	SB-9	SB-11	SB-12
Sample Collection Depth C= Composite or G = Grab			0-16' C	0-16' C	12-16' G	0-8' C	0-12' C	0-12' C	0-8' C	0-4' C	0-4' C	0-4' C
VOCs	TAGM 4046 RSCOs ug/kg	6 NYCRR Subpart 375-6 ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	200	100,000	32.0 Y	110	306	173	38.4	36.3 Y	25.7 Y	27.0 Y	22.3 Y	21.2
n-propylbenzene	n/a	100,000	-	-	5.86 Y	-	-	-	-	-	-	-
Carbon disulfide	2,700	n/a	-	-	-	2.92 Y	-	-	-	-	-	-
Tetrachloroethene	1,400	19,000	-	-	5.13 Y	-	-	-	-	-	3.90 Y	4.49 Y
Methylene Chloride	100	100,000	-	-	-	-	-	-	4.15 Y	6.66 Y	20.0 B	19.2 B
2-Butanone	300	n/a	-	-	-	15.2 Y	-	-	-	-	-	-
4-Isopropyltoluene	n/a	n/a	-	-	-	80.3	-	-	-	-	-	-
sec-Butylbenzene	n/a	100,000	-	-	8.81 Y	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	n/a	n/a	-	-	35.3	-	-	-	-	-	-	-
1,2,4,5-Tetramethylbenzene	n/a	n/a	-	-	172	-	-	-	-	-	-	-
p-Diethylbenzene	n/a	n/a	-	-	31.1 Y	-	-	-	-	-	-	-
SVOCs	TAGM 4046 RSCOs ug/kg	6 NYCRR Subpart 375-6 ug/kg	SB-1 ug/kg	SB-3 ug/kg	SB-4 ug/kg	SB-5 ug/kg	SB-6 ug/kg	SB-7 ug/kg	SB-8 ug/kg	SB-9 ug/kg	SB-11 ug/kg	SB-12 ug/kg

Napthalene	13,000	100,000	-	-	591 Y	42.4	-	-	-	-	-	-
2-Methylnaphthalene	36,400	n/a	-	-	408 Y	45.9 Y	-	-	-	-	-	-
Acenaphthylene	41,000	100,000	-	-	420 Y	23.9 J	-	-	-	-	-	-
Acenaphthene	50,000	100,000	-	-	1,460 Y	39.7 Y	-	-	-	-	-	-
Dibenzofuran	6,200	n/a	-	-	654 Y	-	-	-	-	-	-	-
Fluorene	50,000	100,000	-	-	1,370 Y	42.9 Y	-	-	-	-	-	-
Phenanthrene	50,000	100,000	98.0 Y	25.5 J	13,900	328 Y	-	-	-	66.5 Y	75.6 Y	-
Anthracene	50,000	100,000	-	-	3,270	107 Y	-	-	-	-	-	-
Di-n-butylphthalate	8,100	n/a	97.5 Y	54.1 J	-	1,460	85.0 Y	61.6 J	399 Y	92.7 Y	107 Y	-
Fluoranthene	50,000	100,000	182 Y	66.4 Y	23,400	644	-	-	-	110 Y	93.9 Y	-
Pyrene	50,000	100,000	155 Y	62.3 Y	19,400	551 Y	-	-	-	103 Y	79.1 Y	-
Benzo(a)anthracene	224	1,000	104 Y	31.7 Y	<b>10,500</b>	316 Y	-	-	-	52.9 Y	32.6 Y	-
Chrysene	400	3,900	126 Y	37.8 Y	<b>10,700</b>	353 Y	-	-	-	89.1 Y	44.9 Y	-
Benzo(b)fluoranthene	1,100	1,000	104 Y	23.5 Y	<b>8,750</b>	294 Y	-	-	-	48.8 Y	32.4 Y	-
Benzo(k)fluoranthene	1,100	3,900	101 Y	32.0 J	<b>9,190</b>	277 Y	-	-	-	49.1 J	34.5 J	-
Benzo(a)pyrene	61	1,000	115 Y	31.2 Y	<b>9,960</b>	307 Y	-	-	-	49.1 Y	30.4 Y	-
Indeno(1,2,3-cd)pyrene	3,200	500	96.8 Y	-	<b>4,900</b>	197 Y	-	-	-	29.1 Y	-	-
Dibenzo(a,h)anthracene	14	330	38.3 Y	-	<b>1,930 Y</b>	73.0 Y	-	-	-	-	-	-
Benzo(g,h,i)perylene	50,000	100,000	119 Y	-	4,880	204 Y	-	-	-	37.4 Y	-	-
bis(2-ethylhexyl)phthalate	50,000	n/a	-	-	2,040 Y	165 Y	50.3 Y	-	45.7 Y	24.4 J	-	25.3 J
Carbazole	n/a	n/a	-	-	2,100 Y	49.5 Y	-	-	-	-	-	-
Butylbenzylphthalate	50,000	n/a	-	-	2,490 Y	-	-	-	-	-	-	-
Benzyl alcohol	n/a	n/a	-	-	-	73.7 Y	-	-	-	-	-	-
Benzoic acid	n/a	n/a	-	-	-	139 Y	-	-	-	-	-	-

Dimethylphthalate	2,000	n/a	-	-	-	49.2 Y	-	-	-	-	-	-
Diethylphthalate	7,100	n/a	-	-	-	41.3 Y	84.0 Y	-	-	-	-	-
<b>PCBs</b>	<b>TAGM 4046 RSCOs ug/kg</b>	<b>6 NYCRR Subpart 375-6 ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SB-3 ug/kg</b>	<b>SB-4 ug/kg</b>	<b>SB-5 ug/kg</b>	<b>SB-6 ug/kg</b>	<b>SB-7 ug/kg</b>	<b>SB-8 ug/kg</b>	<b>SB-9 ug/kg</b>	<b>SB-11 ug/kg</b>	<b>SB-12 ug/kg</b>
Aroclor 1254	10,000	1,000	-	54.8	273	-	-	-	-	-	-	-
<b>PP METALS</b>	<b>TAGM 4046 RSCOs mg/kg</b>	<b>6 NYCRR Subpart 375-6 mg/kg</b>	<b>SB-1 mg/kg</b>	<b>SB-3 mg/kg</b>	<b>SB-4 mg/kg</b>	<b>SB-5 mg/kg</b>	<b>SB-6 mg/kg</b>	<b>SB-7 ug/kg</b>	<b>SB-8 mg/kg</b>	<b>SB-9 mg/kg</b>	<b>SB-11 mg/kg</b>	<b>SB-12 mg/kg</b>
Mercury	0.1	0.81	0.066	-	<b>0.85</b>	0.11	-	-	-	-	0.094	-
Arsenic	7.5 or SB SB= 3-12	16	-	12.2	-	-	-	-	-	-	-	-
Cadmium	1 or SB SB=0.1-1	4.3	1.36	2.67	1.58	0.064	1.25	1.16	0.40	0.74	1.44	0.80
Chromium	10 or SB SB= 1.5-40	180	19.4	14.0	23.7	7.63	40.3	18.8	11.4	24.0	28.0	17.6
Copper	35 or SB SB= 1-50	270	29.8	22.5	50.7	13.1	23.4	14.3	10.4	21.7	27.4	32.9
Lead	SB SB= 200- 500	400	85.1	20.9	<b>1,050</b>	13.5	8.34	27.6	2.80	38.8	<b>1,180</b>	22.9
Nickel	13 or SB SB= 0.5-25	310	12.4	10.7	13.5	5.58	25.9	13.3	7.58	14.9	17.4	17.1
Selenium	2 or SB SB= 0.1-3.9	180	2.28	-	2.15	-	-	-	-	-	-	-
Silver	SB SB= n/a	180	-	-	-	-	-	0.68	-	-	-	-
Zinc	20 or SB SB= 9-50	10,000	166	34.4	409	39.3	42.5	283	30.1	50.0	171	40.1

- Analyte not detected. J – Analyte detected below analytical method detection limits (quantitation limits). B – Analyte detected in associated method blank. Y – The concentration reported was detected below the lowest calibration standard concentration.

ug/kg = micrograms per kilogram, mg/kg = milligrams per kilogram, - = compound not detected. RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels. Restricted residential soil cleanup objectives come from 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives." Values in bold exceed the Restricted Residential Values  
SB-2 and SB-10 - refusal hit, no sample collected.

## 6.0 CONCLUSIONS

Galli Engineering, P.C. has prepared this Remedial Investigation report on behalf of Spectrum Communities to establish the current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property. Specifically, this report is intended to provide information in terms of the absence or presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Priority Pollutant Metals, and polychlorinated biphenyls (PCBs) at the locations and depths tested. Based on the analytical data, the following key findings are identified:

- Several SVOCs were detected above their respective NYSDEC Ambient Water Quality Standards and Guidance Values in two of the groundwater samples collected from the five monitoring wells.
- Groundwater from the three new wells installed off-site to the west and southwest did not reveal any VOC or SVOC contamination. Some PP Metals contamination was present in the samples, most likely due to the high turbidity of some groundwater samples, which was a result of using a bailer during sampling activities.
- Based on water elevations measured on November 17, 2006, and the bedrock profile of the site, groundwater flow is to the west-southwest and it appears that the groundwater impact from previous uses of the site is minimal and restricted to the area of MW-4 and MW-5.
- SVOCs and some metals were detected at concentrations above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- SVOCs and metals were detected at concentrations above the New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives "Restricted Use Soil Cleanup Objectives - Restricted Residential" in the soil samples collected from the central parking lot (former power plant parcel).
- No VOCs or SVOCs were detected above their respective SCOs in any of the soil samples on the northernmost lot. It appears that the VOC and SVOC soil contamination is limited to the southern and middle parking lots.
- Soil in which contaminants appear lies in a layer on top of bedrock ranging from ½ to 24 feet deep. The soil layer is up to 24 feet thick in the vicinity of the middle lot and up to 21 feet thick in the southern lot.



The analytical data confirms that the subject property has been impacted by contaminants that are consistent with the past use of the parcels (i.e., former gasoline service station, automotive repair and parking facility at the south parking lot; and a former heat, light and power plant at the central parking lot property). The nature of contaminants detected is not unusual for previously developed urban sites. The analytical data collected as part of this investigation indicate that the impacted soils do not meet the criteria for hazardous waste, and the area of groundwater impact appears to be isolated.

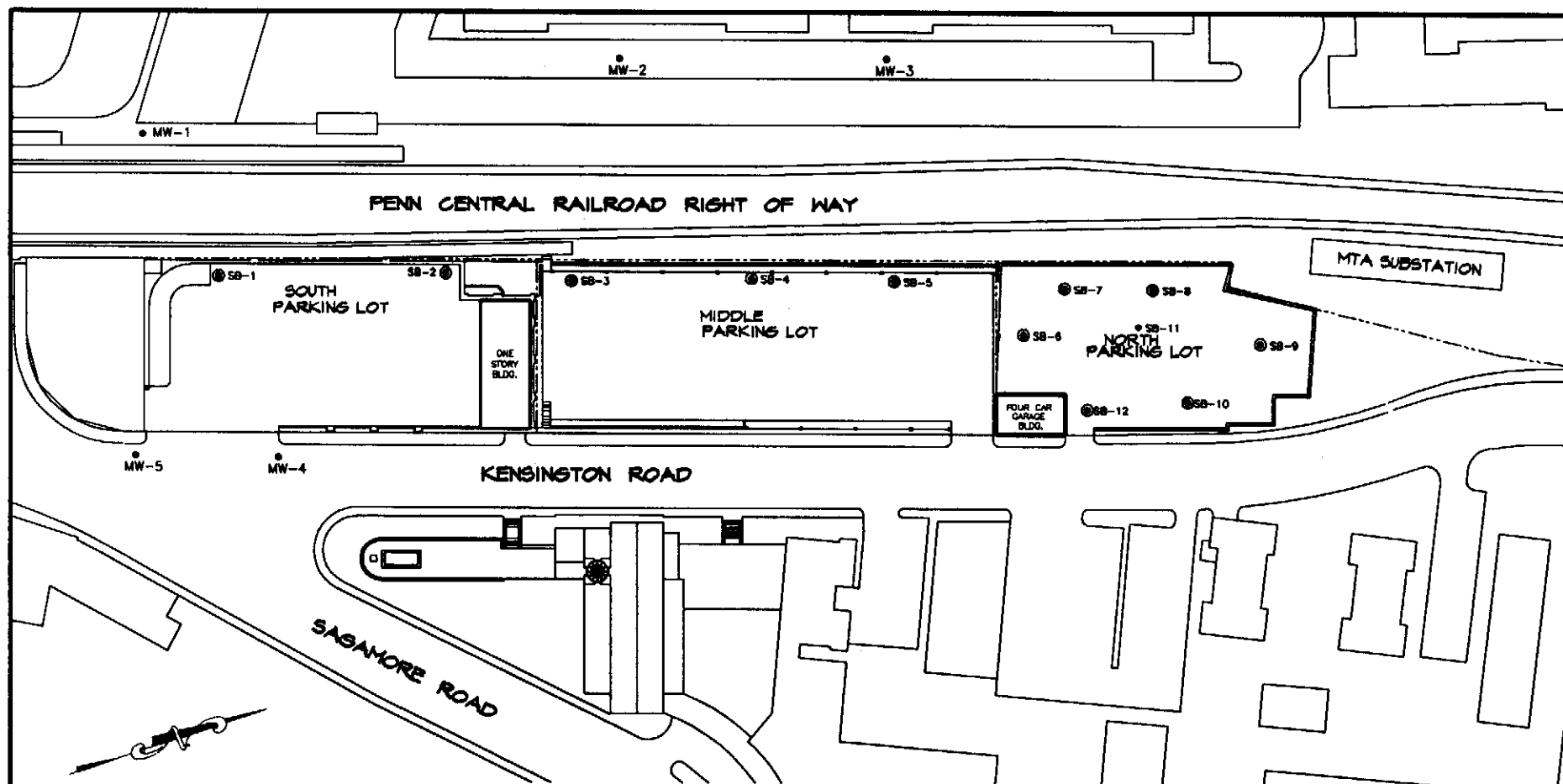
**GALLI ENGINEERING, P.C.**

---

Richard D. Galli  
President

---

Date



#### LEGEND

- SB-6 SOIL BORING LOCATION
- MW-2 MONITORING WELL LOCATION

**THREE CONTIGUOUS PARKING LOTS**  
3-27 KENSINGTON RD., BRONXVILLE, N.Y.

#### SOIL BORING & MONITORING WELL LOCATION PLAN

JOB NO.  
0221-17-016  
DRAWN  
JC  
CHECKED  
RDG  
APPROVED  
RDG



Galli engineering, p.c.  
734 West Whittman Road, Suite 402A  
Merrick, New York 11747

DATE  
12-20-06

SCALE  
1"=60'

FIGURE NO.

1

# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

**Laboratory Identifier: 0610403**

Received: 10/18/2006 13:14

Sampled by: Scott Daivdow

**Client: Galli Engineering, PC**


734 Whitman Road  
Melville,  
NY 11747

**Project: Bronxville**

Kensington Road  
Bronxville,

**Manager: Scott Daivdow**

Respectfully submitted,



---

Technical Director

NYS Lab ID # 10969

NJ Cert. # 73812

CT Cert. # PH0645

MA Cert. # NY061

PA Cert. # 68-535

NH Cert. # 252592-BA

RI Cert. # 161

The information contained in this report is confidential and intended only for the use of the client listed above. This report shall not be reproduced, except in full, without the written consent of Environmental Testing Laboratories, Inc.



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6156	1.21	1.21	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6156	1.48	1.48	ppb	U
74-87-3	Chloromethane	B 2188-6156	0.89	0.89	ppb	U
75-01-4	Vinyl Chloride	B 2188-6156	1.35	1.35	ppb	U
74-83-9	Bromomethane	B 2188-6156	1.19	1.19	ppb	U
75-00-3	Chloroethane	B 2188-6156	2.90	2.90	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6156	1.46	1.46	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6156	1.69	1.69	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6156	1.57	1.57	ppb	U
67-64-1	Acetone	B 2188-6156	11.5	32.0	ppb	Y
75-15-0	Carbon disulfide	B 2188-6156	2.85	2.85	ppb	U
75-09-2	Methylene Chloride	B 2188-6156	1.94	1.94	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6156	0.96	0.96	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6156	1.14	1.14	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6156	1.00	1.00	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6156	1.76	1.76	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6156	1.23	1.23	ppb	U
78-93-3	2-Butanone	B 2188-6156	7.20	7.20	ppb	U
74-97-5	Bromochloromethane	B 2188-6156	2.28	2.28	ppb	U
67-66-3	Chloroform	B 2188-6156	1.07	1.07	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6156	1.14	1.14	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6156	1.30	1.30	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6156	2.39	2.39	ppb	U
71-43-2	Benzene	B 2188-6156	1.14	1.14	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6156	1.30	1.30	ppb	U
79-01-6	Trichloroethene	B 2188-6156	0.82	0.82	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6156	0.87	0.87	ppb	U
74-95-3	Dibromomethane	B 2188-6156	1.14	1.14	ppb	U
75-27-4	Bromodichloromethane	B 2188-6156	0.98	0.98	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6156	7.73	7.73	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6156	1.12	1.12	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6156	4.42	4.42	ppb	U
108-88-3	Toluene	B 2188-6156	0.87	0.87	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6156	1.12	1.12	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6156	2.01	2.01	ppb	U
127-18-4	Tetrachloroethene	B 2188-6156	1.32	1.32	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6156	1.23	1.23	ppb	U
591-78-6	2-Hexanone	B 2188-6156	3.97	3.97	ppb	U
124-48-1	Dibromochloromethane	B 2188-6156	1.64	1.64	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6156	1.69	1.69	ppb	U
108-90-7	Chlorobenzene	B 2188-6156	1.16	1.16	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6156	1.80	1.80	ppb	U
100-41-4	Ethylbenzene	B 2188-6156	0.98	0.98	ppb	U
108-38-3	m,p-xylene	B 2188-6156	2.28	2.28	ppb	U
95-47-6	o-xylene	B 2188-6156	1.71	1.71	ppb	U
100-42-5	Styrene	B 2188-6156	1.69	1.69	ppb	U
75-25-2	Bromoform	B 2188-6156	2.58	2.58	ppb	U
98-82-8	Isopropylbenzene	B 2188-6156	1.44	1.44	ppb	U
108-86-1	Bromobenzene	B 2188-6156	1.85	1.85	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6156	3.26	3.26	ppb	U
103-65-1	n-Propylbenzene	B 2188-6156	1.64	1.64	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6156	4.58	4.58	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6156	2.10	2.10	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6156	1.87	1.87	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6156	2.03	2.03	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6156	2.23	2.23	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6156	2.19	2.19	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6156	2.14	2.14	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6156	1.89	1.89	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6156	1.80	1.80	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6156	2.26	2.26	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6156	2.35	2.35	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6156	2.69	2.69	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6156	2.26	2.26	ppb	U
104-51-8	n-Butylbenzene	B 2188-6156	2.03	2.03	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6156	2.49	2.49	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6156	5.22	5.22	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6156	2.28	2.28	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6156	2.26	2.26	ppb	U
91-20-3	Naphthalene	B 2188-6156	2.78	2.78	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6156	2.35	2.35	ppb	U
994-05-8	TAME	B 2188-6156	4.79	4.79	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6156	39.7	39.7	ppb	U
107-13-1	Acrylonitrile	B 2188-6156	14.0	14.0	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6156	86.8 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6156	127.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6156	103.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-2

Client Sample ID: SB-3

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6157	1.17	1.17	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6157	1.44	1.44	ppb	U
74-87-3	Chloromethane	B 2188-6157	0.86	0.86	ppb	U
75-01-4	Vinyl Chloride	B 2188-6157	1.30	1.30	ppb	U
74-83-9	Bromomethane	B 2188-6157	1.15	1.15	ppb	U
75-00-3	Chloroethane	B 2188-6157	2.81	2.81	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6157	1.41	1.41	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6157	1.64	1.64	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6157	1.52	1.52	ppb	U
67-64-1	Acetone	B 2188-6157	11.2	110	ppb	
75-15-0	Carbon disulfide	B 2188-6157	2.76	2.76	ppb	U
75-09-2	Methylene Chloride	B 2188-6157	1.88	1.88	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6157	0.93	0.93	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6157	1.11	1.11	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6157	0.97	0.97	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6157	1.70	1.70	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6157	1.19	1.19	ppb	U
78-93-3	2-Butanone	B 2188-6157	6.98	6.98	ppb	U
74-97-5	Bromochloromethane	B 2188-6157	2.21	2.21	ppb	U
67-66-3	Chloroform	B 2188-6157	1.04	1.04	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6157	1.11	1.11	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6157	1.26	1.26	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6157	2.32	2.32	ppb	U
71-43-2	Benzene	B 2188-6157	1.11	1.11	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6157	1.26	1.26	ppb	U
79-01-6	Trichloroethene	B 2188-6157	0.80	0.80	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6157	0.84	0.84	ppb	U
74-95-3	Dibromomethane	B 2188-6157	1.11	1.11	ppb	U
75-27-4	Bromodichloromethane	B 2188-6157	0.95	0.95	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6157	7.49	7.49	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6157	1.08	1.08	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6157	4.29	4.29	ppb	U
108-88-3	Toluene	B 2188-6157	0.84	0.84	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6157	1.08	1.08	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-2

Client Sample ID: SB-3

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6157	1.94	1.94	ppb	U
127-18-4	Tetrachloroethene	B 2188-6157	1.28	1.28	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6157	1.19	1.19	ppb	U
591-78-6	2-Hexanone	B 2188-6157	3.85	3.85	ppb	U
124-48-1	Dibromochloromethane	B 2188-6157	1.59	1.59	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6157	1.64	1.64	ppb	U
108-90-7	Chlorobenzene	B 2188-6157	1.13	1.13	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6157	1.75	1.75	ppb	U
100-41-4	Ethylbenzene	B 2188-6157	0.95	0.95	ppb	U
108-38-3	m,p-xylene	B 2188-6157	2.21	2.21	ppb	U
95-47-6	o-xylene	B 2188-6157	1.66	1.66	ppb	U
100-42-5	Styrene	B 2188-6157	1.64	1.64	ppb	U
75-25-2	Bromoform	B 2188-6157	2.50	2.50	ppb	U
98-82-8	Isopropylbenzene	B 2188-6157	1.39	1.39	ppb	U
108-86-1	Bromobenzene	B 2188-6157	1.79	1.79	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6157	3.16	3.16	ppb	U
103-65-1	n-Propylbenzene	B 2188-6157	1.59	1.59	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6157	4.44	4.44	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6157	2.03	2.03	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6157	1.81	1.81	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6157	1.97	1.97	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6157	2.17	2.17	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6157	2.12	2.12	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6157	2.08	2.08	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6157	1.83	1.83	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6157	1.75	1.75	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6157	2.19	2.19	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6157	2.28	2.28	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6157	2.61	2.61	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6157	2.19	2.19	ppb	U
104-51-8	n-Butylbenzene	B 2188-6157	1.97	1.97	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6157	2.41	2.41	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6157	5.06	5.06	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6157	2.21	2.21	ppb	U





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-2**

Client Sample ID: SB-3

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6157	2.19	2.19	ppb	U
91-20-3	Naphthalene	B 2188-6157	2.70	2.70	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6157	2.28	2.28	ppb	U
994-05-8	TAME	B 2188-6157	4.64	4.64	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6157	38.5	38.5	ppb	U
107-13-1	Acrylonitrile	B 2188-6157	13.5	13.5	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6157	87.2 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6157	125.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6157	103.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-3

Client Sample ID: SB-4

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6165	3.39	3.39	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6165	4.15	4.15	ppb	U
74-87-3	Chloromethane	B 2188-6165	2.49	2.49	ppb	U
75-01-4	Vinyl Chloride	B 2188-6165	3.77	3.77	ppb	U
74-83-9	Bromomethane	B 2188-6165	3.32	3.32	ppb	U
75-00-3	Chloroethane	B 2188-6165	8.12	8.12	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6165	4.09	4.09	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6165	4.73	4.73	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6165	4.41	4.41	ppb	U
67-64-1	Acetone	B 2188-6165	32.3	306	ppb	
75-15-0	Carbon disulfide	B 2188-6165	7.99	7.99	ppb	U
75-09-2	Methylene Chloride	B 2188-6165	5.43	5.43	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6165	2.68	2.68	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6165	3.19	3.19	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6165	2.81	2.81	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6165	4.92	4.92	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6165	3.45	3.45	ppb	U
78-93-3	2-Butanone	B 2188-6165	20.2	20.2	ppb	U
74-97-5	Bromochloromethane	B 2188-6165	6.39	6.39	ppb	U
67-66-3	Chloroform	B 2188-6165	3.00	3.00	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6165	3.19	3.19	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6165	3.64	3.64	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6165	6.71	6.71	ppb	U
71-43-2	Benzene	B 2188-6165	3.19	3.19	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6165	3.64	3.64	ppb	U
79-01-6	Trichloroethene	B 2188-6165	2.30	2.30	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6165	2.43	2.43	ppb	U
74-95-3	Dibromomethane	B 2188-6165	3.19	3.19	ppb	U
75-27-4	Bromodichloromethane	B 2188-6165	2.75	2.75	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6165	21.7	21.7	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6165	3.13	3.13	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6165	12.4	12.4	ppb	U
108-88-3	Toluene	B 2188-6165	2.43	2.43	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6165	3.13	3.13	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-3

Client Sample ID: SB-4

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6165	5.62	5.62	ppb	U
127-18-4	Tetrachloroethene	B 2188-6165	3.71	5.13	ppb	Y
142-28-9	1,3-Dichloropropane	B 2188-6165	3.45	3.45	ppb	U
591-78-6	2-Hexanone	B 2188-6165	11.1	11.1	ppb	U
124-48-1	Dibromochloromethane	B 2188-6165	4.60	4.60	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6165	4.73	4.73	ppb	U
108-90-7	Chlorobenzene	B 2188-6165	3.26	3.26	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6165	5.05	5.05	ppb	U
100-41-4	Ethylbenzene	B 2188-6165	2.75	2.75	ppb	U
108-38-3	m,p-xylene	B 2188-6165	6.39	6.39	ppb	U
95-47-6	o-xylene	B 2188-6165	4.79	4.79	ppb	U
100-42-5	Styrene	B 2188-6165	4.73	4.73	ppb	U
75-25-2	Bromoform	B 2188-6165	7.22	7.22	ppb	U
98-82-8	Isopropylbenzene	B 2188-6165	4.03	4.03	ppb	U
108-86-1	Bromobenzene	B 2188-6165	5.18	5.18	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6165	9.14	9.14	ppb	U
103-65-1	n-Propylbenzene	B 2188-6165	4.60	5.86	ppb	Y
96-18-4	1,2,3-Trichloropropane	B 2188-6165	12.8	12.8	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6165	5.88	5.88	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6165	5.24	5.24	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6165	5.69	5.69	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6165	6.26	6.26	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6165	6.13	6.13	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6165	6.01	6.01	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6165	5.30	8.81	ppb	Y
99-87-6	4-Isopropyltoluene	B 2188-6165	5.05	5.05	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6165	6.33	6.33	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6165	6.58	6.58	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6165	7.54	7.54	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6165	6.33	31.1	ppb	Y
104-51-8	n-Butylbenzene	B 2188-6165	5.69	5.69	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6165	6.97	172	ppb	
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6165	14.6	14.6	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6165	6.39	6.39	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-3**

Client Sample ID: SB-4

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6165	6.33	6.33	ppb	U
91-20-3	Naphthalene	B 2188-6165	7.80	7.80	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6165	6.58	35.3	ppb	
994-05-8	TAME	B 2188-6165	13.4	13.4	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6165	111	111	ppb	U
107-13-1	Acrylonitrile	B 2188-6165	39.2	39.2	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6165	92.4 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6165	134.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6165	103.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6158	1.20	1.20	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6158	1.47	1.47	ppb	U
74-87-3	Chloromethane	B 2188-6158	0.88	0.88	ppb	U
75-01-4	Vinyl Chloride	B 2188-6158	1.33	1.33	ppb	U
74-83-9	Bromomethane	B 2188-6158	1.18	1.18	ppb	U
75-00-3	Chloroethane	B 2188-6158	2.87	2.87	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6158	1.45	1.45	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6158	1.67	1.67	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6158	1.56	1.56	ppb	U
67-64-1	Acetone	B 2188-6158	11.4	173	ppb	
75-15-0	Carbon disulfide	B 2188-6158	2.83	2.92	ppb	Y
75-09-2	Methylene Chloride	B 2188-6158	1.92	1.92	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6158	0.95	0.95	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6158	1.13	1.13	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6158	0.99	0.99	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6158	1.74	1.74	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6158	1.22	1.22	ppb	U
78-93-3	2-Butanone	B 2188-6158	7.14	15.2	ppb	Y
74-97-5	Bromochloromethane	B 2188-6158	2.26	2.26	ppb	U
67-66-3	Chloroform	B 2188-6158	1.06	1.06	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6158	1.13	1.13	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6158	1.29	1.29	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6158	2.37	2.37	ppb	U
71-43-2	Benzene	B 2188-6158	1.13	1.13	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6158	1.29	1.29	ppb	U
79-01-6	Trichloroethene	B 2188-6158	0.81	0.81	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6158	0.86	0.86	ppb	U
74-95-3	Dibromomethane	B 2188-6158	1.13	1.13	ppb	U
75-27-4	Bromodichloromethane	B 2188-6158	0.97	0.97	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6158	7.66	7.66	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6158	1.11	1.11	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6158	4.38	4.38	ppb	U
108-88-3	Toluene	B 2188-6158	0.86	0.86	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6158	1.11	1.11	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6158	1.99	1.99	ppb	U
127-18-4	Tetrachloroethene	B 2188-6158	1.31	1.31	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6158	1.22	1.22	ppb	U
591-78-6	2-Hexanone	B 2188-6158	3.93	3.93	ppb	U
124-48-1	Dibromochloromethane	B 2188-6158	1.63	1.63	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6158	1.67	1.67	ppb	U
108-90-7	Chlorobenzene	B 2188-6158	1.15	1.15	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6158	1.79	1.79	ppb	U
100-41-4	Ethylbenzene	B 2188-6158	0.97	0.97	ppb	U
108-38-3	m,p-xylene	B 2188-6158	2.26	2.26	ppb	U
95-47-6	o-xylene	B 2188-6158	1.70	1.70	ppb	U
100-42-5	Styrene	B 2188-6158	1.67	1.67	ppb	U
75-25-2	Bromoform	B 2188-6158	2.55	2.55	ppb	U
98-82-8	Isopropylbenzene	B 2188-6158	1.42	1.42	ppb	U
108-86-1	Bromobenzene	B 2188-6158	1.83	1.83	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6158	3.23	3.23	ppb	U
103-65-1	n-Propylbenzene	B 2188-6158	1.63	1.63	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6158	4.54	4.54	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6158	2.08	2.08	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6158	1.85	1.85	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6158	2.01	2.01	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6158	2.21	2.21	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6158	2.17	2.17	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6158	2.12	2.12	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6158	1.88	1.88	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6158	1.79	80.3	ppb	
541-73-1	1,3-Dichlorobenzene	B 2188-6158	2.24	2.24	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6158	2.33	2.33	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6158	2.67	2.67	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6158	2.24	2.24	ppb	U
104-51-8	n-Butylbenzene	B 2188-6158	2.01	2.01	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6158	2.46	2.46	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6158	5.18	5.18	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6158	2.26	2.26	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6158	2.24	2.24	ppb	U
91-20-3	Naphthalene	B 2188-6158	2.76	2.76	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6158	2.33	2.33	ppb	U
994-05-8	TAME	B 2188-6158	4.75	4.75	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6158	39.3	39.3	ppb	U
107-13-1	Acrylonitrile	B 2188-6158	13.9	13.9	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6158	94.0 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6158	124.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6158	103.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-5

Client Sample ID: SB-6

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6159	1.29	1.29	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6159	1.58	1.58	ppb	U
74-87-3	Chloromethane	B 2188-6159	0.95	0.95	ppb	U
75-01-4	Vinyl Chloride	B 2188-6159	1.43	1.43	ppb	U
74-83-9	Bromomethane	B 2188-6159	1.26	1.26	ppb	U
75-00-3	Chloroethane	B 2188-6159	3.09	3.09	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6159	1.56	1.56	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6159	1.80	1.80	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6159	1.68	1.68	ppb	U
67-64-1	Acetone	B 2188-6159	12.3	38.4	ppb	Y
75-15-0	Carbon disulfide	B 2188-6159	3.04	3.04	ppb	U
75-09-2	Methylene Chloride	B 2188-6159	2.07	2.07	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6159	1.02	1.02	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6159	1.22	1.22	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6159	1.07	1.07	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6159	1.87	1.87	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6159	1.31	1.31	ppb	U
78-93-3	2-Butanone	B 2188-6159	7.68	7.68	ppb	U
74-97-5	Bromochloromethane	B 2188-6159	2.43	2.43	ppb	U
67-66-3	Chloroform	B 2188-6159	1.14	1.14	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6159	1.22	1.22	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6159	1.39	1.39	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6159	2.55	2.55	ppb	U
71-43-2	Benzene	B 2188-6159	1.22	1.22	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6159	1.39	1.39	ppb	U
79-01-6	Trichloroethene	B 2188-6159	0.87	0.87	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6159	0.92	0.92	ppb	U
74-95-3	Dibromomethane	B 2188-6159	1.22	1.22	ppb	U
75-27-4	Bromodichloromethane	B 2188-6159	1.04	1.04	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6159	8.24	8.24	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6159	1.19	1.19	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6159	4.71	4.71	ppb	U
108-88-3	Toluene	B 2188-6159	0.92	0.92	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6159	1.19	1.19	ppb	U





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-5

Client Sample ID: SB-6

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6159	2.14	2.14	ppb	U
127-18-4	Tetrachloroethene	B 2188-6159	1.41	1.41	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6159	1.31	1.31	ppb	U
591-78-6	2-Hexanone	B 2188-6159	4.23	4.23	ppb	U
124-48-1	Dibromochloromethane	B 2188-6159	1.75	1.75	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6159	1.80	1.80	ppb	U
108-90-7	Chlorobenzene	B 2188-6159	1.24	1.24	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6159	1.92	1.92	ppb	U
100-41-4	Ethylbenzene	B 2188-6159	1.04	1.04	ppb	U
108-38-3	m,p-xylene	B 2188-6159	2.43	2.43	ppb	U
95-47-6	o-xylene	B 2188-6159	1.82	1.82	ppb	U
100-42-5	Styrene	B 2188-6159	1.80	1.80	ppb	U
75-25-2	Bromoform	B 2188-6159	2.75	2.75	ppb	U
98-82-8	Isopropylbenzene	B 2188-6159	1.53	1.53	ppb	U
108-86-1	Bromobenzene	B 2188-6159	1.97	1.97	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6159	3.47	3.47	ppb	U
103-65-1	n-Propylbenzene	B 2188-6159	1.75	1.75	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6159	4.88	4.88	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6159	2.24	2.24	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6159	1.99	1.99	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6159	2.16	2.16	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6159	2.38	2.38	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6159	2.33	2.33	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6159	2.28	2.28	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6159	2.02	2.02	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6159	1.92	1.92	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6159	2.41	2.41	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6159	2.50	2.50	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6159	2.87	2.87	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6159	2.41	2.41	ppb	U
104-51-8	n-Butylbenzene	B 2188-6159	2.16	2.16	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6159	2.65	2.65	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6159	5.56	5.56	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6159	2.43	2.43	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### **Sample: 0610403-5**

Client Sample ID: SB-6

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6159	2.41	2.41	ppb	U
91-20-3	Naphthalene	B 2188-6159	2.96	2.96	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6159	2.50	2.50	ppb	U
994-05-8	TAME	B 2188-6159	5.10	5.10	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6159	42.3	42.3	ppb	U
107-13-1	Acrylonitrile	B 2188-6159	14.9	14.9	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6159	87.7 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6159	121.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6159	100.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 84%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6160	1.26	1.26	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6160	1.55	1.55	ppb	U
74-87-3	Chloromethane	B 2188-6160	0.93	0.93	ppb	U
75-01-4	Vinyl Chloride	B 2188-6160	1.40	1.40	ppb	U
74-83-9	Bromomethane	B 2188-6160	1.24	1.24	ppb	U
75-00-3	Chloroethane	B 2188-6160	3.02	3.02	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6160	1.52	1.52	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6160	1.76	1.76	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6160	1.64	1.64	ppb	U
67-64-1	Acetone	B 2188-6160	12.0	36.3	ppb	Y
75-15-0	Carbon disulfide	B 2188-6160	2.97	2.97	ppb	U
75-09-2	Methylene Chloride	B 2188-6160	2.02	2.02	ppb	U
156-60-5	t-1,2-Dichloroethene	B 2188-6160	1.00	1.00	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6160	1.19	1.19	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6160	1.05	1.05	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6160	1.83	1.83	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6160	1.29	1.29	ppb	U
78-93-3	2-Butanone	B 2188-6160	7.52	7.52	ppb	U
74-97-5	Bromochloromethane	B 2188-6160	2.38	2.38	ppb	U
67-66-3	Chloroform	B 2188-6160	1.12	1.12	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6160	1.19	1.19	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6160	1.36	1.36	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6160	2.50	2.50	ppb	U
71-43-2	Benzene	B 2188-6160	1.19	1.19	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6160	1.36	1.36	ppb	U
79-01-6	Trichloroethene	B 2188-6160	0.86	0.86	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6160	0.90	0.90	ppb	U
74-95-3	Dibromomethane	B 2188-6160	1.19	1.19	ppb	U
75-27-4	Bromodichloromethane	B 2188-6160	1.02	1.02	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6160	8.07	8.07	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6160	1.17	1.17	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6160	4.62	4.62	ppb	U
108-88-3	Toluene	B 2188-6160	0.90	0.90	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6160	1.17	1.17	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 84%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6160	2.09	2.09	ppb	U
127-18-4	Tetrachloroethene	B 2188-6160	1.38	1.38	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6160	1.29	1.29	ppb	U
591-78-6	2-Hexanone	B 2188-6160	4.14	4.14	ppb	U
124-48-1	Dibromochloromethane	B 2188-6160	1.71	1.71	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6160	1.76	1.76	ppb	U
108-90-7	Chlorobenzene	B 2188-6160	1.21	1.21	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6160	1.88	1.88	ppb	U
100-41-4	Ethylbenzene	B 2188-6160	1.02	1.02	ppb	U
108-38-3	m,p-xylene	B 2188-6160	2.38	2.38	ppb	U
95-47-6	o-xylene	B 2188-6160	1.78	1.78	ppb	U
100-42-5	Styrene	B 2188-6160	1.76	1.76	ppb	U
75-25-2	Bromoform	B 2188-6160	2.69	2.69	ppb	U
98-82-8	Isopropylbenzene	B 2188-6160	1.50	1.50	ppb	U
108-86-1	Bromobenzene	B 2188-6160	1.93	1.93	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6160	3.40	3.40	ppb	U
103-65-1	n-Propylbenzene	B 2188-6160	1.71	1.71	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6160	4.78	4.78	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6160	2.19	2.19	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6160	1.95	1.95	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6160	2.12	2.12	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6160	2.33	2.33	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6160	2.28	2.28	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6160	2.24	2.24	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6160	1.98	1.98	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6160	1.88	1.88	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6160	2.36	2.36	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6160	2.45	2.45	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6160	2.81	2.81	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6160	2.36	2.36	ppb	U
104-51-8	n-Butylbenzene	B 2188-6160	2.12	2.12	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6160	2.59	2.59	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6160	5.45	5.45	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6160	2.38	2.38	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 84%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6160	2.36	2.36	ppb	U
91-20-3	Naphthalene	B 2188-6160	2.90	2.90	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6160	2.45	2.45	ppb	U
994-05-8	TAME	B 2188-6160	5.00	5.00	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6160	41.4	41.4	ppb	U
107-13-1	Acrylonitrile	B 2188-6160	14.6	14.6	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6160	87.4 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6160	124.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6160	102.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-7**

Client Sample ID: SB-8

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6161	1.18	1.18	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6161	1.44	1.44	ppb	U
74-87-3	Chloromethane	B 2188-6161	0.87	0.87	ppb	U
75-01-4	Vinyl Chloride	B 2188-6161	1.31	1.31	ppb	U
74-83-9	Bromomethane	B 2188-6161	1.15	1.15	ppb	U
75-00-3	Chloroethane	B 2188-6161	2.82	2.82	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6161	1.42	1.42	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6161	1.64	1.64	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6161	1.53	1.53	ppb	U
67-64-1	Acetone	B 2188-6161	11.2	25.7	ppb	Y
75-15-0	Carbon disulfide	B 2188-6161	2.78	2.78	ppb	U
75-09-2	Methylene Chloride	B 2188-6161	1.89	4.15	ppb	Y
156-60-5	t-1,2-Dichloroethene	B 2188-6161	0.93	0.93	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6161	1.11	1.11	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6161	0.98	0.98	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6161	1.71	1.71	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6161	1.20	1.20	ppb	U
78-93-3	2-Butanone	B 2188-6161	7.02	7.02	ppb	U
74-97-5	Bromochloromethane	B 2188-6161	2.22	2.22	ppb	U
67-66-3	Chloroform	B 2188-6161	1.04	1.04	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6161	1.11	1.11	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6161	1.27	1.27	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6161	2.33	2.33	ppb	U
71-43-2	Benzene	B 2188-6161	1.11	1.11	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6161	1.27	1.27	ppb	U
79-01-6	Trichloroethene	B 2188-6161	0.80	0.80	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6161	0.84	0.84	ppb	U
74-95-3	Dibromomethane	B 2188-6161	1.11	1.11	ppb	U
75-27-4	Bromodichloromethane	B 2188-6161	0.95	0.95	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6161	7.53	7.53	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6161	1.09	1.09	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6161	4.31	4.31	ppb	U
108-88-3	Toluene	B 2188-6161	0.84	0.84	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6161	1.09	1.09	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-7

Client Sample ID: SB-8

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6161	1.95	1.95	ppb	U
127-18-4	Tetrachloroethene	B 2188-6161	1.29	1.29	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6161	1.20	1.20	ppb	U
591-78-6	2-Hexanone	B 2188-6161	3.86	3.86	ppb	U
124-48-1	Dibromochloromethane	B 2188-6161	1.60	1.60	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6161	1.64	1.64	ppb	U
108-90-7	Chlorobenzene	B 2188-6161	1.13	1.13	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6161	1.75	1.75	ppb	U
100-41-4	Ethylbenzene	B 2188-6161	0.95	0.95	ppb	U
108-38-3	m,p-xylene	B 2188-6161	2.22	2.22	ppb	U
95-47-6	o-xylene	B 2188-6161	1.66	1.66	ppb	U
100-42-5	Styrene	B 2188-6161	1.64	1.64	ppb	U
75-25-2	Bromoform	B 2188-6161	2.51	2.51	ppb	U
98-82-8	Isopropylbenzene	B 2188-6161	1.40	1.40	ppb	U
108-86-1	Bromobenzene	B 2188-6161	1.80	1.80	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6161	3.17	3.17	ppb	U
103-65-1	n-Propylbenzene	B 2188-6161	1.60	1.60	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6161	4.46	4.46	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6161	2.04	2.04	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6161	1.82	1.82	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6161	1.98	1.98	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6161	2.18	2.18	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6161	2.13	2.13	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6161	2.09	2.09	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6161	1.84	1.84	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6161	1.75	1.75	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6161	2.20	2.20	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6161	2.29	2.29	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6161	2.62	2.62	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6161	2.20	2.20	ppb	U
104-51-8	n-Butylbenzene	B 2188-6161	1.98	1.98	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6161	2.42	2.42	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6161	5.08	5.08	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6161	2.22	2.22	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-7

Client Sample ID: SB-8

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6161	2.20	2.20	ppb	U
91-20-3	Naphthalene	B 2188-6161	2.71	2.71	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6161	2.29	2.29	ppb	U
994-05-8	TAME	B 2188-6161	4.66	4.66	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6161	38.6	38.6	ppb	U
107-13-1	Acrylonitrile	B 2188-6161	13.6	13.6	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6161	85.0 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6161	130.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6161	102.0 %	( 91 - 108)	





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2188-6162	1.19	1.19	ppb	U
75-45-6	Chlorodifluoromethane	B 2188-6162	1.46	1.46	ppb	U
74-87-3	Chloromethane	B 2188-6162	0.87	0.87	ppb	U
75-01-4	Vinyl Chloride	B 2188-6162	1.32	1.32	ppb	U
74-83-9	Bromomethane	B 2188-6162	1.16	1.16	ppb	U
75-00-3	Chloroethane	B 2188-6162	2.84	2.84	ppb	U
75-69-4	Trichlorofluoromethane	B 2188-6162	1.43	1.43	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2188-6162	1.66	1.66	ppb	U
75-35-4	1,1-Dichloroethene	B 2188-6162	1.55	1.55	ppb	U
67-64-1	Acetone	B 2188-6162	11.3	27.0	ppb	Y
75-15-0	Carbon disulfide	B 2188-6162	2.80	2.80	ppb	U
75-09-2	Methylene Chloride	B 2188-6162	1.90	6.66	ppb	Y
156-60-5	t-1,2-Dichloroethene	B 2188-6162	0.94	0.94	ppb	U
1634-04-4	Methyl t-butyl ether	B 2188-6162	1.12	1.12	ppb	U
75-34-3	1,1-Dichloroethane	B 2188-6162	0.99	0.99	ppb	U
590-20-7	2,2-Dichloropropane	B 2188-6162	1.72	1.72	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2188-6162	1.21	1.21	ppb	U
78-93-3	2-Butanone	B 2188-6162	7.08	7.08	ppb	U
74-97-5	Bromochloromethane	B 2188-6162	2.24	2.24	ppb	U
67-66-3	Chloroform	B 2188-6162	1.05	1.05	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2188-6162	1.12	1.12	ppb	U
56-23-5	Carbon Tetrachloride	B 2188-6162	1.28	1.28	ppb	U
563-58-6	1,1-Dichloropropene	B 2188-6162	2.35	2.35	ppb	U
71-43-2	Benzene	B 2188-6162	1.12	1.12	ppb	U
107-06-2	1,2-Dichloroethane	B 2188-6162	1.28	1.28	ppb	U
79-01-6	Trichloroethene	B 2188-6162	0.81	0.81	ppb	U
78-87-5	1,2-Dichloropropane	B 2188-6162	0.85	0.85	ppb	U
74-95-3	Dibromomethane	B 2188-6162	1.12	1.12	ppb	U
75-27-4	Bromodichloromethane	B 2188-6162	0.96	0.96	ppb	U
110-75-8	2-Chloroethylvinylether	B 2188-6162	7.59	7.59	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2188-6162	1.10	1.10	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2188-6162	4.35	4.35	ppb	U
108-88-3	Toluene	B 2188-6162	0.85	0.85	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2188-6162	1.10	1.10	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2188-6162	1.97	1.97	ppb	U
127-18-4	Tetrachloroethene	B 2188-6162	1.30	1.30	ppb	U
142-28-9	1,3-Dichloropropane	B 2188-6162	1.21	1.21	ppb	U
591-78-6	2-Hexanone	B 2188-6162	3.90	3.90	ppb	U
124-48-1	Dibromochloromethane	B 2188-6162	1.61	1.61	ppb	U
106-93-4	1,2-Dibromoethane	B 2188-6162	1.66	1.66	ppb	U
108-90-7	Chlorobenzene	B 2188-6162	1.14	1.14	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2188-6162	1.77	1.77	ppb	U
100-41-4	Ethylbenzene	B 2188-6162	0.96	0.96	ppb	U
108-38-3	m,p-xylene	B 2188-6162	2.24	2.24	ppb	U
95-47-6	o-xylene	B 2188-6162	1.68	1.68	ppb	U
100-42-5	Styrene	B 2188-6162	1.66	1.66	ppb	U
75-25-2	Bromoform	B 2188-6162	2.53	2.53	ppb	U
98-82-8	Isopropylbenzene	B 2188-6162	1.41	1.41	ppb	U
108-86-1	Bromobenzene	B 2188-6162	1.81	1.81	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2188-6162	3.20	3.20	ppb	U
103-65-1	n-Propylbenzene	B 2188-6162	1.61	1.61	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2188-6162	4.50	4.50	ppb	U
622-96-8	p-Ethyltoluene	B 2188-6162	2.06	2.06	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2188-6162	1.84	1.84	ppb	U
95-49-8	2-Chlorotoluene	B 2188-6162	1.99	1.99	ppb	U
106-43-4	4-Chlorotoluene	B 2188-6162	2.20	2.20	ppb	U
98-06-6	tert-Butylbenzene	B 2188-6162	2.15	2.15	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2188-6162	2.11	2.11	ppb	U
135-98-8	sec-Butylbenzene	B 2188-6162	1.86	1.86	ppb	U
99-87-6	4-Isopropyltoluene	B 2188-6162	1.77	1.77	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2188-6162	2.22	2.22	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2188-6162	2.31	2.31	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2188-6162	2.64	2.64	ppb	U
105-05-5	p-Diethylbenzene	B 2188-6162	2.22	2.22	ppb	U
104-51-8	n-Butylbenzene	B 2188-6162	1.99	1.99	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2188-6162	2.44	2.44	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2188-6162	5.13	5.13	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2188-6162	2.24	2.24	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/22/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2188-6162	2.22	2.22	ppb	U
91-20-3	Naphthalene	B 2188-6162	2.73	2.73	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2188-6162	2.31	2.31	ppb	U
994-05-8	TAME	B 2188-6162	4.70	4.70	ppb	U
75-65-0	Tertiary butyl alcohol	B 2188-6162	39.0	39.0	ppb	U
107-13-1	Acrylonitrile	B 2188-6162	13.7	13.7	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2188-6162	84.4 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2188-6162	129.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2188-6162	101.0 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-9

Client Sample ID: SB-11

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2189-6179	1.27	1.27	ppb	U
75-45-6	Chlorodifluoromethane	B 2189-6179	1.56	1.56	ppb	U
74-87-3	Chloromethane	B 2189-6179	0.94	0.94	ppb	U
75-01-4	Vinyl Chloride	B 2189-6179	1.42	1.42	ppb	U
74-83-9	Bromomethane	B 2189-6179	1.25	1.25	ppb	U
75-00-3	Chloroethane	B 2189-6179	3.05	3.05	ppb	U
75-69-4	Trichlorofluoromethane	B 2189-6179	1.54	1.54	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2189-6179	1.78	1.78	ppb	U
75-35-4	1,1-Dichloroethene	B 2189-6179	1.66	1.66	ppb	U
67-64-1	Acetone	B 2189-6179	12.1	22.3	ppb	Y
75-15-0	Carbon disulfide	B 2189-6179	3.00	3.00	ppb	U
75-09-2	Methylene Chloride	B 2189-6179	2.04	20.0	ppb	B
156-60-5	t-1,2-Dichloroethene	B 2189-6179	1.01	1.01	ppb	U
1634-04-4	Methyl t-butyl ether	B 2189-6179	1.20	1.20	ppb	U
75-34-3	1,1-Dichloroethane	B 2189-6179	1.06	1.06	ppb	U
590-20-7	2,2-Dichloropropane	B 2189-6179	1.85	1.85	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2189-6179	1.30	1.30	ppb	U
78-93-3	2-Butanone	B 2189-6179	7.58	7.58	ppb	U
74-97-5	Bromochloromethane	B 2189-6179	2.40	2.40	ppb	U
67-66-3	Chloroform	B 2189-6179	1.13	1.13	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2189-6179	1.20	1.20	ppb	U
56-23-5	Carbon Tetrachloride	B 2189-6179	1.37	1.37	ppb	U
563-58-6	1,1-Dichloropropene	B 2189-6179	2.52	2.52	ppb	U
71-43-2	Benzene	B 2189-6179	1.20	1.20	ppb	U
107-06-2	1,2-Dichloroethane	B 2189-6179	1.37	1.37	ppb	U
79-01-6	Trichloroethene	B 2189-6179	0.86	0.86	ppb	U
78-87-5	1,2-Dichloropropane	B 2189-6179	0.91	0.91	ppb	U
74-95-3	Dibromomethane	B 2189-6179	1.20	1.20	ppb	U
75-27-4	Bromodichloromethane	B 2189-6179	1.03	1.03	ppb	U
110-75-8	2-Chloroethylvinylether	B 2189-6179	8.14	8.14	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2189-6179	1.18	1.18	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2189-6179	4.66	4.66	ppb	U
108-88-3	Toluene	B 2189-6179	0.91	0.91	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2189-6179	1.18	1.18	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-9

Client Sample ID: SB-11

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2189-6179	2.11	2.11	ppb	U
127-18-4	Tetrachloroethene	B 2189-6179	1.39	3.90	ppb	Y
142-28-9	1,3-Dichloropropane	B 2189-6179	1.30	1.30	ppb	U
591-78-6	2-Hexanone	B 2189-6179	4.18	4.18	ppb	U
124-48-1	Dibromochloromethane	B 2189-6179	1.73	1.73	ppb	U
106-93-4	1,2-Dibromoethane	B 2189-6179	1.78	1.78	ppb	U
108-90-7	Chlorobenzene	B 2189-6179	1.22	1.22	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2189-6179	1.90	1.90	ppb	U
100-41-4	Ethylbenzene	B 2189-6179	1.03	1.03	ppb	U
108-38-3	m,p-xylene	B 2189-6179	2.40	2.40	ppb	U
95-47-6	o-xylene	B 2189-6179	1.80	1.80	ppb	U
100-42-5	Styrene	B 2189-6179	1.78	1.78	ppb	U
75-25-2	Bromoform	B 2189-6179	2.71	2.71	ppb	U
98-82-8	Isopropylbenzene	B 2189-6179	1.51	1.51	ppb	U
108-86-1	Bromobenzene	B 2189-6179	1.94	1.94	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2189-6179	3.43	3.43	ppb	U
103-65-1	n-Propylbenzene	B 2189-6179	1.73	1.73	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2189-6179	4.82	4.82	ppb	U
622-96-8	p-Ethyltoluene	B 2189-6179	2.21	2.21	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2189-6179	1.97	1.97	ppb	U
95-49-8	2-Chlorotoluene	B 2189-6179	2.14	2.14	ppb	U
106-43-4	4-Chlorotoluene	B 2189-6179	2.35	2.35	ppb	U
98-06-6	tert-Butylbenzene	B 2189-6179	2.30	2.30	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2189-6179	2.26	2.26	ppb	U
135-98-8	sec-Butylbenzene	B 2189-6179	1.99	1.99	ppb	U
99-87-6	4-Isopropyltoluene	B 2189-6179	1.90	1.90	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2189-6179	2.38	2.38	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2189-6179	2.47	2.47	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2189-6179	2.83	2.83	ppb	U
105-05-5	p-Diethylbenzene	B 2189-6179	2.38	2.38	ppb	U
104-51-8	n-Butylbenzene	B 2189-6179	2.14	2.14	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2189-6179	2.62	2.62	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2189-6179	5.50	5.50	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2189-6179	2.40	2.40	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-9**

Client Sample ID: SB-11

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2189-6179	2.38	2.38	ppb	U
91-20-3	Naphthalene	B 2189-6179	2.93	2.93	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2189-6179	2.47	2.47	ppb	U
994-05-8	TAME	B 2189-6179	5.04	5.04	ppb	U
75-65-0	Tertiary butyl alcohol	B 2189-6179	41.8	41.8	ppb	U
107-13-1	Acrylonitrile	B 2189-6179	14.7	14.7	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2189-6179	86.3 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2189-6179	109.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2189-6179	95.7 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-10

Client Sample ID: SB-12

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
75-71-8	Dichlorodifluoromethane	B 2189-6180	1.22	1.22	ppb	U
75-45-6	Chlorodifluoromethane	B 2189-6180	1.50	1.50	ppb	U
74-87-3	Chloromethane	B 2189-6180	0.90	0.90	ppb	U
75-01-4	Vinyl Chloride	B 2189-6180	1.36	1.36	ppb	U
74-83-9	Bromomethane	B 2189-6180	1.20	1.20	ppb	U
75-00-3	Chloroethane	B 2189-6180	2.92	2.92	ppb	U
75-69-4	Trichlorofluoromethane	B 2189-6180	1.47	1.47	ppb	U
76-13-1	1,1,2-Trichlorotrifluoroethane	B 2189-6180	1.70	1.70	ppb	U
75-35-4	1,1-Dichloroethene	B 2189-6180	1.59	1.59	ppb	U
67-64-1	Acetone	B 2189-6180	11.6	21.2	ppb	Y
75-15-0	Carbon disulfide	B 2189-6180	2.88	2.88	ppb	U
75-09-2	Methylene Chloride	B 2189-6180	1.96	19.2	ppb	B
156-60-5	t-1,2-Dichloroethene	B 2189-6180	0.97	0.97	ppb	U
1634-04-4	Methyl t-butyl ether	B 2189-6180	1.15	1.15	ppb	U
75-34-3	1,1-Dichloroethane	B 2189-6180	1.01	1.01	ppb	U
590-20-7	2,2-Dichloropropane	B 2189-6180	1.77	1.77	ppb	U
156-59-2	c-1,2-Dichloroethene	B 2189-6180	1.24	1.24	ppb	U
78-93-3	2-Butanone	B 2189-6180	7.27	7.27	ppb	U
74-97-5	Bromochloromethane	B 2189-6180	2.30	2.30	ppb	U
67-66-3	Chloroform	B 2189-6180	1.08	1.08	ppb	U
71-55-6	1,1,1-Trichloroethane	B 2189-6180	1.15	1.15	ppb	U
56-23-5	Carbon Tetrachloride	B 2189-6180	1.31	1.31	ppb	U
563-58-6	1,1-Dichloropropene	B 2189-6180	2.41	2.41	ppb	U
71-43-2	Benzene	B 2189-6180	1.15	1.15	ppb	U
107-06-2	1,2-Dichloroethane	B 2189-6180	1.31	1.31	ppb	U
79-01-6	Trichloroethene	B 2189-6180	0.83	0.83	ppb	U
78-87-5	1,2-Dichloropropane	B 2189-6180	0.87	0.87	ppb	U
74-95-3	Dibromomethane	B 2189-6180	1.15	1.15	ppb	U
75-27-4	Bromodichloromethane	B 2189-6180	0.99	0.99	ppb	U
110-75-8	2-Chloroethylvinylether	B 2189-6180	7.80	7.80	ppb	U
10061-01-5	c-1,3-Dichloropropene	B 2189-6180	1.13	1.13	ppb	U
108-10-1	4-Methyl-2-pentanone	B 2189-6180	4.46	4.46	ppb	U
108-88-3	Toluene	B 2189-6180	0.87	0.87	ppb	U
10061-02-6	t-1,3-Dichloropropene	B 2189-6180	1.13	1.13	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

### Sample: 0610403-10

Client Sample ID: SB-12

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
79-00-5	1,1,2-Trichloroethane	B 2189-6180	2.02	2.02	ppb	U
127-18-4	Tetrachloroethene	B 2189-6180	1.33	4.49	ppb	Y
142-28-9	1,3-Dichloropropane	B 2189-6180	1.24	1.24	ppb	U
591-78-6	2-Hexanone	B 2189-6180	4.00	4.00	ppb	U
124-48-1	Dibromochloromethane	B 2189-6180	1.66	1.66	ppb	U
106-93-4	1,2-Dibromoethane	B 2189-6180	1.70	1.70	ppb	U
108-90-7	Chlorobenzene	B 2189-6180	1.17	1.17	ppb	U
630-20-6	1,1,1,2-Tetrachloroethane	B 2189-6180	1.82	1.82	ppb	U
100-41-4	Ethylbenzene	B 2189-6180	0.99	0.99	ppb	U
108-38-3	m,p-xylene	B 2189-6180	2.30	2.30	ppb	U
95-47-6	o-xylene	B 2189-6180	1.73	1.73	ppb	U
100-42-5	Styrene	B 2189-6180	1.70	1.70	ppb	U
75-25-2	Bromoform	B 2189-6180	2.60	2.60	ppb	U
98-82-8	Isopropylbenzene	B 2189-6180	1.45	1.45	ppb	U
108-86-1	Bromobenzene	B 2189-6180	1.86	1.86	ppb	U
79-34-5	1,1,2,2-Tetrachloroethane	B 2189-6180	3.29	3.29	ppb	U
103-65-1	n-Propylbenzene	B 2189-6180	1.66	1.66	ppb	U
96-18-4	1,2,3-Trichloropropane	B 2189-6180	4.62	4.62	ppb	U
622-96-8	p-Ethyltoluene	B 2189-6180	2.12	2.12	ppb	U
108-67-8	1,3,5-Trimethylbenzene	B 2189-6180	1.89	1.89	ppb	U
95-49-8	2-Chlorotoluene	B 2189-6180	2.05	2.05	ppb	U
106-43-4	4-Chlorotoluene	B 2189-6180	2.25	2.25	ppb	U
98-06-6	tert-Butylbenzene	B 2189-6180	2.21	2.21	ppb	U
95-63-6	1,2,4-Trimethylbenzene	B 2189-6180	2.16	2.16	ppb	U
135-98-8	sec-Butylbenzene	B 2189-6180	1.91	1.91	ppb	U
99-87-6	4-Isopropyltoluene	B 2189-6180	1.82	1.82	ppb	U
541-73-1	1,3-Dichlorobenzene	B 2189-6180	2.28	2.28	ppb	U
106-46-7	1,4-Dichlorobenzene	B 2189-6180	2.37	2.37	ppb	U
95-50-1	1,2-Dichlorobenzene	B 2189-6180	2.71	2.71	ppb	U
105-05-5	p-Diethylbenzene	B 2189-6180	2.28	2.28	ppb	U
104-51-8	n-Butylbenzene	B 2189-6180	2.05	2.05	ppb	U
95-93-2	1,2,4,5-Tetramethylbenzene	B 2189-6180	2.51	2.51	ppb	U
96-12-8	1,2-Dibromo-3-chloropropane	B 2189-6180	5.27	5.27	ppb	U
120-82-1	1,2,4-Trichlorobenzene	B 2189-6180	2.30	2.30	ppb	U





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Volatiles - EPA 8260B

**Sample: 0610403-10**

Client Sample ID: SB-12

Matrix: Soil

Remarks: See Case Narrative

Analyzed Date: 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

## Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
87-68-3	Hexachlorobutadiene	B 2189-6180	2.28	2.28	ppb	U
91-20-3	Naphthalene	B 2189-6180	2.81	2.81	ppb	U
87-61-6	1,2,3-Trichlorobenzene	B 2189-6180	2.37	2.37	ppb	U
994-05-8	TAME	B 2189-6180	4.83	4.83	ppb	U
75-65-0	Tertiary butyl alcohol	B 2189-6180	40.0	40.0	ppb	U
107-13-1	Acrylonitrile	B 2189-6180	14.1	14.1	ppb	U

\* Results are reported on a dry weight basis

## Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
460-00-4	4-BROMOFLUOROBENZENE	B2189-6180	85.8 %	( 80 - 110)	
4774-33-8	DIBROMOFLUOROMETHANE	B2189-6180	115.0 %	( 68 - 156)	
2037-26-5	TOLUENE-D8	B2189-6180	96.8 %	( 91 - 108)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1557	28.5	28.5	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1557	26.2	26.2	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1557	31.9	31.9	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1557	31.9	31.9	ppb	U
100-51-6	Benzyl alcohol	C 1689-1557	29.6	29.6	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1557	34.2	34.2	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1557	38.8	38.8	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1557	33.1	33.1	ppb	U
67-72-1	Hexachloroethane	C 1689-1557	29.6	29.6	ppb	U
98-95-3	Nitrobenzene	C 1689-1557	33.1	33.1	ppb	U
78-59-1	Isophorone	C 1689-1557	30.8	30.8	ppb	U
65-85-0	Benzoic acid	C 1689-1557	119	119	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1557	29.6	29.6	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1557	30.8	30.8	ppb	U
91-20-3	Naphthalene	C 1689-1557	38.8	38.8	ppb	U
106-47-8	4-Chloroaniline	C 1689-1557	26.2	26.2	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1557	21.7	21.7	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1557	35.3	35.3	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1557	292	292	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1557	31.9	31.9	ppb	U
88-74-4	2-Nitroaniline	C 1689-1557	22.8	22.8	ppb	U
131-11-3	Dimethylphthalate	C 1689-1557	21.7	21.7	ppb	U
208-96-8	Acenaphthylene	C 1689-1557	27.4	27.4	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1557	17.1	17.1	ppb	U
99-09-2	3-Nitroaniline	C 1689-1557	20.5	20.5	ppb	U
83-32-9	Acenaphthene	C 1689-1557	29.6	29.6	ppb	U
132-64-9	Dibenzofuran	C 1689-1557	29.6	29.6	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1557	17.1	17.1	ppb	U
84-66-2	Diethylphthalate	C 1689-1557	21.7	21.7	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1557	21.7	21.7	ppb	U
86-73-7	Fluorene	C 1689-1557	25.1	25.1	ppb	U
100-01-6	4-Nitroaniline	C 1689-1557	23.9	23.9	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1557	21.7	21.7	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1557	29.6	29.6	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1557	21.7	21.7	ppb	U
85-01-8	Phenanthrene	C 1689-1557	30.8	98.0	ppb	Y
120-12-7	Anthracene	C 1689-1557	27.4	27.4	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1557	59.3	97.5	ppb	Y
206-44-0	Fluoranthene	C 1689-1557	22.8	182	ppb	Y
129-00-0	Pyrene	C 1689-1557	22.8	155	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1557	16.0	16.0	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1557	324	324	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1557	16.0	104	ppb	Y
218-01-9	Chrysene	C 1689-1557	25.1	126	ppb	Y
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1557	29.6	29.6	ppb	U
117-84-0	Di-n-octylphthalate	C 1689-1557	19.4	19.4	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1557	14.8	104	ppb	Y
207-08-9	Benzo(k)fluoranthene	C 1689-1557	50.2	101	ppb	Y
50-32-8	Benzo(a)pyrene	C 1689-1557	21.7	115	ppb	Y
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1557	23.9	96.8	ppb	Y
53-70-3	Dibenzo(a,h)anthracene	C 1689-1557	19.4	38.3	ppb	Y
191-24-2	Benzo(g,h,i)perylene	C 1689-1557	19.4	119	ppb	Y
86-74-8	Carbazole	C 1689-1557	28.5	28.5	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1557	71.5 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1557	58.2 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1557	57.9 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1557	57.1 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1557	64.4 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1557	69.3 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-2

Client Sample ID: SB-3

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1554	27.5	27.5	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1554	25.3	25.3	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1554	30.8	30.8	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1554	30.8	30.8	ppb	U
100-51-6	Benzyl alcohol	C 1689-1554	28.6	28.6	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1554	33.0	33.0	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1554	37.4	37.4	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1554	31.9	31.9	ppb	U
67-72-1	Hexachloroethane	C 1689-1554	28.6	28.6	ppb	U
98-95-3	Nitrobenzene	C 1689-1554	31.9	31.9	ppb	U
78-59-1	Isophorone	C 1689-1554	29.7	29.7	ppb	U
65-85-0	Benzoic acid	C 1689-1554	114	114	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1554	28.6	28.6	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1554	29.7	29.7	ppb	U
91-20-3	Naphthalene	C 1689-1554	37.4	37.4	ppb	U
106-47-8	4-Chloroaniline	C 1689-1554	25.3	25.3	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1554	20.9	20.9	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1554	34.1	34.1	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1554	282	282	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1554	30.8	30.8	ppb	U
88-74-4	2-Nitroaniline	C 1689-1554	22.0	22.0	ppb	U
131-11-3	Dimethylphthalate	C 1689-1554	20.9	20.9	ppb	U
208-96-8	Acenaphthylene	C 1689-1554	26.4	26.4	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1554	16.5	16.5	ppb	U
99-09-2	3-Nitroaniline	C 1689-1554	19.8	19.8	ppb	U
83-32-9	Acenaphthene	C 1689-1554	28.6	28.6	ppb	U
132-64-9	Dibenzofuran	C 1689-1554	28.6	28.6	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1554	16.5	16.5	ppb	U
84-66-2	Diethylphthalate	C 1689-1554	20.9	20.9	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1554	20.9	20.9	ppb	U
86-73-7	Fluorene	C 1689-1554	24.2	24.2	ppb	U
100-01-6	4-Nitroaniline	C 1689-1554	23.1	23.1	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1554	20.9	20.9	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1554	28.6	28.6	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-2

Client Sample ID: SB-3

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1554	20.9	20.9	ppb	U
85-01-8	Phenanthrene	C 1689-1554	29.7	25.5	ppb	J
120-12-7	Anthracene	C 1689-1554	26.4	26.4	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1554	57.2	54.1	ppb	J
206-44-0	Fluoranthene	C 1689-1554	22.0	66.4	ppb	Y
129-00-0	Pyrene	C 1689-1554	22.0	62.3	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1554	15.4	15.4	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1554	312	312	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1554	15.4	31.7	ppb	Y
218-01-9	Chrysene	C 1689-1554	24.2	37.8	ppb	Y
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1554	28.6	28.6	ppb	U
117-84-0	Di-n-octylphthalate	C 1689-1554	18.7	18.7	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1554	14.3	23.5	ppb	Y
207-08-9	Benzo(k)fluoranthene	C 1689-1554	48.4	32.0	ppb	J
50-32-8	Benzo(a)pyrene	C 1689-1554	20.9	31.2	ppb	Y
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1554	23.1	23.1	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1554	18.7	18.7	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1554	18.7	18.7	ppb	U
86-74-8	Carbazole	C 1689-1554	27.5	27.5	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1554	66.5 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1554	52.0 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1554	55.5 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1554	51.5 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1554	61.0 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1554	61.6 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-3

Client Sample ID: SB-4

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1560	128	128	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1560	118	118	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1560	143	143	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1560	143	143	ppb	U
100-51-6	Benzyl alcohol	C 1689-1560	133	133	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1560	153	153	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1560	174	174	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1560	148	148	ppb	U
67-72-1	Hexachloroethane	C 1689-1560	133	133	ppb	U
98-95-3	Nitrobenzene	C 1689-1560	148	148	ppb	U
78-59-1	Isophorone	C 1689-1560	138	138	ppb	U
65-85-0	Benzoic acid	C 1689-1560	531	531	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1560	133	133	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1560	138	138	ppb	U
91-20-3	Naphthalene	C 1689-1560	174	591	ppb	Y
106-47-8	4-Chloroaniline	C 1689-1560	118	118	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1560	97.1	97.1	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1560	158	408	ppb	Y
77-47-4	Hexachlorocyclopentadiene	C 1689-1560	1310	1310	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1560	143	143	ppb	U
88-74-4	2-Nitroaniline	C 1689-1560	102	102	ppb	U
131-11-3	Dimethylphthalate	C 1689-1560	97.1	97.1	ppb	U
208-96-8	Acenaphthylene	C 1689-1560	123	420	ppb	Y
606-20-2	2,6-Dinitrotoluene	C 1689-1560	76.7	76.7	ppb	U
99-09-2	3-Nitroaniline	C 1689-1560	92.0	92.0	ppb	U
83-32-9	Acenaphthene	C 1689-1560	133	1460	ppb	Y
132-64-9	Dibenzofuran	C 1689-1560	133	654	ppb	Y
121-14-2	2,4-Dinitrotoluene	C 1689-1560	76.7	76.7	ppb	U
84-66-2	Diethylphthalate	C 1689-1560	97.1	97.1	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1560	97.1	97.1	ppb	U
86-73-7	Fluorene	C 1689-1560	112	1370	ppb	Y
100-01-6	4-Nitroaniline	C 1689-1560	107	107	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1560	97.1	97.1	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1560	133	133	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-3

Client Sample ID: SB-4

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1560	97.1	97.1	ppb	U
85-01-8	Phenanthrene	C 1689-1560	138	13900	ppb	
120-12-7	Anthracene	C 1689-1560	123	3270	ppb	
84-74-2	Di-n-butylphthalate	C 1689-1560	266	266	ppb	U
206-44-0	Fluoranthene	C 1689-1560	102	23400	ppb	
129-00-0	Pyrene	C 1689-1560	102	19400	ppb	
85-68-7	Butylbenzylphthalate	C 1689-1560	71.5	2490	ppb	Y
91-94-1	3,3'-Dichlorobenzidine	C 1689-1560	1450	1450	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1560	71.5	10500	ppb	
218-01-9	Chrysene	C 1689-1560	112	10700	ppb	
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1560	133	2040	ppb	Y
117-84-0	Di-n-octylphthalate	C 1689-1560	86.9	86.9	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1560	66.4	8750	ppb	
207-08-9	Benzo(k)fluoranthene	C 1689-1560	225	9190	ppb	
50-32-8	Benzo(a)pyrene	C 1689-1560	97.1	9960	ppb	
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1560	107	4900	ppb	
53-70-3	Dibenzo(a,h)anthracene	C 1689-1560	86.9	1930	ppb	Y
191-24-2	Benzo(g,h,i)perylene	C 1689-1560	86.9	4880	ppb	
86-74-8	Carbazole	C 1689-1560	128	2100	ppb	Y

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1560	42.7 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1560	39.4 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1560	38.4 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1560	40.8 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1560	44.1 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1560	40.2 %	( 18 - 137)	





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-4

Client Sample ID: SB-5

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1559	28.3	28.3	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1559	26.0	26.0	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1559	31.6	31.6	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1559	31.6	31.6	ppb	U
100-51-6	Benzyl alcohol	C 1689-1559	29.4	73.7	ppb	Y
95-50-1	1,2-Dichlorobenzene	C 1689-1559	33.9	33.9	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1559	38.4	38.4	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1559	32.8	32.8	ppb	U
67-72-1	Hexachloroethane	C 1689-1559	29.4	29.4	ppb	U
98-95-3	Nitrobenzene	C 1689-1559	32.8	32.8	ppb	U
78-59-1	Isophorone	C 1689-1559	30.5	30.5	ppb	U
65-85-0	Benzoic acid	C 1689-1559	118	139	ppb	Y
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1559	29.4	29.4	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1559	30.5	30.5	ppb	U
91-20-3	Naphthalene	C 1689-1559	38.4	42.4	ppb	Y
106-47-8	4-Chloroaniline	C 1689-1559	26.0	26.0	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1559	21.5	21.5	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1559	35.0	45.9	ppb	Y
77-47-4	Hexachlorocyclopentadiene	C 1689-1559	289	289	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1559	31.6	31.6	ppb	U
88-74-4	2-Nitroaniline	C 1689-1559	22.6	22.6	ppb	U
131-11-3	Dimethylphthalate	C 1689-1559	21.5	49.2	ppb	Y
208-96-8	Acenaphthylene	C 1689-1559	27.1	23.9	ppb	J
606-20-2	2,6-Dinitrotoluene	C 1689-1559	17.0	17.0	ppb	U
99-09-2	3-Nitroaniline	C 1689-1559	20.3	20.3	ppb	U
83-32-9	Acenaphthene	C 1689-1559	29.4	39.7	ppb	Y
132-64-9	Dibenzofuran	C 1689-1559	29.4	29.4	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1559	17.0	17.0	ppb	U
84-66-2	Diethylphthalate	C 1689-1559	21.5	41.3	ppb	Y
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1559	21.5	21.5	ppb	U
86-73-7	Fluorene	C 1689-1559	24.9	42.9	ppb	Y
100-01-6	4-Nitroaniline	C 1689-1559	23.7	23.7	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1559	21.5	21.5	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1559	29.4	29.4	ppb	U





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-4

Client Sample ID: SB-5

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1559	21.5	21.5	ppb	U
85-01-8	Phenanthrene	C 1689-1559	30.5	328	ppb	Y
120-12-7	Anthracene	C 1689-1559	27.1	107	ppb	Y
84-74-2	Di-n-butylphthalate	C 1689-1559	58.8	1460	ppb	
206-44-0	Fluoranthene	C 1689-1559	22.6	644	ppb	
129-00-0	Pyrene	C 1689-1559	22.6	551	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1559	15.8	15.8	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1559	321	321	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1559	15.8	316	ppb	Y
218-01-9	Chrysene	C 1689-1559	24.9	353	ppb	Y
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1559	29.4	165	ppb	Y
117-84-0	Di-n-octylphthalate	C 1689-1559	19.2	19.2	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1559	14.7	294	ppb	Y
207-08-9	Benzo(k)fluoranthene	C 1689-1559	49.7	277	ppb	Y
50-32-8	Benzo(a)pyrene	C 1689-1559	21.5	307	ppb	Y
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1559	23.7	197	ppb	Y
53-70-3	Dibenzo(a,h)anthracene	C 1689-1559	19.2	73.0	ppb	Y
191-24-2	Benzo(g,h,i)perylene	C 1689-1559	19.2	204	ppb	Y
86-74-8	Carbazole	C 1689-1559	28.3	49.5	ppb	Y

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1559	74.0 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1559	57.8 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1559	57.0 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1559	54.5 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1559	65.8 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1559	67.2 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-5

Client Sample ID: SB-6

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1553	30.5	30.5	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1553	28.1	28.1	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1553	34.2	34.2	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1553	34.2	34.2	ppb	U
100-51-6	Benzyl alcohol	C 1689-1553	31.7	31.7	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1553	36.6	36.6	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1553	41.5	41.5	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1553	35.4	35.4	ppb	U
67-72-1	Hexachloroethane	C 1689-1553	31.7	31.7	ppb	U
98-95-3	Nitrobenzene	C 1689-1553	35.4	35.4	ppb	U
78-59-1	Isophorone	C 1689-1553	32.9	32.9	ppb	U
65-85-0	Benzoic acid	C 1689-1553	127	127	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1553	31.7	31.7	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1553	32.9	32.9	ppb	U
91-20-3	Naphthalene	C 1689-1553	41.5	41.5	ppb	U
106-47-8	4-Chloroaniline	C 1689-1553	28.1	28.1	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1553	23.2	23.2	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1553	37.8	37.8	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1553	312	312	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1553	34.2	34.2	ppb	U
88-74-4	2-Nitroaniline	C 1689-1553	24.4	24.4	ppb	U
131-11-3	Dimethylphthalate	C 1689-1553	23.2	23.2	ppb	U
208-96-8	Acenaphthylene	C 1689-1553	29.3	29.3	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1553	18.3	18.3	ppb	U
99-09-2	3-Nitroaniline	C 1689-1553	22.0	22.0	ppb	U
83-32-9	Acenaphthene	C 1689-1553	31.7	31.7	ppb	U
132-64-9	Dibenzofuran	C 1689-1553	31.7	31.7	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1553	18.3	18.3	ppb	U
84-66-2	Diethylphthalate	C 1689-1553	23.2	84.0	ppb	Y
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1553	23.2	23.2	ppb	U
86-73-7	Fluorene	C 1689-1553	26.8	26.8	ppb	U
100-01-6	4-Nitroaniline	C 1689-1553	25.6	25.6	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1553	23.2	23.2	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1553	31.7	31.7	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-5

Client Sample ID: SB-6

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1553	23.2	23.2	ppb	U
85-01-8	Phenanthrene	C 1689-1553	32.9	32.9	ppb	U
120-12-7	Anthracene	C 1689-1553	29.3	29.3	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1553	63.4	85.0	ppb	Y
206-44-0	Fluoranthene	C 1689-1553	24.4	24.4	ppb	U
129-00-0	Pyrene	C 1689-1553	24.4	24.4	ppb	U
85-68-7	Butylbenzylphthalate	C 1689-1553	17.1	17.1	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1553	346	346	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1553	17.1	17.1	ppb	U
218-01-9	Chrysene	C 1689-1553	26.8	26.8	ppb	U
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1553	31.7	50.3	ppb	Y
117-84-0	Di-n-octylphthalate	C 1689-1553	20.7	20.7	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1553	15.9	15.9	ppb	U
207-08-9	Benzo(k)fluoranthene	C 1689-1553	53.7	53.7	ppb	U
50-32-8	Benzo(a)pyrene	C 1689-1553	23.2	23.2	ppb	U
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1553	25.6	25.6	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1553	20.7	20.7	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1553	20.7	20.7	ppb	U
86-74-8	Carbazole	C 1689-1553	30.5	30.5	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1553	65.2 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1553	55.5 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1553	57.7 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1553	54.8 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1553	64.6 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1553	62.2 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

**Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 84%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1552	29.8	29.8	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1552	27.4	27.4	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1552	33.3	33.3	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1552	33.3	33.3	ppb	U
100-51-6	Benzyl alcohol	C 1689-1552	30.9	30.9	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1552	35.7	35.7	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1552	40.5	40.5	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1552	34.5	34.5	ppb	U
67-72-1	Hexachloroethane	C 1689-1552	30.9	30.9	ppb	U
98-95-3	Nitrobenzene	C 1689-1552	34.5	34.5	ppb	U
78-59-1	Isophorone	C 1689-1552	32.1	32.1	ppb	U
65-85-0	Benzoic acid	C 1689-1552	124	124	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1552	30.9	30.9	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1552	32.1	32.1	ppb	U
91-20-3	Naphthalene	C 1689-1552	40.5	40.5	ppb	U
106-47-8	4-Chloroaniline	C 1689-1552	27.4	27.4	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1552	22.6	22.6	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1552	36.9	36.9	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1552	305	305	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1552	33.3	33.3	ppb	U
88-74-4	2-Nitroaniline	C 1689-1552	23.8	23.8	ppb	U
131-11-3	Dimethylphthalate	C 1689-1552	22.6	22.6	ppb	U
208-96-8	Acenaphthylene	C 1689-1552	28.6	28.6	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1552	17.9	17.9	ppb	U
99-09-2	3-Nitroaniline	C 1689-1552	21.4	21.4	ppb	U
83-32-9	Acenaphthene	C 1689-1552	30.9	30.9	ppb	U
132-64-9	Dibenzofuran	C 1689-1552	30.9	30.9	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1552	17.9	17.9	ppb	U
84-66-2	Diethylphthalate	C 1689-1552	22.6	22.6	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1552	22.6	22.6	ppb	U
86-73-7	Fluorene	C 1689-1552	26.2	26.2	ppb	U
100-01-6	4-Nitroaniline	C 1689-1552	25.0	25.0	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1552	22.6	22.6	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1552	30.9	30.9	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-6

Client Sample ID: SB-7

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 84%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1552	22.6	22.6	ppb	U
85-01-8	Phenanthrene	C 1689-1552	32.1	32.1	ppb	U
120-12-7	Anthracene	C 1689-1552	28.6	28.6	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1552	61.9	<b>61.6</b>	ppb	J
206-44-0	Fluoranthene	C 1689-1552	23.8	23.8	ppb	U
129-00-0	Pyrene	C 1689-1552	23.8	23.8	ppb	U
85-68-7	Butylbenzylphthalate	C 1689-1552	16.7	16.7	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1552	338	338	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1552	16.7	16.7	ppb	U
218-01-9	Chrysene	C 1689-1552	26.2	26.2	ppb	U
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1552	30.9	30.9	ppb	U
117-84-0	Di-n-octylphthalate	C 1689-1552	20.2	20.2	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1552	15.5	15.5	ppb	U
207-08-9	Benzo(k)fluoranthene	C 1689-1552	52.4	52.4	ppb	U
50-32-8	Benzo(a)pyrene	C 1689-1552	22.6	22.6	ppb	U
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1552	25.0	25.0	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1552	20.2	20.2	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1552	20.2	20.2	ppb	U
86-74-8	Carbazole	C 1689-1552	29.8	29.8	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1552	70.0 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1552	55.4 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1552	53.7 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1552	53.1 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1552	61.4 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1552	68.7 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-7

Client Sample ID: SB-8

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1558	27.8	27.8	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1558	25.5	25.5	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1558	31.1	31.1	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1558	31.1	31.1	ppb	U
100-51-6	Benzyl alcohol	C 1689-1558	28.9	28.9	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1558	33.3	33.3	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1558	37.7	37.7	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1558	32.2	32.2	ppb	U
67-72-1	Hexachloroethane	C 1689-1558	28.9	28.9	ppb	U
98-95-3	Nitrobenzene	C 1689-1558	32.2	32.2	ppb	U
78-59-1	Isophorone	C 1689-1558	30.0	30.0	ppb	U
65-85-0	Benzoic acid	C 1689-1558	115	115	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1558	28.9	28.9	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1558	30.0	30.0	ppb	U
91-20-3	Naphthalene	C 1689-1558	37.7	37.7	ppb	U
106-47-8	4-Chloroaniline	C 1689-1558	25.5	25.5	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1558	21.1	21.1	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1558	34.4	34.4	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1558	284	284	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1558	31.1	31.1	ppb	U
88-74-4	2-Nitroaniline	C 1689-1558	22.2	22.2	ppb	U
131-11-3	Dimethylphthalate	C 1689-1558	21.1	21.1	ppb	U
208-96-8	Acenaphthylene	C 1689-1558	26.6	26.6	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1558	16.6	16.6	ppb	U
99-09-2	3-Nitroaniline	C 1689-1558	20.0	20.0	ppb	U
83-32-9	Acenaphthene	C 1689-1558	28.9	28.9	ppb	U
132-64-9	Dibenzofuran	C 1689-1558	28.9	28.9	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1558	16.6	16.6	ppb	U
84-66-2	Diethylphthalate	C 1689-1558	21.1	21.1	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1558	21.1	21.1	ppb	U
86-73-7	Fluorene	C 1689-1558	24.4	24.4	ppb	U
100-01-6	4-Nitroaniline	C 1689-1558	23.3	23.3	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1558	21.1	21.1	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1558	28.9	28.9	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-7

Client Sample ID: SB-8

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1558	21.1	21.1	ppb	U
85-01-8	Phenanthrene	C 1689-1558	30.0	30.0	ppb	U
120-12-7	Anthracene	C 1689-1558	26.6	26.6	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1558	57.7	399	ppb	Y
206-44-0	Fluoranthene	C 1689-1558	22.2	22.2	ppb	U
129-00-0	Pyrene	C 1689-1558	22.2	23.5	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1558	15.5	15.5	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1558	315	315	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1558	15.5	15.5	ppb	U
218-01-9	Chrysene	C 1689-1558	24.4	24.4	ppb	U
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1558	28.9	45.7	ppb	Y
117-84-0	Di-n-octylphthalate	C 1689-1558	18.9	18.9	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1558	14.4	14.4	ppb	U
207-08-9	Benzo(k)fluoranthene	C 1689-1558	48.8	48.8	ppb	U
50-32-8	Benzo(a)pyrene	C 1689-1558	21.1	21.1	ppb	U
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1558	23.3	23.3	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1558	18.9	18.9	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1558	18.9	18.9	ppb	U
86-74-8	Carbazole	C 1689-1558	27.8	27.8	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1558	69.9 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1558	53.0 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1558	52.9 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1558	51.5 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1558	59.4 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1558	66.8 %	( 18 - 137)	





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-8

Client Sample ID: SB-9

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1556	28.0	28.0	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1556	25.8	25.8	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1556	31.4	31.4	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1556	31.4	31.4	ppb	U
100-51-6	Benzyl alcohol	C 1689-1556	29.1	29.1	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1556	33.6	33.6	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1556	38.1	38.1	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1556	32.5	32.5	ppb	U
67-72-1	Hexachloroethane	C 1689-1556	29.1	29.1	ppb	U
98-95-3	Nitrobenzene	C 1689-1556	32.5	32.5	ppb	U
78-59-1	Isophorone	C 1689-1556	30.2	30.2	ppb	U
65-85-0	Benzoic acid	C 1689-1556	116	116	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1556	29.1	29.1	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1556	30.2	30.2	ppb	U
91-20-3	Naphthalene	C 1689-1556	38.1	38.1	ppb	U
106-47-8	4-Chloroaniline	C 1689-1556	25.8	25.8	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1556	21.3	21.3	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1556	34.7	34.7	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1556	287	287	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1556	31.4	31.4	ppb	U
88-74-4	2-Nitroaniline	C 1689-1556	22.4	22.4	ppb	U
131-11-3	Dimethylphthalate	C 1689-1556	21.3	21.3	ppb	U
208-96-8	Acenaphthylene	C 1689-1556	26.9	26.9	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1556	16.8	16.8	ppb	U
99-09-2	3-Nitroaniline	C 1689-1556	20.2	20.2	ppb	U
83-32-9	Acenaphthene	C 1689-1556	29.1	29.1	ppb	U
132-64-9	Dibenzofuran	C 1689-1556	29.1	29.1	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1556	16.8	16.8	ppb	U
84-66-2	Diethylphthalate	C 1689-1556	21.3	21.3	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1556	21.3	21.3	ppb	U
86-73-7	Fluorene	C 1689-1556	24.6	24.6	ppb	U
100-01-6	4-Nitroaniline	C 1689-1556	23.5	23.5	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1556	21.3	21.3	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1556	29.1	29.1	ppb	U





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-8

Client Sample ID: SB-9

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1556	21.3	21.3	ppb	U
85-01-8	Phenanthrene	C 1689-1556	30.2	<b>66.5</b>	ppb	Y
120-12-7	Anthracene	C 1689-1556	26.9	26.9	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1556	58.2	<b>92.7</b>	ppb	Y
206-44-0	Fluoranthene	C 1689-1556	22.4	<b>110</b>	ppb	Y
129-00-0	Pyrene	C 1689-1556	22.4	<b>103</b>	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1556	15.7	15.7	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1556	318	318	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1556	15.7	<b>52.9</b>	ppb	Y
218-01-9	Chrysene	C 1689-1556	24.6	<b>89.1</b>	ppb	Y
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1556	29.1	<b>24.4</b>	ppb	J
117-84-0	Di-n-octylphthalate	C 1689-1556	19.0	19.0	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1556	14.6	<b>48.8</b>	ppb	Y
207-08-9	Benzo(k)fluoranthene	C 1689-1556	49.3	<b>49.1</b>	ppb	J
50-32-8	Benzo(a)pyrene	C 1689-1556	21.3	<b>49.1</b>	ppb	Y
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1556	23.5	<b>29.1</b>	ppb	Y
53-70-3	Dibenzo(a,h)anthracene	C 1689-1556	19.0	19.0	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1556	19.0	<b>37.4</b>	ppb	Y
86-74-8	Carbazole	C 1689-1556	28.0	28.0	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1556	69.9 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1556	52.3 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1556	50.7 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1556	50.5 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1556	58.0 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1556	72.8 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-9

Client Sample ID: SB-11

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1555	30.0	30.0	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1555	27.6	27.6	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1555	33.6	33.6	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1555	33.6	33.6	ppb	U
100-51-6	Benzyl alcohol	C 1689-1555	31.2	31.2	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1555	36.0	36.0	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1555	40.8	40.8	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1555	34.8	34.8	ppb	U
67-72-1	Hexachloroethane	C 1689-1555	31.2	31.2	ppb	U
98-95-3	Nitrobenzene	C 1689-1555	34.8	34.8	ppb	U
78-59-1	Isophorone	C 1689-1555	32.4	32.4	ppb	U
65-85-0	Benzoic acid	C 1689-1555	125	125	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1555	31.2	31.2	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1555	32.4	32.4	ppb	U
91-20-3	Naphthalene	C 1689-1555	40.8	40.8	ppb	U
106-47-8	4-Chloroaniline	C 1689-1555	27.6	27.6	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1555	22.8	22.8	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1555	37.2	37.2	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1555	307	307	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1555	33.6	33.6	ppb	U
88-74-4	2-Nitroaniline	C 1689-1555	24.0	24.0	ppb	U
131-11-3	Dimethylphthalate	C 1689-1555	22.8	22.8	ppb	U
208-96-8	Acenaphthylene	C 1689-1555	28.8	28.8	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1555	18.0	18.0	ppb	U
99-09-2	3-Nitroaniline	C 1689-1555	21.6	21.6	ppb	U
83-32-9	Acenaphthene	C 1689-1555	31.2	31.2	ppb	U
132-64-9	Dibenzofuran	C 1689-1555	31.2	31.2	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1555	18.0	18.0	ppb	U
84-66-2	Diethylphthalate	C 1689-1555	22.8	22.8	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1555	22.8	22.8	ppb	U
86-73-7	Fluorene	C 1689-1555	26.4	26.4	ppb	U
100-01-6	4-Nitroaniline	C 1689-1555	25.2	25.2	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1555	22.8	22.8	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1555	31.2	31.2	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-9

Client Sample ID: SB-11

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1555	22.8	22.8	ppb	U
85-01-8	Phenanthrene	C 1689-1555	32.4	75.6	ppb	Y
120-12-7	Anthracene	C 1689-1555	28.8	28.8	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1555	62.4	107	ppb	Y
206-44-0	Fluoranthene	C 1689-1555	24.0	93.9	ppb	Y
129-00-0	Pyrene	C 1689-1555	24.0	79.1	ppb	Y
85-68-7	Butylbenzylphthalate	C 1689-1555	16.8	16.8	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1555	341	341	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1555	16.8	32.6	ppb	Y
218-01-9	Chrysene	C 1689-1555	26.4	44.9	ppb	Y
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1555	31.2	31.2	ppb	U
117-84-0	Di-n-octylphthalate	C 1689-1555	20.4	20.4	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1555	15.6	32.4	ppb	Y
207-08-9	Benzo(k)fluoranthene	C 1689-1555	52.8	34.5	ppb	J
50-32-8	Benzo(a)pyrene	C 1689-1555	22.8	30.4	ppb	Y
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1555	25.2	25.2	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1555	20.4	20.4	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1555	20.4	20.4	ppb	U
86-74-8	Carbazole	C 1689-1555	30.0	30.0	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1555	64.5 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1555	51.2 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1555	53.1 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1555	51.0 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1555	59.1 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1555	63.5 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-10

Client Sample ID: SB-12

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
110-86-1	Pyridine	C 1689-1551	28.8	28.8	ppb	U
111-44-4	bis(2-Chloroethyl)ether	C 1689-1551	26.5	26.5	ppb	U
541-73-1	1,3-Dichlorobenzene	C 1689-1551	32.2	32.2	ppb	U
106-46-7	1,4-Dichlorobenzene	C 1689-1551	32.2	32.2	ppb	U
100-51-6	Benzyl alcohol	C 1689-1551	29.9	29.9	ppb	U
95-50-1	1,2-Dichlorobenzene	C 1689-1551	34.5	34.5	ppb	U
108-60-1	bis(2-Chloroisopropyl)ether	C 1689-1551	39.1	39.1	ppb	U
621-64-7	N-Nitroso-di-n-propylamine	C 1689-1551	33.3	33.3	ppb	U
67-72-1	Hexachloroethane	C 1689-1551	29.9	29.9	ppb	U
98-95-3	Nitrobenzene	C 1689-1551	33.3	33.3	ppb	U
78-59-1	Isophorone	C 1689-1551	31.0	31.0	ppb	U
65-85-0	Benzoic acid	C 1689-1551	120	120	ppb	U
111-91-1	bis(2-Chloroethoxy)methane	C 1689-1551	29.9	29.9	ppb	U
120-82-1	1,2,4-Trichlorobenzene	C 1689-1551	31.0	31.0	ppb	U
91-20-3	Naphthalene	C 1689-1551	39.1	39.1	ppb	U
106-47-8	4-Chloroaniline	C 1689-1551	26.5	26.5	ppb	U
87-68-3	Hexachlorobutadiene	C 1689-1551	21.9	21.9	ppb	U
91-57-6	2-Methylnaphthalene	C 1689-1551	35.7	35.7	ppb	U
77-47-4	Hexachlorocyclopentadiene	C 1689-1551	294	294	ppb	U
91-58-7	2-Chloronaphthalene	C 1689-1551	32.2	32.2	ppb	U
88-74-4	2-Nitroaniline	C 1689-1551	23.0	23.0	ppb	U
131-11-3	Dimethylphthalate	C 1689-1551	21.9	21.9	ppb	U
208-96-8	Acenaphthylene	C 1689-1551	27.6	27.6	ppb	U
606-20-2	2,6-Dinitrotoluene	C 1689-1551	17.3	17.3	ppb	U
99-09-2	3-Nitroaniline	C 1689-1551	20.7	20.7	ppb	U
83-32-9	Acenaphthene	C 1689-1551	29.9	29.9	ppb	U
132-64-9	Dibenzofuran	C 1689-1551	29.9	29.9	ppb	U
121-14-2	2,4-Dinitrotoluene	C 1689-1551	17.3	17.3	ppb	U
84-66-2	Diethylphthalate	C 1689-1551	21.9	21.9	ppb	U
7005-72-3	4-Chlorophenyl-phenylether	C 1689-1551	21.9	21.9	ppb	U
86-73-7	Fluorene	C 1689-1551	25.3	25.3	ppb	U
100-01-6	4-Nitroaniline	C 1689-1551	24.1	24.1	ppb	U
86-30-6	N-nitrosodiphenylamine	C 1689-1551	21.9	21.9	ppb	U
101-55-3	4-Bromophenyl-phenylether	C 1689-1551	29.9	29.9	ppb	U



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Semivolatile Base Neutral Compounds - EPA 8270C

### Sample: 0610403-10

Client Sample ID: SB-12

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/23/2006

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
118-74-1	Hexachlorobenzene	C 1689-1551	21.9	21.9	ppb	U
85-01-8	Phenanthrene	C 1689-1551	31.0	31.0	ppb	U
120-12-7	Anthracene	C 1689-1551	27.6	27.6	ppb	U
84-74-2	Di-n-butylphthalate	C 1689-1551	59.8	23.4	ppb	J
206-44-0	Fluoranthene	C 1689-1551	23.0	23.0	ppb	U
129-00-0	Pyrene	C 1689-1551	23.0	23.0	ppb	U
85-68-7	Butylbenzylphthalate	C 1689-1551	16.1	16.1	ppb	U
91-94-1	3,3'-Dichlorobenzidine	C 1689-1551	327	327	ppb	U
56-55-3	Benzo(a)anthracene	C 1689-1551	16.1	16.1	ppb	U
218-01-9	Chrysene	C 1689-1551	25.3	25.3	ppb	U
117-81-7	Bis(2-Ethylhexyl)phthalate	C 1689-1551	29.9	25.3	ppb	J
117-84-0	Di-n-octylphthalate	C 1689-1551	19.5	19.5	ppb	U
205-99-2	Benzo(b)fluoranthene	C 1689-1551	14.9	14.9	ppb	U
207-08-9	Benzo(k)fluoranthene	C 1689-1551	50.6	50.6	ppb	U
50-32-8	Benzo(a)pyrene	C 1689-1551	21.9	21.9	ppb	U
193-39-5	Indeno(1,2,3-cd)pyrene	C 1689-1551	24.1	24.1	ppb	U
53-70-3	Dibenzo(a,h)anthracene	C 1689-1551	19.5	19.5	ppb	U
191-24-2	Benzo(g,h,i)perylene	C 1689-1551	19.5	19.5	ppb	U
86-74-8	Carbazole	C 1689-1551	28.8	28.8	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
118-76-6	2,4,6-TRIBROMOPHENOL	C1689-1551	54.2 %	( 19 - 122)	
321-60-8	2-FLUOROBIPHENYL	C1689-1551	50.1 %	( 30 - 115)	
367-12-4	2-FLUOROPHENOL	C1689-1551	51.9 %	( 25 - 121)	
4165-60-0	NITROBENZENE-D5	C1689-1551	50.4 %	( 23 - 120)	
13127-88-3	PHENOL-D6	C1689-1551	58.3 %	( 24 - 113)	
1718-51-0	TERPHENYL-D14	C1689-1551	52.0 %	( 18 - 137)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-1**

Client Sample ID: SB-1

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-15	2.32	2.32	ppb	U
11104-28-2	PCB 1221	G 1232-15	10.9	10.9	ppb	U
11141-16-5	PCB 1232	G 1232-15	2.43	2.43	ppb	U
53469-21-9	PCB 1242	G 1232-15	1.82	1.82	ppb	U
12672-29-6	PCB 1248	G 1232-15	4.10	4.10	ppb	U
11097-69-1	PCB 1254	G 1232-15	6.21	6.21	ppb	U
11096-82-5	PCB 1260	G 1232-15	7.13	7.13	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-15	56.5 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-15	78.1 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

### Sample: 0610403-2

Client Sample ID: SB-3

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-16	2.25	2.25	ppb	U
11104-28-2	PCB 1221	G 1232-16	10.6	10.6	ppb	U
11141-16-5	PCB 1232	G 1232-16	2.35	2.35	ppb	U
53469-21-9	PCB 1242	G 1232-16	1.77	1.77	ppb	U
12672-29-6	PCB 1248	G 1232-16	3.97	3.97	ppb	U
11097-69-1	PCB 1254	G 1232-16	6.02	54.8	ppb	
11096-82-5	PCB 1260	G 1232-16	6.91	6.91	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-16	65.6 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-16	76.3 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-3**

Client Sample ID: SB-4

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-17	2.61	2.61	ppb	U
11104-28-2	PCB 1221	G 1232-17	12.3	12.3	ppb	U
11141-16-5	PCB 1232	G 1232-17	2.72	2.72	ppb	U
53469-21-9	PCB 1242	G 1232-17	2.04	2.04	ppb	U
12672-29-6	PCB 1248	G 1232-17	4.60	4.60	ppb	U
11097-69-1	PCB 1254	G 1232-17	6.96	<b>273</b>	ppb	
11096-82-5	PCB 1260	G 1232-17	7.99	7.99	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-17	68.3 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-17	71.4 %	( 30 - 150)	





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-18	2.31	2.31	ppb	U
11104-28-2	PCB 1221	G 1232-18	10.8	10.8	ppb	U
11141-16-5	PCB 1232	G 1232-18	2.41	2.41	ppb	U
53469-21-9	PCB 1242	G 1232-18	1.81	1.81	ppb	U
12672-29-6	PCB 1248	G 1232-18	4.07	4.07	ppb	U
11097-69-1	PCB 1254	G 1232-18	6.16	6.16	ppb	U
11096-82-5	PCB 1260	G 1232-18	7.07	7.07	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-18	86.3 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-18	88.7 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-5**

Client Sample ID: SB-6

Matrix: Soil

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-19	2.48	2.48	ppb	U
11104-28-2	PCB 1221	G 1232-19	11.7	11.7	ppb	U
11141-16-5	PCB 1232	G 1232-19	2.59	2.59	ppb	U
53469-21-9	PCB 1242	G 1232-19	1.95	1.95	ppb	U
12672-29-6	PCB 1248	G 1232-19	4.38	4.38	ppb	U
11097-69-1	PCB 1254	G 1232-19	6.63	6.63	ppb	U
11096-82-5	PCB 1260	G 1232-19	7.62	7.62	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-19	65.5 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-19	81.8 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 84%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-20	2.43	2.43	ppb	U
11104-28-2	PCB 1221	G 1232-20	11.4	11.4	ppb	U
11141-16-5	PCB 1232	G 1232-20	2.54	2.54	ppb	U
53469-21-9	PCB 1242	G 1232-20	1.90	1.90	ppb	U
12672-29-6	PCB 1248	G 1232-20	4.29	4.29	ppb	U
11097-69-1	PCB 1254	G 1232-20	6.49	6.49	ppb	U
11096-82-5	PCB 1260	G 1232-20	7.45	7.45	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-20	58.8 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-20	87.1 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-7**

Client Sample ID: SB-8

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-21	2.27	2.27	ppb	U
11104-28-2	PCB 1221	G 1232-21	10.7	10.7	ppb	U
11141-16-5	PCB 1232	G 1232-21	2.37	2.37	ppb	U
53469-21-9	PCB 1242	G 1232-21	1.78	1.78	ppb	U
12672-29-6	PCB 1248	G 1232-21	4.00	4.00	ppb	U
11097-69-1	PCB 1254	G 1232-21	6.06	6.06	ppb	U
11096-82-5	PCB 1260	G 1232-21	6.96	6.96	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-21	80.1 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-21	103.0 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-22	2.28	2.28	ppb	U
11104-28-2	PCB 1221	G 1232-22	10.8	10.8	ppb	U
11141-16-5	PCB 1232	G 1232-22	2.39	2.39	ppb	U
53469-21-9	PCB 1242	G 1232-22	1.79	1.79	ppb	U
12672-29-6	PCB 1248	G 1232-22	4.03	4.03	ppb	U
11097-69-1	PCB 1254	G 1232-22	6.10	6.10	ppb	U
11096-82-5	PCB 1260	G 1232-22	7.01	7.01	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-22	54.9 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-22	89.6 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-9**

Client Sample ID: SB-11

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-23	2.45	2.45	ppb	U
11104-28-2	PCB 1221	G 1232-23	11.5	11.5	ppb	U
11141-16-5	PCB 1232	G 1232-23	2.56	2.56	ppb	U
53469-21-9	PCB 1242	G 1232-23	1.92	1.92	ppb	U
12672-29-6	PCB 1248	G 1232-23	4.32	4.32	ppb	U
11097-69-1	PCB 1254	G 1232-23	6.54	6.54	ppb	U
11096-82-5	PCB 1260	G 1232-23	7.52	7.52	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-23	57.1 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-23	77.5 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## PCB Aroclors by SW846 8082/EPA 608

**Sample: 0610403-10**

Client Sample ID: SB-12

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

Remarks:

Analyzed Date: 10/24/2006

Preparation Date(s) : 10/24/2006

### Analytical Results

Cas No	Analyte	File ID	MDL	Concentration*	Units	Q
12674-11-2	PCB 1016	G 1232-24	2.35	2.35	ppb	U
11104-28-2	PCB 1221	G 1232-24	11.0	11.0	ppb	U
11141-16-5	PCB 1232	G 1232-24	2.45	2.45	ppb	U
53469-21-9	PCB 1242	G 1232-24	1.84	1.84	ppb	U
12672-29-6	PCB 1248	G 1232-24	4.14	4.14	ppb	U
11097-69-1	PCB 1254	G 1232-24	6.27	6.27	ppb	U
11096-82-5	PCB 1260	G 1232-24	7.20	7.20	ppb	U

\* Results are reported on a dry weight basis

### Surrogate Results

Cas No	Analyte	File ID	% Recovery	QC Limits	Q
2051-24-3	DECACHLOROBIPHENYL	G1232-24	56.9 %	( 30 - 150)	
877-09-8	TETRACHLORO M-XYLENE	G1232-24	81.6 %	( 30 - 150)	



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Mercury by SW846 7470/7471/EPA 245.1

### **Sample: 0610403-1**

Client Sample ID: SB-1

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0014	0.066	ppm	

\* Results are reported on a dry weight basis

### **Sample: 0610403-2**

Client Sample ID: SB-3

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0015	0.0015	ppm	U

\* Results are reported on a dry weight basis

### **Sample: 0610403-3**

Client Sample ID: SB-4

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0018	0.85	ppm	

\* Results are reported on a dry weight basis





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Mercury by SW846 7470/7471/EPA 245.1

### **Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0014	0.11	ppm	

\* Results are reported on a dry weight basis

### **Sample: 0610403-5**

Client Sample ID: SB-6

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0016	0.0016	ppm	U

\* Results are reported on a dry weight basis

### **Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 84%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### **Analytical Results**

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0017	0.0017	ppm	U

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Mercury by SW846 7470/7471/EPA 245.1

### **Sample: 0610403-7**

Client Sample ID: SB-8

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0015	0.0015	ppm	U

\* Results are reported on a dry weight basis

### **Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0016	0.0016	ppm	U

\* Results are reported on a dry weight basis

### **Sample: 0610403-9**

Client Sample ID: SB-11

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0017	0.094	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Mercury by SW846 7470/7471/EPA 245.1

**Sample: 0610403-10**

Client Sample ID: SB-12

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

Remarks:

Analyzed Date: 10/20/2006

Preparation Date(s) : 10/20/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7439-97-6	Mercury	0.0016	0.0016	ppm	U

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### Sample: 0610403-1

Client Sample ID: SB-1

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 87.8%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.23	0.23	ppm	U
7440-38-2	Arsenic	0.39	0.39	ppm	U
7440-41-7	Beryllium	0.023	0.023	ppm	U
7440-43-9	Cadmium	0.034	1.36	ppm	
7440-47-3	Chromium	0.18	19.4	ppm	
7440-50-8	Copper	0.33	29.8	ppm	
7439-92-1	Lead	0.19	85.1	ppm	
7440-02-0	Nickel	0.057	12.4	ppm	
7782-49-2	Selenium	0.49	2.28	ppm	
7440-22-4	Silver	0.11	0.11	ppm	U
7440-28-0	Thallium	0.23	0.23	ppm	U
7440-66-6	Zinc	0.50	166	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-2**

Client Sample ID: SB-3

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 90.6%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.22	0.22	ppm	U
7440-38-2	Arsenic	0.37	12.2	ppm	
7440-41-7	Beryllium	0.022	0.022	ppm	U
7440-43-9	Cadmium	0.032	2.67	ppm	
7440-47-3	Chromium	0.17	14.0	ppm	
7440-50-8	Copper	0.31	22.5	ppm	
7439-92-1	Lead	0.18	20.9	ppm	
7440-02-0	Nickel	0.054	10.7	ppm	
7782-49-2	Selenium	0.47	0.47	ppm	U
7440-22-4	Silver	0.11	0.11	ppm	U
7440-28-0	Thallium	0.22	0.22	ppm	U
7440-66-6	Zinc	0.48	34.4	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-3**

Client Sample ID: SB-4

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 78.3%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.25	0.25	ppm	U
7440-38-2	Arsenic	0.43	0.43	ppm	U
7440-41-7	Beryllium	0.025	0.025	ppm	U
7440-43-9	Cadmium	0.038	1.58	ppm	
7440-47-3	Chromium	0.20	23.7	ppm	
7440-50-8	Copper	0.36	50.7	ppm	
7439-92-1	Lead	0.21	1050	ppm	
7440-02-0	Nickel	0.063	13.5	ppm	
7782-49-2	Selenium	0.54	2.15	ppm	
7440-22-4	Silver	0.13	0.13	ppm	U
7440-28-0	Thallium	0.25	0.25	ppm	U
7440-66-6	Zinc	0.55	409	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-4**

Client Sample ID: SB-5

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 88.5%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.21	0.21	ppm	U
7440-38-2	Arsenic	0.36	0.36	ppm	U
7440-41-7	Beryllium	0.021	0.021	ppm	U
7440-43-9	Cadmium	0.032	<b>0.064</b>	ppm	
7440-47-3	Chromium	0.17	<b>7.63</b>	ppm	
7440-50-8	Copper	0.31	<b>13.1</b>	ppm	
7439-92-1	Lead	0.18	<b>13.5</b>	ppm	
7440-02-0	Nickel	0.053	<b>5.58</b>	ppm	
7782-49-2	Selenium	0.46	0.46	ppm	U
7440-22-4	Silver	0.11	0.11	ppm	U
7440-28-0	Thallium	0.21	0.21	ppm	U
7440-66-6	Zinc	0.47	<b>39.3</b>	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-5**

Client Sample ID: SB-6

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 82.2%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.23	0.23	ppm	U
7440-38-2	Arsenic	0.40	0.40	ppm	U
7440-41-7	Beryllium	0.023	0.023	ppm	U
7440-43-9	Cadmium	0.035	1.25	ppm	
7440-47-3	Chromium	0.19	40.3	ppm	
7440-50-8	Copper	0.34	23.4	ppm	
7439-92-1	Lead	0.20	8.34	ppm	
7440-02-0	Nickel	0.058	25.9	ppm	
7782-49-2	Selenium	0.50	0.50	ppm	U
7440-22-4	Silver	0.12	0.12	ppm	U
7440-28-0	Thallium	0.23	0.23	ppm	U
7440-66-6	Zinc	0.51	42.5	ppm	

\* Results are reported on a dry weight basis





# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-6**

Client Sample ID: SB-7

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 84%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.22	0.22	ppm	U
7440-38-2	Arsenic	0.37	0.37	ppm	U
7440-41-7	Beryllium	0.022	0.022	ppm	U
7440-43-9	Cadmium	0.033	1.16	ppm	
7440-47-3	Chromium	0.18	18.8	ppm	
7440-50-8	Copper	0.32	14.3	ppm	
7439-92-1	Lead	0.19	27.6	ppm	
7440-02-0	Nickel	0.055	13.3	ppm	
7782-49-2	Selenium	0.47	0.47	ppm	U
7440-22-4	Silver	0.11	0.68	ppm	
7440-28-0	Thallium	0.22	0.22	ppm	U
7440-66-6	Zinc	0.49	283	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### Sample: 0610403-7

Client Sample ID: SB-8

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.9%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.21	0.21	ppm	U
7440-38-2	Arsenic	0.36	0.36	ppm	U
7440-41-7	Beryllium	0.021	0.021	ppm	U
7440-43-9	Cadmium	0.031	<b>0.40</b>	ppm	
7440-47-3	Chromium	0.17	<b>11.4</b>	ppm	
7440-50-8	Copper	0.30	<b>10.4</b>	ppm	
7439-92-1	Lead	0.18	<b>2.80</b>	ppm	
7440-02-0	Nickel	0.052	<b>7.58</b>	ppm	
7782-49-2	Selenium	0.45	0.45	ppm	U
7440-22-4	Silver	0.10	0.10	ppm	U
7440-28-0	Thallium	0.21	0.21	ppm	U
7440-66-6	Zinc	0.46	<b>30.1</b>	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-8**

Client Sample ID: SB-9

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 89.3%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.22	0.22	ppm	U
7440-38-2	Arsenic	0.37	0.37	ppm	U
7440-41-7	Beryllium	0.022	0.022	ppm	U
7440-43-9	Cadmium	0.033	<b>0.74</b>	ppm	
7440-47-3	Chromium	0.18	<b>24.0</b>	ppm	
7440-50-8	Copper	0.32	<b>21.7</b>	ppm	
7439-92-1	Lead	0.19	<b>38.8</b>	ppm	
7440-02-0	Nickel	0.055	<b>14.9</b>	ppm	
7782-49-2	Selenium	0.47	0.47	ppm	U
7440-22-4	Silver	0.11	0.11	ppm	U
7440-28-0	Thallium	0.22	0.22	ppm	U
7440-66-6	Zinc	0.48	<b>50.0</b>	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

**Sample: 0610403-9**

Client Sample ID: SB-11

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 83.3%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.24	0.24	ppm	U
7440-38-2	Arsenic	0.40	0.40	ppm	U
7440-41-7	Beryllium	0.024	0.024	ppm	U
7440-43-9	Cadmium	0.035	1.44	ppm	
7440-47-3	Chromium	0.19	28.0	ppm	
7440-50-8	Copper	0.34	27.4	ppm	
7439-92-1	Lead	0.20	1180	ppm	
7440-02-0	Nickel	0.059	17.4	ppm	
7782-49-2	Selenium	0.51	0.51	ppm	U
7440-22-4	Silver	0.12	0.12	ppm	U
7440-28-0	Thallium	0.24	0.24	ppm	U
7440-66-6	Zinc	0.52	171	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Priority Pollutant Metals by SW846 6010/EPA 200.7

### **Sample: 0610403-10**

Client Sample ID: SB-12

Matrix: Soil

Type: Composite

Collected: 10/18/2006

% Solid: 86.9%

Remarks:

Analyzed Date: 10/19/2006

Preparation Date(s) : 10/20/2006 10/18/2006

### Analytical Results

Cas No	Analyte	MDL	Concentration*	Units	Q
7440-36-0	Antimony	0.22	0.22	ppm	U
7440-38-2	Arsenic	0.37	0.37	ppm	U
7440-41-7	Beryllium	0.022	0.022	ppm	U
7440-43-9	Cadmium	0.033	<b>0.80</b>	ppm	
7440-47-3	Chromium	0.17	<b>17.6</b>	ppm	
7440-50-8	Copper	0.31	<b>32.9</b>	ppm	
7439-92-1	Lead	0.18	<b>22.9</b>	ppm	
7440-02-0	Nickel	0.054	<b>17.1</b>	ppm	
7782-49-2	Selenium	0.47	0.47	ppm	U
7440-22-4	Silver	0.11	0.11	ppm	U
7440-28-0	Thallium	0.22	0.22	ppm	U
7440-66-6	Zinc	0.48	<b>40.1</b>	ppm	

\* Results are reported on a dry weight basis



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735

Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## Case Narrative

### EPA 8260 VOLATILE ANALYSIS:

The following compounds were calibrated at 25, 50, 100, 150 and 200 ppb levels in the initial calibration curve:

- Acetone
- 2-Butanone
- 4-Methyl-2-pentanone
- 2-Hexanone

M&P-Xylenes and 2-Chloroethylvinylether were calibrated at 10, 40, 100, 200 and 300 ppb levels.

Acrolein/Acrylonitrile were calibrated at 50,100,150,200 and 250 ppb levels.

Tert Butyl Alcohol (TBA) was calibrated at 50,200,500,1000 and 1500 ppb levels.

All other compounds were calibrated at 5, 20, 50, 100 and 150 ppb levels.

The method blank associated with the soil samples 0610403-9 & 10, contained 4.18 ppb of Methylene Chloride, a common laboratory contaminant.

### EPA 8270 BN ANALYSIS:

Sample #3 was analyzed at a 1:4 dilution due to extract viscosity.



# Environmental Testing Laboratories, Inc.

208 Route 109, Farmingdale NY 11735  
Phone - 631-249-1456 Fax - 631-249-8344

10/26/2006

## ORGANIC METHOD QUALIFIERS

Q - Qualifier - specified entries and their meanings are as follows:

- U - The analytical result is not detected above the Method Detection Limit (MDL).  
All MDL's are lower than the lowest calibration standard concentration.
- J - Indicates an estimated value. The concentration reported was detected below the Method Detection Limit (MDL).
- Y - The concentration reported was detected below the lowest calibration standard concentration.
- B - The analyte was found in the associated method blank as well as the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- E - The concentration of the analyte exceeded the calibration range of the instrument.
- D - This flag indicates a system monitoring compound diluted out.

## INORGANIC METHOD QUALIFIERS

C - (Concentration) qualifiers are as follows:

- B - Entered if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).
- U - Entered when the analyte was analyzed for, but not detected above the Method Detection Limit (MDL) which is less than the lowest calibration standard concentration.

Q - Qualifier specific entries and their meanings are as follows:

- E - Reported value is estimated because of the presence of interferences.

M - (Method) qualifiers are as follows:

- A - Flame AA
- AS - Semi-automated Spectrophotometric
- AV - Automated Cold Vapor AA
- C - Manual Spectrophotometric
- F - Furnace AA
- P - ICP
- T - Titrimetric

## OTHER QUALIFIERS

ND - Not Detected



SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-1	0-5" asphalt			
	5"-2' brown, dry, fine-medium sand, angular gravel, trace silt, no odor			
	2'-3' same as above			
	3'-4' same as above, trace of brick fragments	0-4'	FS-1	0.0
	4'-5' same as above	4'-8'	FS-2	0.0
	5'-6' same as above			
	6'-7' same as above, dark-brown color	8'-12'	FS-3	0.0
	7'-8' same as above, light-medium brown color			
	8'-12' same as above	12'-16'	FS-4	0.0
	12'-16' same as above brick fragments, moist at 16', refusal at 18' bedrock			
	Composite sample were collected from each interval			
	Sample SB-1			
SB-2	0-7" asphalt			
	7"-3' brown, fine-medium sand, brick fragments, angular gravel, trace of silt, dry, no odor	0-3'	FS-5	0.0
	Refusal at 3' rubble, moved boring over 10'	0-2'	FS-6	0.0
	Refusal at 2' rubble, second location			
	No sample collected due to refusal			
SB-3	0-6" asphalt			
	6"-4' brown, medium-fine sand, angular gravel, brick fragments, dry, no odor			
	4'-8' same as above			
	8'-9' yellowish orange, fine-medium sand			
	9'-12' light brown, fine-medium sand	0-4'	FS-7	0.0
	12'-16' yellowish orange to light grey, fine-medium sand, brick fragments, angular gravel, no odor, dry	4'-8'	FS-8	0.0
	16'-18' light brown, fine-medium sand, moist, no odor	8'-12'	FS-9	0.0
	18'-20' yellowish orange, fine-medium sand, no odor, refusal at 20' bedrock	12'-16'	FS-10	0.0
	Composite sample were collected from each interval			
	Sample SB-3			



SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-4	0-7" asphalt			
	7"-3' light brown, fine-medium sand, angular gravel, trace of silt, no odor, dry			
	3'-4' same as above, dark brown color			
	4'-8' same as above, brick fragments			
	8'-10' same as above, brown color	0-4'	FS-11	0.0
	10'-12' same as above, black color	4'-8'	FS-12	0.0
	12'-16' dark grey, fine-medium sand, trace of silt, hydrocarbon odor	8'-12'	FS-13	0.0
	16'-19' dark grey, fine-medium sand, brick fragments, hydrocarbon odor, refusal at 19' concrete	12'-16'	FS-14	9.8
	Sample was take at 12'-16' interval due to elevated PID measurement Sample SB-4			
SB-5	0-7" asphalt			
	7"-4' olive grey, fine-medium sand angular gravel, brick fragments, trace of silt, dry, no odor	0-4	FS-15	0.0
	4'-7' same as above, refusal at 7' rubble	4-8	FS-16	0.0
	Composite sample were collected from each interval Sample SB-5			
SB-6	0-7" asphalt			
	7"-2' brown, fine-medium sand, angular gravel, trace silt, no odor			
	2'-4' same as above			
	4'-8' brown-light brown, fine-medium sand, trace of clay and silt	0-4	FS-17	0.0
	8'-12' brown, fine-medium sand, angular gravel, no odor, dry	4-8	FS-18	0.0
	12'-14' light brown, fine-medium sand, angular gravel, trace of clay, trace of silt	8-12	FS-19	0.0
	16' borehole collapsed due to rain Composite sample were collected from each interval Sample SB-6			

SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-7	0-8" asphalt			
	8"- 3' light brown, fine-medium sand, trace of coal slag, trace silt, dry, no odor			
	3'-4' same as above			
	4'-8' brown, fine-medium sand, trace of coal slag	0-4	FS-20	0.0
	8'-12' light brown, fine-medium sand, angular gravel, trace of silt	4-8	FS-21	0.0
	12' refusal at bedrock	8-12	FS-22	0.0
	Composite sample were collected from each interval Sample SB-7			
SB-8	0-6" asphalt			
	6"-4' brown, fine-medium sand, angular gravel, trace of silt, dry, no odor			
	4'-7' same as above	0-4	FS-23	0.0
	7' refusal at bedrock	4-8	FS-24	0.0
	Composite sample were collected from each interval Sample SB-8			
SB-9	0-7" asphalt			
	7"-4' light brown, fine-medium sand, no odor, dry			
	4' refusal at bedrock	0-4	FS-25	0.0
	Composite sample were collected from each interval Sample SB-9			
SB-10	0-5" asphalt			
	5"-1' bedrock			
	1' refusal at bedrock	0-4	FS-26	0.0
	No sample collected due to refusal			
SB-11	0-5" asphalt			
	5"-2' light brown, fine-medium sand			
	2'-4' light brown, fine-medium sand, angular gravel, trace of silt, no odor, dry			
	4' refusal at bedrock	0-4	FS-27	0.0
	Composite sample were collected from each interval Sample SB-11			

SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-12	0-6" asphalt 6"-4' yellowish orange, fine-medium sand, trace of silt, no odor, dry 4'-6' same as above 6' refusal at bedrock Composite sample were collected from each interval Sample SB-12	0-4	FS-28	0.0

Soil Boring Designation	Notations
<b>SB-1</b>	0'-1' asphalt 1'-2' fine-medium sand, angular gravel, rock fragments, silt 2'-3' medium-fine brown soil 3'-4' brick 4'-5' medium brown soil with asphalt 5'-6' rock 6'-7' black soil 7'-8' light-medium brown soil 8'-12' medium brown soil with brick and angular gravel 12'-16' light brown sand with rock and silt, some brick Damp at 16', Refusal at 18'
<b>SB-2</b>	0'-3' fine-medium sand, silt, brick fragments, rock fragments Refusal at 3', moved boring location Refusal at 2' second boring location No recovery
<b>SB-3</b>	1'-4' brick fragments, brown sand, silt, rock fragments 4'-5' rubble, brick fragments 5'-6' medium brown sand 6'-7' rock fragments 7'-8' brick fragments, fine-medium orange soil 8'-9' orange soil 9'-12' medium orange soil, light brown soil 12'-13' orange-light grey soil 13'-14' brick, rock, light brown soil 14'-15' rock 15'-16' medium light brown sand 16'-18' light brown sand 18'-20' orange sand Refusal at 20'
<b>SB-4</b>	0'-1' light brown sand 1'-3' brown sand with rock fragments 3'-4' dark brown sand 4'-6' brick, rock 6'-8' brown soil 8'-10' brown soil with rock fragments 12'-16' black soil, hydrocarbon odors 16'-19' black soil with brick fragments
<b>SB-5</b>	0'-4' grey sand, rock fragments, brick fragments 4'-7' grey sand, rock fragments Refusal at 7'

Soil Boring Designation	Notations
<b>SB-6</b>	0'-6" asphalt 6"-2' rock fragments 2'-4' coarse-medium sand 4'-7' grey sand 7'-8' brown clay 8'-10' brown-light brown clay 10'-12' brown medium sand 12'-13' brown sand 13'-14' rock fragments 14'-16' light brown sand and clay 16' borehole collapse due to rain
<b>SB-7</b>	0'-1' asphalt 1'-3' light-medium brown sand, some coal slag 3'-4' coarse brown sand 4'-6' coal slag 6'-8' medium brown soil and sand 8'-12' light brown sand, some rock, silt and fine-medium sand
<b>SB-8</b>	0'-4' medium brown sand, light brown silt, some rock 4'-5' light brown sand 5'-7' medium brown sand Bedrock at 7'
<b>SB-9</b>	1'-2' light sand, some rock 2'-4' light brown sand Bedrock at 4'
<b>SB-10</b>	No recovery Bedrock at 0.5 feet Asphalt and bedrock
<b>SB-11</b>	0'-2' light-medium brown soil 2'-4' rock fragments, brown silt Bedrock at 4'
<b>SB-12</b>	0'-6" asphalt 6"-4' orange-brown sand 4'-6' brown sand Bedrock at 6'

# Well Installation Form



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone:(631) 271-9292 Fax: (631) 271-9357

**Project:**  
Spectrum Kensington  
Bronxville, NY

Well ID: MW-1

Job Number:

Top of Pipe:

Driller: Soil Testing Inc.

Drilling

Date

Time

Drill Method: Hollow Stem Auger

Started

11-7-06

Borehole Diameter: 4"

Finished

11-7-06

Well Type: Monitoring Well

Well Diameter: 2"

Logged By: SD

Well Completion

Additional Information

Depth (feet)

Graphic Log

Materials Description

No odors

0-6" asphalt

6"-1' dark brown, fine-medium sand, medium gravel

1'-5' brown-light brown fine-medium sand, medium gravel

5'-10' light brown fine-medium sand, angular gravel

10'-15' light brown sand

15'-20' light brown sand, wet

20'-25' light brown sand

25'-30' light brown sand

30'-35' light brown sand

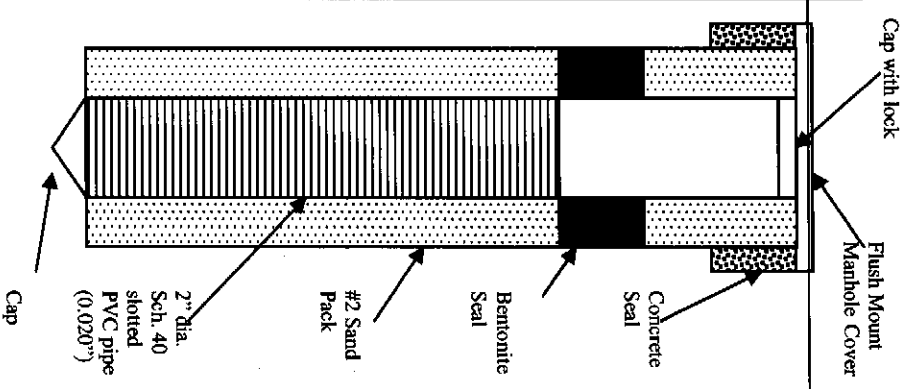
35'-40' light brown sand

40'-45' light brown sand

45'-50' light brown sand

55'-60' light brown sand

Groundwater ~ 17'



# Well Installation Form



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone:(631) 271-9292 Fax: (631) 271-9357

**Project:**  
Spectrum Kensington  
Bronxville, NY

Well ID: MW-2

Job Number:

Top of Pipe:

Driller: Soil Testing Inc.

Drilling

Date

Time

Drill Method: Hollow Stem Auger

Started

11-2-06

Borehole Diameter: 4"

Finished

11-2-06

Well Type: Monitoring Well

Well Diameter: 2"

Logged By: SD

Well Completion

Additional Information

Depth (feet)

Graphic Log

Materials Description

No odors  
Dry Soil

0-4" asphalt

4"-5' dark brown-brown medium-fine sand, some gravel.

5'-10' light brown-brown medium sand, rock fragments, trace silt

10'-15' light brown-brown medium sand, trace silt

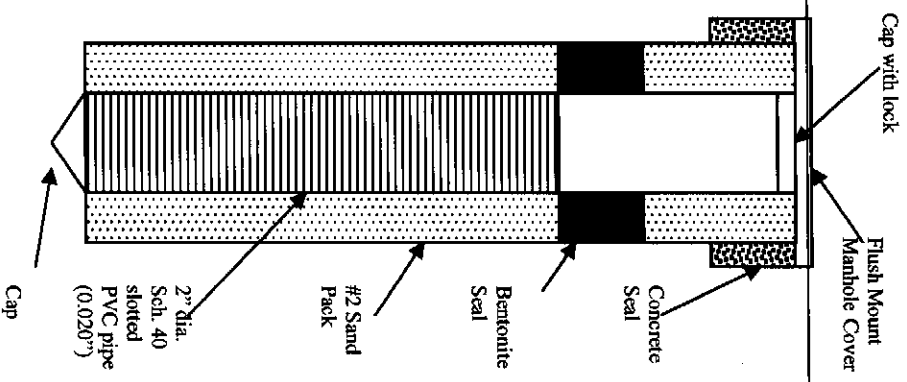
15'-20' light brown-brown medium sand, trace silt

20'-25' light brown-brown medium sand, trace silt

25'-30' light brown-brown medium sand, trace silt, wet

Groundwater ~ 25'

Bedrock ~ 31'



# Well Installation Form



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone:(631) 271-9292 Fax: (631) 271-9357

**Project:**  
Spectrum Kensington  
Bronxville, NY

Well ID: MW-3

Job Number:

Top of Pipe:

Driller: Soil Testing, Inc.

Drilling

Date

Time

Drill Method: Hollow Stem Auger

Started

11-2-06

Borehole Diameter: 4"

Finished

11-2-06

Well Type: Monitoring Well

Well Diameter: 2"

Logged By: SD

Well Completion

Additional Information

Depth (feet)

Graphic Log

Materials Description

0"-4" asphalt

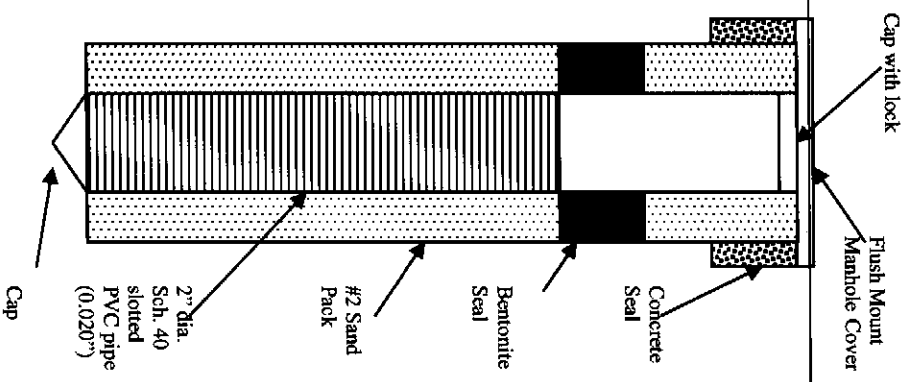
4"-5' light brown-brown fine sand, some medium-coarse gravel, trace silt, brick fragments

5'-10' light brown-brown medium-fine sand, brick fragments, gravel, trace silt

10'-15' light brown-brown sand, angular gravel

15'-20' light brown-brown sand, wet

Bedrock at ~21'







Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone: (631) 271-9292 Fax: (631) 271-9345

Well ID: MW-1

Sampling Date: 11-17-06

Job Number:

Client Name: Spectrum Communities

Well Diameter: 2"

Well Depth: 54.30'

Project Name: Kensington

Well Condition: Good

Water Level: 28.40'

Location: Bronxville, NY

Sampler(s): Scott Davidow, Mike Tavakolian

**PURGING/SAMPLING:**

Total Gallons Purged: 10 gallons

Sample Method: Polyethylene Bailers

Purge Method:

Sample Parameters: VOC, SVOC, PP Metal, PCB

Purge/Flow Rate:

Odor/Product: None

	Units	0 gallons	3 gallons	6 gallons	10 gallons
Time	Hrs				
pH	SU	7.50	6.82	6.29	6.39
Conductivity	ms/cm	2.88	2.87	2.88	2.88
Turbidity	NTU	120	340	550	46
Dissolved Oxygen	mg/L	8.94	9.29	9.20	9.15
Temperature	°C	16.2	15.9	15.9	15.9
Salinity	ppm	0.14	0.14	0.14	0.14

Comments:

Sampler Signature(s):

Scott Davidow

Michael Tavakolian



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone: (631) 271-9292 Fax: (631) 271-9345

Well ID: MW-2

Sampling Date: 11-17-06

Job Number:

Client Name: Spectrum Communities

Well Diameter: 2"

Well Depth: 29.31'

Project Name: Kensington

Well Condition: Good

Water Level: 18.19'

Location: Bronxville, NY

Sampler(s): Scott Davidow, Mike Tavakolian

**PURGING/SAMPLING:**

Total Gallons Purged: 10 gallons

Sample Method: Polyethylene Bailers

Purge Method:

Sample Parameters: VOC, SVOC, PP Metal, PCB

Purge/Flow Rate:

Odor/Product: None

	Units	0 gallons	3 gallons	6 gallons	10 gallons
Time	Hrs				
pH	SU	6.23	5.95	6.04	6.30
Conductivity	ms/cm	1.21	1.20	1.20	1.20
Turbidity	NTU	985	999	999	120
Dissolved Oxygen	mg/L	8.72	8.63	8.52	8.68
Temperature	°C	16.5	16.6	16.4	16.4
Salinity	ppm	0.05	0.05	0.05	0.05

**Comments:**

Sampler Signature(s):

Scott Davidow

Michael Tavakolian



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone: (631) 271-9292 Fax: (631) 271-9345

Well ID: MW-3

Sampling Date: 11-17-06

Job Number:

Client Name: Spectrum Communities

Well Diameter: 2"

Well Depth: 21.10'

Project Name: Kensington

Well Condition: Good

Water Level: 8.41'

Location: Bronxville, NY

Sampler(s): Scott Davidow, Mike Tavakolian

**PURGING/SAMPLING:**

Total Gallons Purged: 10 gallons

Sample Method: Polyethylene Bailers

Purge Method:

Sample Parameters: VOC, SVOC, PP Metal, PCB

Purge/Flow Rate:

Odor/Product: None

	Units	0 gallons	3 gallons	6 gallons	10 gallons
Time	Hrs				
pH	SU	6.01	7.30	6.70	6.75
Conductivity	ms/cm	2.90	3.13	2.27	2.80
Turbidity	NTU	999	999	518	320
Dissolved Oxygen	mg/L	9.24	9.06	8.92	8.97
Temperature	°C	16.4	16.3	16.4	16.4
Salinity	ppm	0.01	0.01	0.01	0.01

**Comments:**

Sampler Signature(s):

Scott Davidow

Michael Tavakolian



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone: (631) 271-9292 Fax: (631) 271-9345

Well ID: MW-4

Sampling Date: 11-17-06

Job Number:

Client Name: Spectrum Communities

Well Diameter: 2"

Well Depth: 20.05'

Project Name: Kensington

Well Condition: Good

Water Level: 10.40'

Location: Bronxville, NY

Sampler(s): Scott Davidow, Mike Tavakolian

**PURGING/SAMPLING:**

Total Gallons Purged: 10 gallons

Sample Method: Polyethylene Bailers

Purge Method:

Sample Parameters: VOC, SVOC, PP Metal, PCB

Purge/Flow Rate:

Odor/Product: None

	Units	0 gallons	3 gallons	6 gallons	10 gallons
Time	Hrs				
pH	SU	7.11	6.04	5.55	5.50
Conductivity	ms/cm	1.39	1.45	1.46	1.47
Turbidity	NTU	370	320	300	250
Dissolved Oxygen	mg/L	8.23	8.12	8.12	8.09
Temperature	°C	18.2	18.4	18.3	18.4
Salinity	ppm	0.06	0.06	0.06	0.06

Comments:

Sampler Signature(s):

Scott Davidow

Michael Tavakolian



Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone: (631) 271-9292 Fax: (631) 271-9345

Well ID: MW-5

Sampling Date: 11-17-06

Job Number:

Client Name: Spectrum Communities

Well Diameter: 2"

Well Depth: 19.30'

Project Name: Kensington

Well Condition: Good

Water Level: 13.60'

Location: Bronxville, NY

Sampler(s): Scott Davidow, Mike Tavakolian

**PURGING/SAMPLING:**

Total Gallons Purged: 10 gallons

Sample Method: Polyethylene Bailers

Purge Method:

Sample Parameters: VOC, SVOC, PP Metal, PCB

Purge/Flow Rate:

Odor/Product: None

	Units	0 gallons	3 gallons	6 gallons	10 gallons
Time	Hrs	No Data due to petroleum product in the well.			
pH	SU				
Conductivity	ms/cm				
Turbidity	NTU				
Dissolved Oxygen	mg/L				
Temperature	°C				
Salinity	ppm				

**Comments:**


Sampler Signature(s):

Scott Davidow

Michael Tavakolian

# Appendix F - Geographic Coordinates of Sample Locations

<u>Sample #</u>	<u>North</u>	<u>West</u>
SB-1	40.94239	73.83455
SB-2	40.94263	73.83460
SB-3	40.94297	73.83451
SB-4	40.94313	73.83451
SB-5	40.94362	73.83449
SB-6	40.94351	73.83442
SB-7	40.94381	73.83452
SB-8	40.94386	73.83447
SB-9	40.94391	73.83442
SB-10	40.94401	73.83436
SB-11	40.94388	73.83433
SB-12	40.94383	73.83432

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES POTABLE WATER  
All approved analytes are listed below:*

**Drinking Water Non-Metals**

Hydrogen Ion (pH) EPA 150.1

Serial No.: 28565

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

Acrylates		Chlorinated Hydrocarbon Pesticides	
Acrolein (Propenal)	EPA 624	4,4'-DDE	EPA 8081A
	EPA 8260B	4,4'-DDT	EPA 608
Acrylonitrile	EPA 624		EPA 8081A
	EPA 8015 B	Aldrin	EPA 608
	EPA 8260B		EPA 8081A
Amines		alpha-BHC	EPA 608
2-Nitroaniline	EPA 8270C		EPA 8081A
3-Nitroaniline	EPA 8270C	beta-BHC	EPA 608
4-Chloroaniline	EPA 8270C		EPA 8081A
4-Nitroaniline	EPA 8270C	Chlordane Total	EPA 608
Carbazole	EPA 8270C		EPA 8081A
Pyridine	EPA 8260B	delta-BHC	EPA 608
	EPA 8270C		EPA 8081A
Benzidines		Dieldrin	EPA 608
3,3'-Dichlorobenzidine	EPA 625		EPA 8081A
	EPA 8270C	Endosulfan I	EPA 608
Benzidine	EPA 625		EPA 8081A
	EPA 8270C	Endosulfan II	EPA 608
			EPA 8081A
Chlorinated Hydrocarbon Pesticides		Endosulfan sulfate	EPA 608
4,4'-DDD	EPA 608		EPA 8081A
	EPA 8081A	Endrin	EPA 608
4,4'-DDE	EPA 608		EPA 8081A

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 465-5570 to verify laboratory's accreditation status.





NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Chlorinated Hydrocarbon Pesticides**

Endrin aldehyde	EPA 608
	EPA 8081A
Heptachlor	EPA 608
	EPA 8081A
Heptachlor epoxide	EPA 608
	EPA 8081A
Lindane	EPA 608
	EPA 8081A
Methoxychlor	EPA 608
	EPA 8081A
Toxaphene	EPA 608
	EPA 8081A

**Chlorinated Hydrocarbons**

1,2,4,5-Tetrachlorobenzene	EPA 8270C
1,2,4-Trichlorobenzene	EPA 625
	EPA 8270C
2-Chloronaphthalene	EPA 625
	EPA 8270C
Hexachlorobenzene	EPA 625
	EPA 8270C
Hexachlorobutadiene	EPA 625
	EPA 8260B
	EPA 8270C

**Chlorinated Hydrocarbons**

Hexachlorocyclopentadiene	EPA 625
	EPA 8270C
Hexachloroethane	EPA 625
	EPA 8270C
Hexachloropropene	EPA 8270C
Pentachlorobenzene	EPA 8270C

**Chlorophenoxy Acid Pesticides**

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
	EPA 8321
2,4-D	EPA 8151A
	EPA 8321
	EPA 8151A

**Dicamba**

**Demand**

Biochemical Oxygen Demand	SM 18-20 5210B
Carbonaceous BOD	SM 18-20 5210B
Chemical Oxygen Demand	HACH 8000

**Fuel Oxygenates**

Ethanol	EPA 8260B
Methyl tert-butyl ether	EPA 8260B
t-Butyl alcohol	EPA 8260B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

<b>Haloethers</b>		<b>Nitroaromatics and Isophorone</b>	
4-Bromophenylphenyl ether	EPA 625 EPA 8270C	2,4-Dinitrotoluene	EPA 625 EPA 8270C
4-Chlorophenylphenyl ether	EPA 625 EPA 8270C	2,6-Dinitrotoluene	EPA 625 EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 625 EPA 8270C	Isophorone	EPA 625 EPA 8270C
Bis(2-chloroethoxy)methane	EPA 625 EPA 8270C	Nitrobenzene	EPA 625 EPA 8270C
Bis(2-chloroethyl)ether	EPA 625 EPA 8270C		
<b>Microextractables</b>		<b>Nitrosoamines</b>	
1,2-Dibromo-3-chloropropane	EPA 8260B	N-Nitrosodiethylamine	EPA 8270C
1,2-Dibromoethane	EPA 8260B	N-Nitrosodimethylamine	EPA 625 EPA 8270C
<b>Mineral</b>		N-Nitrosodi-n-butylamine	EPA 8270C
Acidity	EPA 305.1	N-Nitrosodi-n-propylamine	EPA 625 EPA 8270C
Alkalinity	EPA 310.1		
Calcium Hardness	EPA 200.7	N-Nitrosodiphenylamine	EPA 625 EPA 8270C
Chloride	EPA 325.3		
Fluoride, Total	EPA 340.2	<b>Nutrient</b>	
Hardness, Total	EPA 200.7	Ammonia (as N)	EPA 350.2
Sulfate (as SO4)	EPA 375.4	Kjeldahl Nitrogen, Total	EPA 351.3
		Nitrite (as N)	EPA 354.1
			SM 18-20 4500-NO2 B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

Nutrient		Polychlorinated Biphenyls		
Orthophosphate (as P)	EPA 365.3	2,2',3,3',5,5',6,6'-Octachlorobiphenyl	EPA 8082	
Organophosphate Pesticides		2,2',3,4,4',5,5'-Heptachlorobiphenyl	EPA 8082	
	Azinphos methyl	EPA 8141A	2,2',3,4,4',5,6-Heptachlorobiphenyl	EPA 8082
	Demeton-O	EPA 8141A	2,2',3,4,4',5'-Hexachlorobiphenyl	EPA 8082
	Demeton-S	EPA 8141A	2,2',3,4',5,5',6-Heptachlorobiphenyl	EPA 8082
			2,2',3,4,5,5'-Hexachlorobiphenyl	EPA 8082
Phthalate Esters		2,2',3,4',5,6,6'-Heptachlorobiphenyl	EPA 8082	
Benzyl butyl phthalate	EPA 625	2,2',3,4,5'-Pentachlorobiphenyl	EPA 8082	
	EPA 8270C	2,2',3,5,5',6-Hexachlorobiphenyl	EPA 8082	
Bis(2-ethylhexyl) phthalate	EPA 625	2,2',3,5'-Tetrachlorobiphenyl	EPA 8082	
	EPA 8270C	2,2',5,5'-Tetrachlorobiphenyl	EPA 8082	
Diethyl phthalate	EPA 625	2,2',5-Trichlorobiphenyl	EPA 8082	
	EPA 8270C	2,2'-dichlorobiphenyl	EPA 8082	
Dimethyl phthalate	EPA 625	2,3,3',4,4',5-Hexachlorobiphenyl	EPA 8082	
	EPA 8270C	2,3,3',4,6-Pentachlorobiphenyl	EPA 8082	
Di-n-butyl phthalate	EPA 625	2,3',4,4'-Tetrachlorobiphenyl	EPA 8082	
	EPA 8270C	2,4',5-Trichlorobiphenyl	EPA 1668 A	
Di-n-octyl phthalate	EPA 625		EPA 8082	
	EPA 8270C	2-Chlorobiphenyl	EPA 8082	
Polychlorinated Biphenyls		PCB-1016	EPA 608	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	EPA 8082		EPA 8082	
2,2',3,3',4,4',5-Heptachlorobiphenyl	EPA 8082	PCB-1221	EPA 608	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	EPA 8082		EPA 8082	

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Polychlorinated Biphenyls**

PCB-1232	EPA 608
	EPA 8082
PCB-1242	EPA 608
	EPA 8082
PCB-1248	EPA 608
	EPA 8082
PCB-1254	EPA 608
	EPA 8082
PCB-1260	EPA 608
	EPA 8082

**Polynuclear Aromatics**

Benzo(ghi)perylene	EPA 625
	EPA 8270C
Benzo(k)fluoranthene	EPA 625
	EPA 8270C
Chrysene	EPA 625
	EPA 8270C
Dibenzo(a,h)anthracene	EPA 625
	EPA 8270C
Fluoranthene	EPA 625
	EPA 8270C

**Polynuclear Aromatics**

Acenaphthene	EPA 625
	EPA 8270C
Acenaphthylene	EPA 625
	EPA 8270C
Anthracene	EPA 625
	EPA 8270C
Benzo(a)anthracene	EPA 625
	EPA 8270C
Benzo(a)pyrene	EPA 625
	EPA 8270C
Benzo(b)fluoranthene	EPA 625
	EPA 8270C

Fluorene	EPA 625
	EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 625
	EPA 8270C
Naphthalene	EPA 625
	EPA 8270C
Phenanthrene	EPA 625
	EPA 8270C
Pyrene	EPA 625
	EPA 8270C

**Priority Pollutant Phenols**

2,4,5-Trichlorophenol	EPA 625
	EPA 8270C

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Priority Pollutant Phenols**

2,4,6-Trichlorophenol	EPA 625
	EPA 8270C
2,4-Dichlorophenol	EPA 625
	EPA 8270C
2,4-Dimethylphenol	EPA 625
	EPA 8270C
2,4-Dinitrophenol	EPA 625
	EPA 8270C
2-Chlorophenol	EPA 625
	EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270C
2-Nitrophenol	EPA 625
	EPA 8270C
4-Chloro-3-methylphenol	EPA 625
	EPA 8270C
4-Nitrophenol	EPA 625
	EPA 8270C
Cresols, Total	EPA 8270C
Pentachlorophenol	EPA 625
	EPA 8270C
Phenol	EPA 625
	EPA 8270C

**Purgeable Aromatics**

1,2-Dichlorobenzene	EPA 624
	EPA 625
	EPA 8260B
	EPA 8270C
1,3-Dichlorobenzene	EPA 624
	EPA 625
	EPA 8260B
	EPA 8270C
1,4-Dichlorobenzene	EPA 624
	EPA 625
	EPA 8260B
	EPA 8270C
Benzene	EPA 624
	EPA 8260B
Chlorobenzene	EPA 624
	EPA 8260B
Ethyl benzene	EPA 624
	EPA 8260B
Toluene	EPA 624
	EPA 8260B
Total Xylenes	EPA 624
	EPA 8260B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Purgeable Halocarbons**

1,1,1,2-Tetrachloroethane	EPA 8260B
1,1,1-Trichloroethane	EPA 624
	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 624
	EPA 8260B
1,1,2-Trichloroethane	EPA 624
	EPA 8260B
1,1-Dichloroethane	EPA 624
	EPA 8260B
1,1-Dichloroethene	EPA 624
	EPA 8260B
1,1-Dichloropropene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B
1,2-Dichloroethane	EPA 624
	EPA 8260B
1,2-Dichloropropane	EPA 624
	EPA 8260B
1,3-Dichloropropane	EPA 8260B
2,2-Dichloropropane	EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B
2-Chloroethylvinyl ether	EPA 624
	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B

**Purgeable Halocarbons**

Bromochloromethane	EPA 8260B
Bromodichloromethane	EPA 624
	EPA 8260B
Bromoform	EPA 624
	EPA 8260B
Bromomethane	EPA 624
	EPA 8260B
Carbon tetrachloride	EPA 624
	EPA 8260B
Chloroethane	EPA 624
	EPA 8260B
Chloroform	EPA 624
	EPA 8260B
Chloromethane	EPA 624
	EPA 8260B
cis-1,2-Dichloroethene	EPA 8260B
cis-1,3-Dichloropropene	EPA 624
	EPA 8260B
Dibromochloromethane	EPA 624
	EPA 8260B
Dichlorodifluoromethane	EPA 8260B
Methylene chloride	EPA 624
	EPA 8260B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Purgeable Halocarbons**

Tetrachloroethene	EPA 624
	EPA 8260B
trans-1,2-Dichloroethene	EPA 624
	EPA 8260B
trans-1,3-Dichloropropene	EPA 624
	EPA 8260B
Trichloroethene	EPA 624
	EPA 8260B
Trichlorofluoromethane	EPA 8260B
Vinyl chloride	EPA 624
	EPA 8260B

**Purgeable Organics**

2-Butanone (Methylethyl ketone)	EPA 8260B
2-Hexanone	EPA 8260B
Acetone	EPA 8260B
Carbon Disulfide	EPA 8260B
Vinyl acetate	EPA 8260B

**Residue**

Solids, Total	EPA 160.3
Solids, Total Dissolved	EPA 160.1
Solids, Total Suspended	EPA 160.2

**Semi-Volatile Organics**

2-Methylnaphthalene	EPA 8270C
Benzoic Acid	EPA 8270C
Benzyl alcohol	EPA 8270C
Dibenzofuran	EPA 8270C

**Volatile Chlorinated Organics**

Benzyl chloride	EPA 1978, p. 130
	EPA 8260B

**Wastewater Metals I**

Barium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Cadmium, Total	EPA 200.7
	EPA 3005A
	EPA 6010B
Calcium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Chromium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Wastewater Metals I**

Chromium, Total	EPA 6010B
Copper, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Iron, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Lead, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Magnesium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Manganese, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Nickel, Total	EPA 200.7
	EPA 3005A

**Wastewater Metals I**

Nickel, Total	EPA 3010A
	EPA 6010B
Potassium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Silver, Total	EPA 200.7
	EPA 3005A
	EPA 6010B
Sodium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Strontium, Total	EPA 200.7
	EPA 6010B

**Wastewater Metals II**

Aluminum, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Antimony, Total	EPA 200.7
	EPA 3005A
	EPA 6010B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.





NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Wastewater Metals II**

Arsenic, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Beryllium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Mercury, Total	EPA 245.1
	EPA 7470A
Selenium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Vanadium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Zinc, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B

**Wastewater Metals III**

Cobalt, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Molybdenum, Total	EPA 200.7
	EPA 3005A
	EPA 6010B
Thallium, Total	EPA 200.7
	EPA 3005A
	EPA 3010A
	EPA 6010B
Tin, Total	EPA 200.7
	EPA 6010B
Titanium, Total	EPA 200.7
	EPA 6010B

**Wastewater Miscellaneous**

Boron, Total	EPA 200.7
	EPA 6010B
Bromide	EPA 320.1
Color	EPA 110.2
Cyanide, Total	EPA 335.3
	LACHAT 10-204-00-1-A
Hydrogen Ion (pH)	EPA 150.1

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES NON POTABLE WATER  
All approved analytes are listed below:*

**Wastewater Miscellaneous**

Oil & Grease Total Recoverable	EPA 1664A
	EPA 413.1
Phenols	EPA 420.1
Silica, Dissolved	EPA 6010B
Specific Conductance	EPA 120.1
	SM 18-20 2510B
Sulfide (as S)	SM 18 4500-S E
Surfactant (MBAS)	SM 18-20 5540C
Temperature	EPA 170.1
	SM 18-20 2550B

Serial No.: 28566

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

<b>Acrylates</b>		<b>Chlorinated Hydrocarbon Pesticides</b>	
Acrolein (Propenal)	EPA 8260B	4,4'-DDT	EPA 8081A
Acrylonitrile	EPA 8260B	Aldrin	EPA 8081A
<b>Amines</b>		alpha-BHC	EPA 8081A
2-Chloroaniline	EPA 8270C	alpha-Chlordane	EPA 8081A
2-Nitroaniline	EPA 8270C	beta-BHC	EPA 8081A
3-Nitroaniline	EPA 8270C	Chlordane Total	EPA 8081A
4-Chloroaniline	EPA 8270C	delta-BHC	EPA 8081A
Carbazole	EPA 8270C	Dieldrin	EPA 8081A
<b>Benzidines</b>		Endosulfan I	EPA 8081A
3,3'-Dichlorobenzidine	EPA 8270C	Endosulfan II	EPA 8081A
Benzidine	EPA 8270C	Endosulfan sulfate	EPA 8081A
<b>Characteristic Testing</b>		Endrin	EPA 8081A
Corrosivity	EPA 9040B	Endrin aldehyde	EPA 8081A
	EPA 9045C	Endrin Ketone	EPA 8081A
Ignitability	EPA 1010	gamma-Chlordane	EPA 8081A
	EPA 1020	Heptachlor	EPA 8081A
Reactivity	SW-846 Ch7, Sec. 7.3	Heptachlor epoxide	EPA 8081A
TCLP	EPA 1311	Lindane	EPA 8081A
<b>Chlorinated Hydrocarbon Pesticides</b>		Methoxychlor	EPA 8081A
4,4'-DDD	EPA 8081A	Toxaphene	EPA 8081A
4,4'-DDE	EPA 8081A	<b>Chlorinated Hydrocarbons</b>	
		1,2,4,5-Tetrachlorobenzene	EPA 8270C
		1,2,4-Trichlorobenzene	EPA 8270C

Serial No.: 28567

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Chlorinated Hydrocarbons**

2-Chloronaphthalene	EPA 8270C
Hexachlorobenzene	EPA 8270C
Hexachlorobutadiene	EPA 8270C
Hexachlorocyclopentadiene	EPA 8270C
Hexachloroethane	EPA 8270C
Pentachlorobenzene	EPA 8270C

**Chlorophenoxy Acid Pesticides**

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dicamba	EPA 8151A

**Haloethers**

4-Bromophenylphenyl ether	EPA 8270C
4-Chlorophenylphenyl ether	EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 8270C
Bis(2-chloroethoxy)methane	EPA 8270C

**Metals I**

Barium, Total	EPA 6010B
Cadmium, Total	EPA 6010B
Calcium, Total	EPA 6010B
Chromium, Total	EPA 6010B
Copper, Total	EPA 6010B

**Metals I**

Iron, Total	EPA 6010B
Lead, Total	EPA 6010B
Magnesium, Total	EPA 6010B
Manganese, Total	EPA 6010B
Nickel, Total	EPA 6010B
Potassium, Total	EPA 6010B
Silver, Total	EPA 6010B
Sodium, Total	EPA 6010B

**Metals II**

Aluminum, Total	EPA 6010B
Antimony, Total	EPA 6010B
Arsenic, Total	EPA 6010B
Beryllium, Total	EPA 6010B
Chromium VI	EPA 7196A
Mercury, Total	EPA 7471A
Selenium, Total	EPA 6010B
Vanadium, Total	EPA 6010B
Zinc, Total	EPA 6010B

**Metals III**

Cobalt, Total	EPA 6010B
Molybdenum, Total	EPA 6010B
Thallium, Total	EPA 6010B

Serial No.: 28567

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

<b>Metals III</b>		<b>Phthalate Esters</b>	
Tin, Total	EPA 6010B	Benzyl butyl phthalate	EPA 8270C
<b>Miscellaneous</b>		Diethyl phthalate	EPA 8270C
		Dimethyl phthalate	EPA 8270C
		Di-n-butyl phthalate	EPA 8270C
Cyanide, Total	EPA 9010B	Di-n-octyl phthalate	EPA 8270C
	EPA 9012A		
Hydrogen Ion (pH)	EPA 9040B		
	EPA 9045C	<b>Polychlorinated Biphenyls</b>	
Lead in Dust Wipes	EPA 6010B	PCB-1016	EPA 8082
Lead in Paint	EPA 6010B	PCB-1221	EPA 8082
Oil & Grease Total Recoverable	EPA 9070	PCB-1232	EPA 8082
Specific Conductance	EPA 9050	PCB-1242	EPA 8082
Sulfide (as S)	EPA 9030B	PCB-1248	EPA 8082
	EPA 9034	PCB-1254	EPA 8082
<b>Nitroaromatics and isophorone</b>		PCB-1260	EPA 8082
2,4-Dinitrotoluene	EPA 8270C	<b>Polynuclear Aromatic Hydrocarbons</b>	
2,6-Dinitrotoluene	EPA 8270C	Acenaphthene	EPA 8270C
Isophorone	EPA 8270C	Acenaphthylene	EPA 8270C
Nitrobenzene	EPA 8270C	Anthracene	EPA 8270C
Pyridine	EPA 8270C	Benzo(a)anthracene	EPA 8270C
<b>Nitrosoamines</b>		Benzo(b)fluoranthene	EPA 8270C
		Benzo(ghi)perylene	EPA 8270C
		Benzo(k)fluoranthene	EPA 8270C
		Chrysene	EPA 8270C
N-Nitrosodimethylamine	EPA 8270C		
N-Nitrosodi-n-propylamine	EPA 8270C		

Serial No.: 28567

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Polynuclear Aromatic Hydrocarbons**

Dibenzo(a,e)pyrene	EPA 8270C
Dibenzo(a,h)anthracene	EPA 8270C
Fluoranthene	EPA 8270C
Fluorene	EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 8270C
Naphthalene	EPA 8260B
	EPA 8270C
Phenanthrene	EPA 8270C
Pyrene	EPA 8270C

**Priority Pollutant Phenols**

2,3,4,6 Tetrachlorophenol	EPA 8270C
2,4,5-Trichlorophenol	EPA 8270C
2,4,6-Trichlorophenol	EPA 8270C
2,4-Dichlorophenol	EPA 8270C
2,4-Dimethylphenol	EPA 8270C
2,4-Dinitrophenol	EPA 8270C
2,6-Dichlorophenol	EPA 8270C
2-Chlorophenol	EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 8270C
2-Methylphenol	EPA 8270C
2-Nitrophenol	EPA 8270C
3-Methylphenol	EPA 8270C
4-Chloro-3-methylphenol	EPA 8270C

**Priority Pollutant Phenols**

4-Methylphenol	EPA 8270C
4-Nitrophenol	EPA 8270C
Pentachlorophenol	EPA 8270C
Phenol	EPA 8270C

**Purgeable Aromatics**

1,2,4-Trimethylbenzene	EPA 8260B
1,2-Dichlorobenzene	EPA 8260B
	EPA 8270C
1,3,5-Trimethylbenzene	EPA 8260B
1,3-Dichlorobenzene	EPA 8260B
	EPA 8270C
1,4-Dichlorobenzene	EPA 8260B
	EPA 8270C
2-Chlorotoluene	EPA 8260B
4-Chlorotoluene	EPA 8260B
Benzene	EPA 8260B
Bromobenzene	EPA 8260B
Chlorobenzene	EPA 8260B
Ethyl benzene	EPA 8260B
Isopropylbenzene	EPA 8260B
n-Butylbenzene	EPA 8260B
sec-Butylbenzene	EPA 8260B
Styrene	EPA 8260B

Serial No.: 28567

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. JUAN R. CUBA**  
**ENVIRONMENTAL TESTING LABS INC**  
**208 ROUTE 109**  
**FARMINGDALE, NY 11735**

**NY Lab Id No: 10969**  
**EPA Lab Code: NY00061**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Purgeable Aromatics**

tert-Butylbenzene	EPA 8260B
Toluene	EPA 8260B
Total Xylenes	EPA 8260B

**Purgeable Halocarbons**

1,1,1-Trichloroethane	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 8260B
1,1,2-Trichloroethane	EPA 8260B
1,1-Dichloroethane	EPA 8260B
1,1-Dichloroethene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B
1,2-Dichloroethane	EPA 8260B
1,2-Dichloropropane	EPA 8260B
1,3-Dichloro-2-propanol	EPA 8260B
1,3-Dichloropropane	EPA 8260B
2,2-Dichloropropane	EPA 8260B
2-Chloro-1,3-butadiene (Chloroprene)	EPA 8260B
2-Chloroethylvinyl ether	EPA 8260B
3-Chloropropene (Allyl chloride)	EPA 8260B
Bromochloromethane	EPA 8260B
Bromodichloromethane	EPA 8260B
Bromoform	EPA 8260B
Bromomethane	EPA 8260B

**Purgeable Halocarbons**

Carbon tetrachloride	EPA 8260B
Chloroethane	EPA 8260B
Chloroform	EPA 8260B
Chloromethane	EPA 8260B
cis-1,2-Dichloroethene	EPA 8260B
cis-1,3-Dichloropropene	EPA 8260B
cis-1,4-Dichloro-2-butene	EPA 8260B
Dibromochloromethane	EPA 8260B
Dichlorodifluoromethane	EPA 8260B
Methylene chloride	EPA 8260B
Tetrachloroethene	EPA 8260B
trans-1,2-Dichloroethene	EPA 8260B
trans-1,3-Dichloropropene	EPA 8260B
trans-1,4-Dichloro-2-butene	EPA 8260B
Trichloroethene	EPA 8260B
Trichlorofluoromethane	EPA 8260B
Vinyl chloride	EPA 8260B

**Purgeable Organics**

2-Butanone (Methylethyl ketone)	EPA 8260B
2-Hexanone	EPA 8260B
4-Methyl-2-Pentanone	EPA 8260B
Acetone	EPA 8260B
Carbon Disulfide	EPA 8260B

**Serial No.: 28567**

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735

NY Lab Id No: 10969  
EPA Lab Code: NY00061

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Purgeable Organics**

Vinyl acetate EPA 8260B

**Semi-Volatile Organics**

2-Methylnaphthalene EPA 8270C

Benzoic Acid EPA 8270C

Benzyl alcohol EPA 8270C

**Volatile Chlorinated Organics**

Benzyl chloride EPA 8260B

Serial No.: 28567

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.





**NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER**

*Antonia C. Novello, M.D., M.P.H., Dr.P.H.*



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. JUAN R. CUBA  
ENVIRONMENTAL TESTING LABS INC  
208 ROUTE 109  
FARMINGDALE, NY 11735**

**NY Lab Id No: 10969  
EPA Lab Code: NY00061**

*is hereby APPROVED as an Environmental Laboratory for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved subcategories and/or analytes are listed below:*

**Amines**

**4-Nitroaniline**

**EPA 8270C**

**Serial No.: 28568**

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H.



Expires 12:01 AM April 01, 2007  
Issued April 1, 2006

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

**MR. JUAN R. CUBA**  
**ENVIRONMENTAL TESTING LABS INC**  
**208 ROUTE 109**  
**FARMINGDALE, NY 11735**

**NY Lab Id No: 10969**  
**EPA Lab Code: NY00061**

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards for the category  
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS  
All approved analytes are listed below:*

**Chlorinated Hydrocarbons**

1,2,4-Trichlorobenzene	NIOSH 2, VOL. 2 S133
Hexachlorobutadiene	NIOSH 2, VOL. 5 307

**Fuels**

B.T.U.	ASTM D2015-77
Percent Sulfur	ASTM D4294-98

**Metals I**

Lead, Total	EPA 200.7
-------------	-----------

**Purgeable Aromatics**

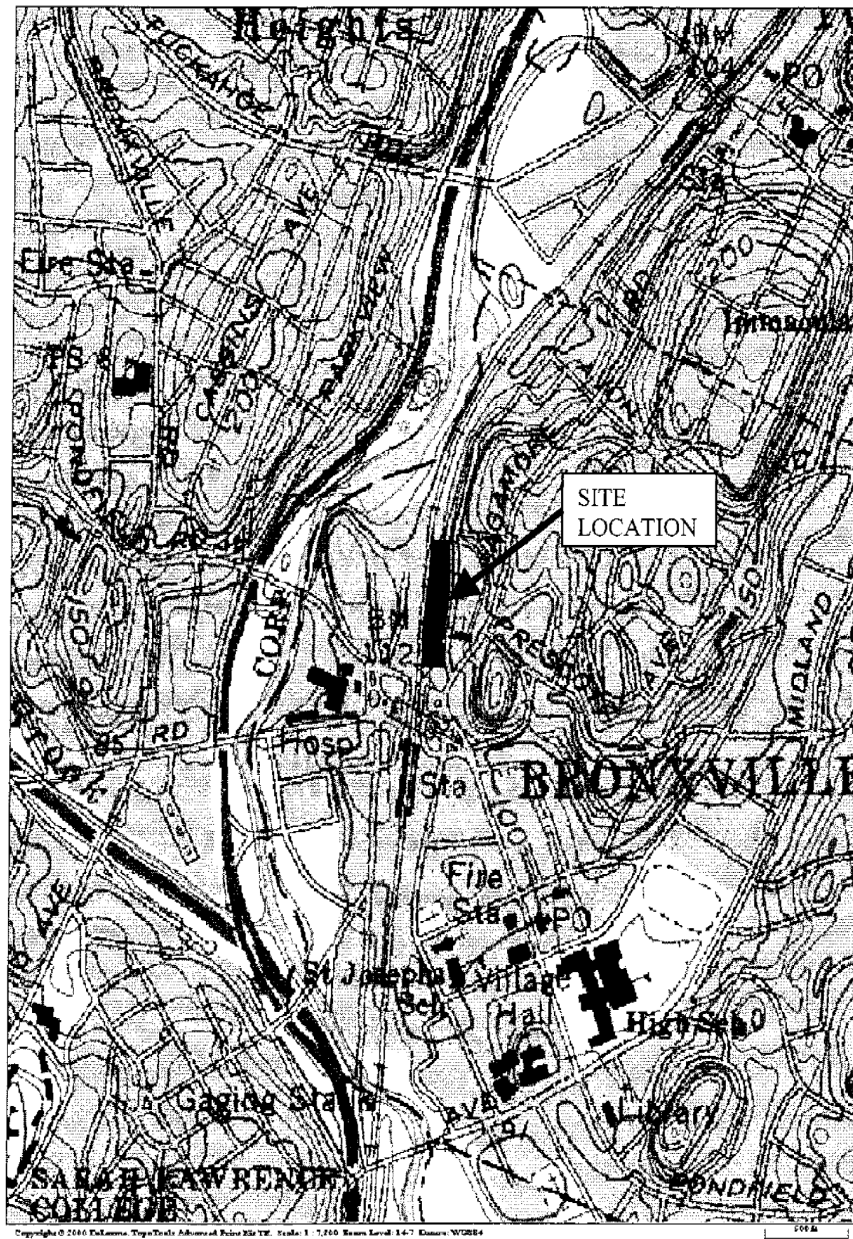
1,2-Dichlorobenzene	NIOSH 2, VOL.3 S135
1,4-Dichlorobenzene	NIOSH 2, VOL. 3 S281
Benzene	NIOSH 2, VOL. 1 127
Chlorobenzene	NIOSH 2, VOL. 2 S133
Ethyl benzene	NIOSH 2, VOL 2 S29
Toluene	NIOSH 2, VOL. 3 S343
Total Xylenes	NIOSH 2, VOL. 3 S318

**Serial No.: 28569**

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (516) 485-5570 to verify laboratory's accreditation status.



USGS TOPOGRAPHIC MAP

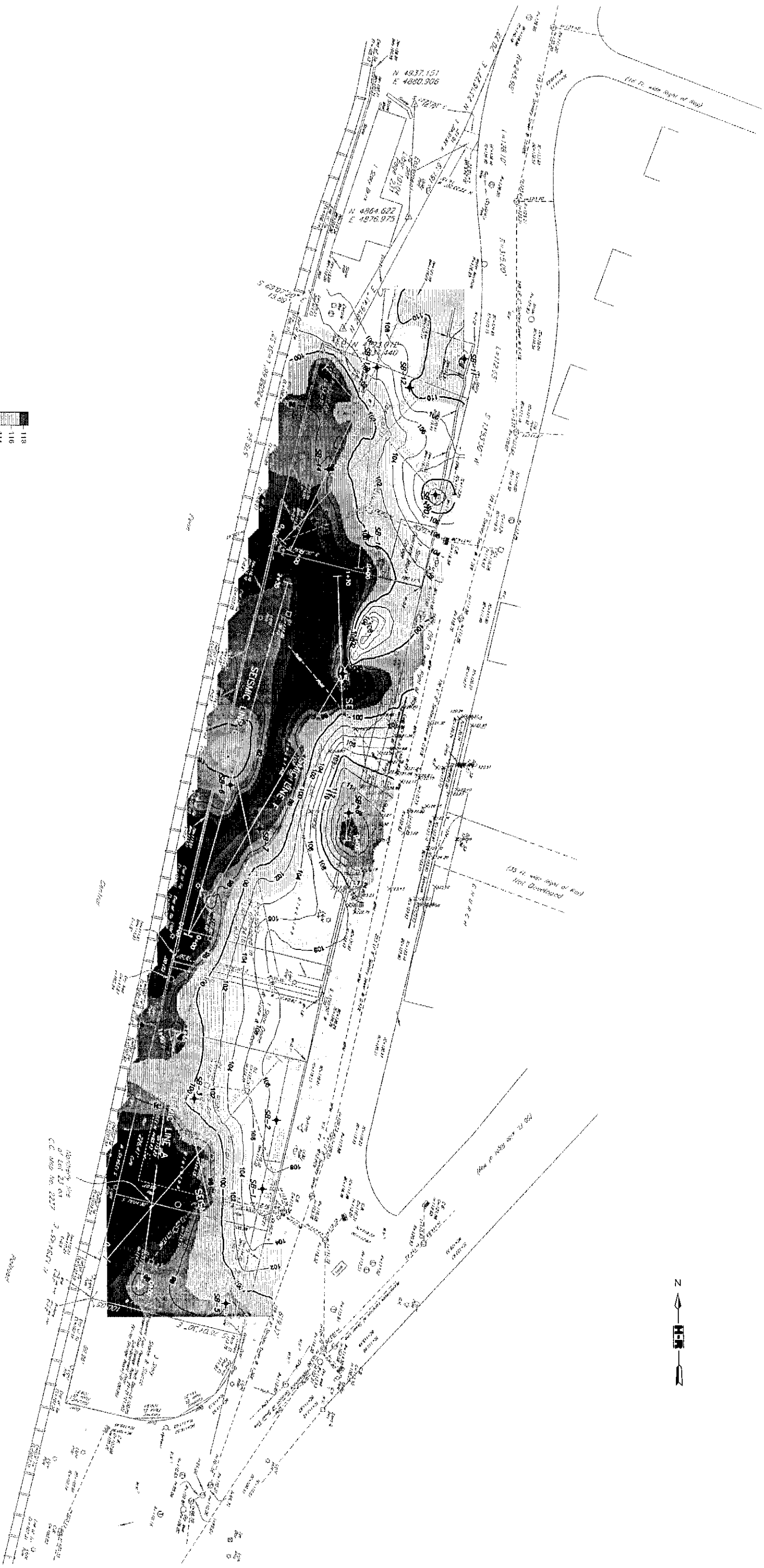


5-27 Kensington Road  
Bronxville, NY 10708

## **APPENDIX I**

### **Geotechnical Borings Location Plan with Bedrock Profile**

#### **Geotechnical Boring Logs**



NOTES:

1. Modified from site plan provided by WCI Communities.
2. Contour Interval = 2 Feet.
3. The bedrock elevations shown on this plot are a non-unique model. The contours represent interpolations based on the available data, including seismic refraction data and outcrop information. The elevations of the bedrock surface at any particular location may differ from that shown. Bedrock depths based on additional data may differ significantly.
4. The results of the seismic refraction survey should not be used to determine bedrock removal quantities.

LEGEND

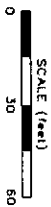
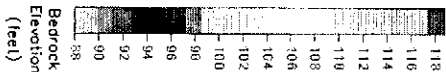
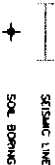
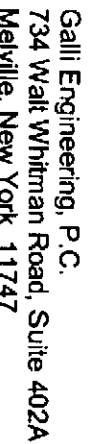


PLATE 1  
BEDROCK TOPOGRAPHY  
THE KENSINGTON ROAD  
3-27 KENSINGTON ROAD  
BRONXVILLE, NEW YORK  
FILE 05J65 MAY, 2006

HAGER-RICHTER GEOSCIENCE, INC.  
SALEM, NEW HAMPSHIRE

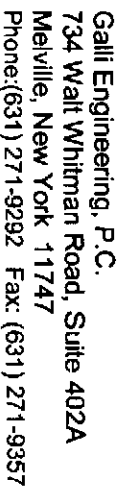


Sheet 1 of 1

Job Number 0221-14-003

Job Number 0221-14-003

[illegible]



Sheet 1 of 1

Job Number 0221-14-003

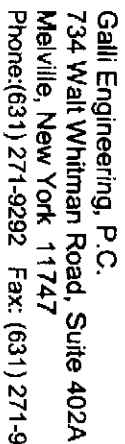
Job Number 0221-14-003

continued on p. 47

---

---

[illegible]



## Sheet 1 of 1

Job Number 0221-14-003

Date \_\_\_\_\_

10/31/03

10/31/03

Logged By: JDF

[illegible]





Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone:(631) 271-9292 Fax: (631) 271-9357

## BORING SB-4

Sheet 1 of 1

Job Number 0221-14-003

Driller: American Standard Testing

Drilling

Date

Drill Method: Core Drill

Started

10/31/03

Sample Method: Spit Spoon

Finished

10/31/03

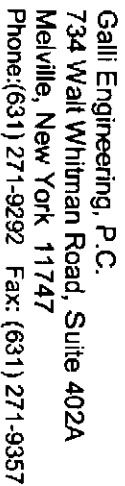
Borehole Diameter: 4"

Water Level: -

Logged By: ADS

Sample No.	Recovery (In.)	Blow Counts	PID (ppm)	Depth (feet)	Graphic Log	Materials Description		
14	8	15	10	0-2		Medium Brown, Slightly Damp, Silty Sand.		
	10	17	41	2-4		Medium Brown, Silty Sand; Concrete Fragments.		
	10	32	52					
8	14	40	8	4-6		Medium Brown, Silty Sand.		
	7							
10	5	3	2	6-8		Medium Brown, Silty Sand.		
	3							
11	3	2		8-10		Medium Brown, Silty Sand. Augered down 5'-0".		
12	7	7		10-12		Medium Brown, Silty Sand.		
	9	14						
17	22	25		12-14		Medium Brown, Silty Sand.		
	32	16						
9.5	23	28		14-16		Medium Brown, Silty Sand.		
	31	31						
18	14	7		16-18		Medium Brown, Silty Sand.		
	17	33						
15	44	53		18-20		Medium Brown, Silty Sand.		
	75	32						
						Drilled to bedrock, and collected a 5'-0" bedrock core sample.		





Sheet 1 of 1

---

Job Number 0221-14-003

Job Number 0221-14-003

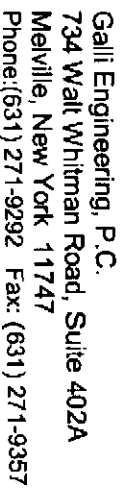
---

10

---

## & ADS

[illegible]



Sheet 1 of 1

---

Job Number 0221-14-003

Job Number 0221-14-003

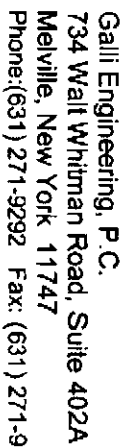
---

---

---

---

- Advanced to a depth of 12' below land surface and met refusal.
- Located concrete slab at depth of ~10'.
- Cored 5' recovered ~2' sample. Core sample consisted of rock with sections of concrete slab.
- Attempted to collect split spoon sample at depth of 17' (beneath core sample). Met refusal.
- Maximum drill depth ~17'-0".



Sheet 1 of 1

Job Number 0221-14-003

Job Number 0221-14-003

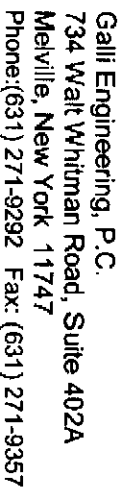
Date \_\_\_\_\_

11/1/03

11/103

Logged By: ADS

[illegible]



Sheet 1 of 1

---

Job Number 0221-14-003

Job Number 0221-14-003

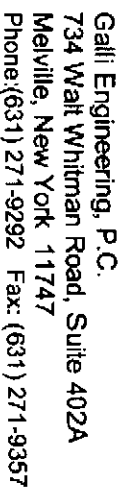
Date \_\_\_\_\_

11/1/03

11/103

Logged By: ADS

[illegible]



Sheet 1 of 1

---

Job Number 0221-14-003

**Job Number 0221-14-003**

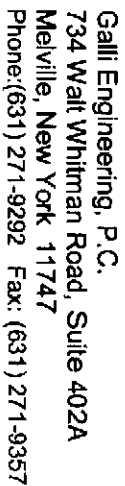
Date \_\_\_\_\_

10/31/03

10/31/03

Logged By: MTC

[illegible]



Sheet 1 of 1

---

Job Number 0221-14-003

**Job Number 0221-14-003**

Date \_\_\_\_\_

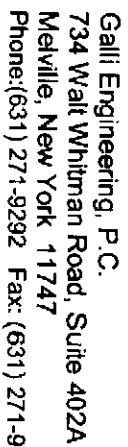
10/31/0

10/31/0

Logged By: MTC

[illegible]





Sheet 1 of 1

Job Number 0221-14-003

Job Number 0221-14-003

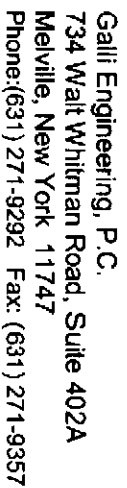
Date \_\_\_\_\_

10/31/03

10/31/03

Logged By: MTC

[illegible]



Sheet 1 of 1

---

Job Number 0221-14-003

**Job Number 0221-14-003**

Date

10/31/03

10/31/03

Logged By: MTC

[illegible]





Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, New York 11747  
Phone:(631) 271-9292 Fax: (631) 271-9357

## BORING SB-15

Sheet 1 of 1

Job Number 0221-14-003

Driller: Aquifer Drilling and Testing					Drilling	Date	
Drill Method: Core Drill					Started	10/31/03	
Sample Method: Spit Spoon					Finished	10/31/03	
Borehole Diameter: 4"					Water Level: -	Logged By: MTC	
Sample No.	Recovery (In.)	Blow Counts		PID (ppm)	Depth (feet)	Graphic Log	Materials Description
	12	6 4	7 7		0-2	Asphalt; Fill Material With Stone Fragments; Coal Fragments; Glass.  Fill Material; Coal Fragments.  Medium to Coarse Brown Sand With Fragments of Coal and Fill.	
	12	5 3	4 2		2-4		
	6	5 2	2 1		4-6		
	6	7 4	6 7		6-8		
	12	10 9	8 8		8- 10	Fine to Coarse Brown Sand With Gravel Fragments and Traces of Silt. Fine Steel Filaments Observed.	
	15	13 8	9 10		10- 12	Medium to Coarse Brown Sand With Gravel and Mica Fragments.	
	16	11 20	11 19		15- 17	Augered to 15'. Fine Brown Sand With Rock Fragments.	
	8	32 50/0"	57		18- 20	Augered to 18'. Fine Brown Sand With Medium Mica Fragments.	
						Bedrock at 19'-0".	



## **APPENDIX M**

### **PHASE II ESA**

**Galli, October 2003**



# **Phase II Environmental Site Assessment**

---

**May 20, 2004**

**Privileged and Confidential Information  
Disclose Only to Authorized Parties**

Conducted at:

**Three Contiguous Parking Lot Parcels  
5 - 27 Kensington Road  
Bronxville, New York 10708**

**Village Of Bronxville Tax Identification Number:  
Section 11, Block 5, Lots 1, 6, 7, 13, 14, 15, 16 and 16A**

Prepared for:

**Spectrum Communities  
115 Stevens Avenue  
Valhalla, New York 10595**

Prepared by:

**Galli Engineering, P.C.  
734 Walt Whitman, Suite 402A  
Melville, NY 11747**





## EXECUTIVE SUMMARY

Galli Engineering, P.C. has prepared this Phase II Environmental Site Assessment (ESA) report on behalf of Spectrum Communities to establish current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property. Based on the analytical data, the following key findings are identified:

- Groundwater samples were collected from the existing monitoring wells, which are located in the easement along Kensington Road and the south parking lot area (former gas station, garage and automotive repair facility). Some VOCs and metals were detected in the groundwater samples above the NYSDEC Ambient Water Quality Standards and Guidance Values. It should be noted that endeavors to install additional down gradient monitoring wells on the subject property were attempted, but attempted soil borings met refusal and groundwater was not encountered. Additionally, groundwater was not encountered in deep structural soil borings performed at the site as part of a geotechnical investigation.
- Concentrations of SVOCs and some metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- Concentrations of some VOCs, SVOCs and metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the central parking lot (former power plant parcel).
- Based on the analytical results from soil samples collected from the central parking lot (former power plant parcel), a full TCLP analysis of soil samples from this area of the subject property was performed. The TCLP analysis indicates that the soils at the locations and depths tested do not meet the criteria for hazardous waste.

The analytical data confirms that the subject property has been impacted by contaminants that are consistent with the past use of the parcels (i.e., former gasoline service station, automotive repair and parking facility at the south parking lot; and a former heat, light and power plant at the central parking lot property). The nature of contaminants detected is not unusual for previously developed urban sites. The analytical data collected as part of this investigation indicates that the impacted soils do not meet the criteria for hazardous waste, and the area of groundwater impact appears to be isolated.

Soil laboratory analytical results are evaluated in accordance with NYSDEC TAGM 4046. The Recommended Soil Cleanup Objectives (RSCO) provided in TAGM #4046 are not regulatory standards and are not strict thresholds that dictate absolute cleanup levels; however, the TAGM #4046, in conjunction with the STARS Memo #1: Petroleum Contaminated Soil Guidance Policy, are the only current guidelines available for soils in the New York State, and as such are used to identify contaminated sites.

The proposed redevelopment of the subject property would require the demolition of existing structures and the removal of soil inundated with rocks and debris from past demolition activities to accommodate a subsurface parking garage. The impacted soil to be excavated for construction activities would require transport to an appropriate disposal or treatment facility. Subsurface construction and demolition debris should be separated from the impacted soils and taken to a recycling or disposal facility, as appropriate.

In the past, the NYSDEC has allowed contaminated soil to stay in place in urban areas provided there are no sensitive receptors on or proximate to the site, and a cap or barrier is used to isolate the remaining impacted soils and provide reliable protection of human health and the environment. Whereas, the subject property is not in a flood prone zone; the groundwater in the subject property area is not a source of potable drinking water; most of the contaminated soil will be excavated and removed from the site; and a cap or barrier with a passive soil gas collection system that vents to the atmosphere can be implemented in conjunction with the construction of the subsurface parking garage; the subject property would be developed with or without engineering or physical controls, as appropriate, depending on residual contaminant levels. Galli Engineering anticipates that the NYSDEC will require additional assessment at the site in the form of a remedial investigation that addresses the feasibility of the remedial option or the submittal of a remedial action plan.

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Purpose.....	1
1.2	Scope of Work .....	2
1.3	Existing Conditions.....	3
1.3.1	<i>Subject Property Description.....</i>	<i>3</i>
1.3.2	<i>Physiography and Topography.....</i>	<i>4</i>
1.3.3	<i>Geology.....</i>	<i>5</i>
1.3.4	<i>Soils .....</i>	<i>5</i>
1.3.5	<i>Surface and Groundwater Resources .....</i>	<i>6</i>
1.4	Background .....	6
<b>2.0</b>	<b>SITE ASSESSMENT METHODOLOGY .....</b>	<b>10</b>
2.1	Ground Penetrating Radar (GPR) .....	10
2.2	Groundwater Sample Collection .....	11
2.2.1	<i>Groundwater Sample Collection for Laboratory Analysis.....</i>	<i>11</i>
2.3	Soil Sample Collection .....	12
2.3.1	<i>Soil Sample Collection for Field Screening.....</i>	<i>13</i>
2.3.2	<i>Soil Sample Selection for Laboratory Analysis .....</i>	<i>13</i>
2.4	Field Screening and Analytical Test Methods.....	14
2.4.1	<i>Groundwater Laboratory Analysis .....</i>	<i>14</i>
2.4.2	<i>Soil Field Screening.....</i>	<i>14</i>
2.4.3	<i>Soil Laboratory Analysis.....</i>	<i>15</i>
<b>3.0</b>	<b>GPR, FIELD SCREENING AND ANALYTICAL RESULTS .....</b>	<b>16</b>
3.1	GPR Results.....	16
3.2	Field Screening Results.....	16
3.3	Laboratory Analytical Results.....	22
3.3.1	<i>Groundwater Analytical Results.....</i>	<i>22</i>
3.3.2	<i>Soil Sample Analytical Results for October 25 and 28, 2003.....</i>	<i>24</i>
3.3.3	<i>Soil Sample TCLP Analytical Results for December 1, 2003 .....</i>	<i>32</i>
<b>4.0</b>	<b>EVALUATION OF RESULTS .....</b>	<b>34</b>
4.1	GPR .....	34

4.2	Field Screening.....	34
4.3	Groundwater Sample.....	34
4.4	Soil Sample .....	35
4.5	TCLP Soil Samples .....	37
5.0	CONCLUSIONS AND RECOMMENDATIONS .....	38

## APPENDICES

Appendix A	Figure 1 - Site Layout Figure with Soil Boring and Monitoring Well Locations
Appendix B	Exhibit 35 Prepared By Henry George Green AIA
Appendix C	GPR Plotted Results for Selected Anomalies
Appendix D	Laboratory Analytical Reports
Appendix E	TCLP Laboratory Analytical Reports

## **1.0 INTRODUCTION**

Galli Engineering, P.C. (Galli) has prepared this Phase II Environmental Site Assessment (ESA) report on behalf of Spectrum Communities, its successors and/or assigns for the property known as the Three Contiguous Parking Lot Parcels located at 5 - 27 Kensington Road in Bronxville, Westchester County, New York, herein identified as the “subject property”. The three subject property parcels are comprised of eight individual lots that have the Village Of Bronxville Tax Identification Numbers, Section 11, Block 5, Lots 1, 6, 7, 13, 14, 15, 16 and 16A.

### **1.1 Purpose**

This Phase II ESA is intended to establish current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property, and to locate potential underground storage tanks, subsurface structures and other buried material on the south and central parking lots. Specifically, the purpose of this investigation is to: 1) collect soil and groundwater samples through the advancement of soil borings, the installation of additional monitoring wells, and the collection of groundwater samples from the available existing monitoring wells (reportedly four existing); and 2) use ground penetration radar (GPR) to identify the location of the known abandoned tank at the south parking lot and any other potential tanks or subsurface structures (e.g., drainage structures, hydraulic automobile lift equipment), and determine the extent of debris buried beneath the south and central parking lots which would require separate disposal from that of contaminated soils.

This Phase II ESA was conducted in accordance with industry practice as defined in the American Society for Testing and Materials (ASTM) Standard: Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E 1903-97). The laboratory results of groundwater samples collected as part of this investigation have been evaluated based on Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR), Chapter X, Part 703, entitled Surface Water And Groundwater Quality Standards And Groundwater Effluent Limitations. The laboratory results of the soil samples collected for full TCLP analyses have been evaluated based on applicable standards and

guidance values promulgated by the NYSDEC in the Spill Technology and Remediation Series (STARS) Memo #1 *"Petroleum-Contaminated Soil Guidance Policy"*. Presented herein are the results of the sampling and analyses performed by Galli Engineering, P.C. as part of the Phase II ESA activities conducted on October 25 and 28, and December 1, 2003.

## **1.2 Scope of Work**

The scope of work developed for the subject property was based on the findings of the Phase I Environmental Site Assessment (ESA), Galli Engineering, P.C., dated October 23, 2003 for the subject property. The Phase I ESA report identified that the subject property has been previously utilized for housing; a heat, electric and power generating plant; a gasoline filling station and automotive repair facility; and for parking facilities. Prior historical uses of the subject property are documented to have impacted the environmental quality of the south and central portions of the subject property. Based on the findings of the Phase I ESA, Galli Engineering recommended additional assessment to further delineate the extent of soil and groundwater contamination at the subject property.

The initial scope of work developed for this Phase II ESA included: 1) the collection of soil samples for subsequent field screening and laboratory analysis from fourteen of the initial twenty-four geotechnical soil borings to be performed at the site; 2) the installation of four monitoring wells down-gradient of the former Gramatan Garage facility and the heat, electric and power generating plant, and one monitoring well at an up-gradient location of the property; 3) collection of groundwater samples from the five newly installed monitoring wells and from existing monitoring wells for subsequent laboratory analysis; and 4) ground penetrating radar (GPR) to produce profiles of subsurface features inclusive of buried objects.

Due to time constraints for completion of field work, repositioning of the geotechnical soil boring locations, and the limited quantity of soil being recovered from some of the geotechnical soil borings (significant fill materials present) the following scope of work was implemented:

- Perform ground penetrating radar (GPR) survey over the south parking lot and central parking lot areas on October 28, 2003;
- Collection of soil samples from the split spoon sampler for field screening with a photo ionization detector (PID) and collection of one soil sample from geotechnical soil boring SB-1 for subsequent laboratory analysis on October 25, 2003;

- Advanced four soil borings associated with the attempted installation of four monitoring wells using a split spoon sampler through a hollow stem auger and collected four soil samples for field screening with a PID and selected one soil sample for subsequent laboratory analysis (no groundwater encountered; therefore no monitoring well installation performed) on October 25, 2003;
- Advance seventeen soil borings using a *Geoprobe* and collected fifty-one soil samples for field screening with a PID and selected twelve soil samples for subsequent laboratory analysis on October 28, 2003;
- Advance ten soil borings using a *Geoprobe* and collected ten soil samples on December 1, 2003 for subsequent laboratory analysis;
- Laboratory analysis of a total of twelve soil samples, collected on October 25 and 28, 2003, for VOC, SVOCs, 8 RCRA metals and PCBs analyses;
- Collection of a set of groundwater samples from each of the two existing monitoring wells, collected on October 28, 2003, for subsequent VOC, SVOCs, 8 RCRA metals and PCBs analyses;
- Laboratory analysis of a total of ten soil samples, collected on December 1, 2003, for subsequent full toxicity characteristic leaching procedure (TCLP) analysis; and
- Prepare a Phase II ESA report describing environmental conditions, field activities, evaluation of findings, and recommendations.

This assessment is limited to the scope of work described above, and to the depths and locations tested as part of this assessment.

## **1.3 Existing Conditions**

### **1.3.1 Subject Property Description**

The subject property, shown on Figure 1 provided in Appendix A, consists of approximately 1.74 acres of land. The subject property is an irregular shaped parcel of land that is oriented in a predominantly north-south direction, and is situated west-northwest of the intersection of Kensington Road and Sagamore Road. The subject property is currently developed with three detached paved parking areas, designated as the south lot, middle lot and north lot for the purposes of this report. The parking lots consist of both metered and permit parking.

A concrete ramp structure with no outlet is located at the south end of the south parking lot and a one-story building of stone and concrete block masonry construction is located at the north end (building segregates the south and middle parking lots). A concrete block wall encloses the west and a portion of the east perimeters of the parking lot. These structures appear to be

the remnants associated with the former two-story parking garage facility (Gramatan Garage). The vehicle entrance for this parking lot is at the southeast corner and this lot approximates street grade.

The south end of the middle parking lot is situated approximately six feet below street grade and an access stairway is located at the southeast corner near the stone and concrete block building at the south end. The vehicle entrance to this lot is located the northeast corner, and the east perimeter of this parking lot is enclosed by a concrete wall or chain link fence. A metal guardrail runs along the west property perimeter. An access way to a concrete platform (associated with Metro North railroad) is located at the southwest corner of this lot. A small strip of land containing bushes and trees separates this parking lot from the north parking lot.

The north parking lot approximates road grade, which has an increasing elevation to the northeast. A small four bay garage structure is located at the southeast corner of the lot. The vehicle entrance to this lot is to the north of the garage structure. The east and north perimeter of this parking lot is enclosed by a low concrete wall. A metal guardrail runs along the west property perimeter.

The one-story building situated between the south and central parking lots was not accessible at the time of the site inspection performed as part of the Phase I ESA, however, the Village of Bronxville made the building accessible on October 31, 2003. For the most part, this building is empty with the exception of several major electrical conduit lines (approximately three inch diameter). Two lines exit the building to the south (under south parking lot - below grade), which are believed to provide power to the off-site medical arts building to the south. Concrete debris was observed on the floor within the building.

### **1.3.2 Physiography and Topography**

The subject property is located within the New England Upland physiographic province. Elevations in the area surrounding the subject property range from approximately 72 to 251 feet above mean sea level (msl).



The United States Geologic Survey (USGS) 7.5 minute series topographic map of Mount Vernon, New York indicates that the topographic gradient for the subject property is generally to the west-southwest. The average elevation of the subject property is approximately 114 feet above msl.

### **1.3.3 Geology**

The Westchester County region is distinguished by complex folded and faulted rocks ranging from pre-Cambrian to Triassic age. Metamorphic gneiss and schist bedrock is dominant in the area, but other bedrock types occur. Bedrock is overlain by unconsolidated deposits of Pleistocene age associated with the Nebraskan, Kansan, Illinoian, and Wisconsinian glacial stages. These deposits consist of a mix of clays, silts, and sands, with boulders.

Site specific geological information was reviewed for the subject property and the depth to bedrock at: 1) the north parking lot property ranged from approximately half a foot below the land surface (bls) at the northeastern perimeter of the property to approximately nineteen feet bls at the southwestern portion of the lot; 2) the central parking lot ranged from approximately one foot bls at the east central perimeter of the lot to approximately twenty-four feet bls on the west central perimeter with the exception of a depression to a depth of 29 feet bls at the north central portion of the lot; and 3) the south parking lot property ranged from approximately six feet bls at the northeastern corner to a depth of approximately twenty-two feet at the west central perimeter of the lot. The overall bedrock trend is from the east-northeast to the west-southwest.

### **1.3.4 Soils**

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) information indicates that the soils on the subject property are classified as Urban Land where the land surface is predominantly covered by roads, building footprints and other impervious surfaces, or for areas that are highly developed. This soil type is described as gravelly to fine sandy loam.

### **1.3.5 Surface and Groundwater Resources**

There are no surface water features located on the subject property lots. The subject property is located within the Bronx River Drainage Basin, and is physically located approximately 2,400 feet to the east-southeast of the Bronx River. No other surface water features are in close proximity to the subject property. The Bronx River is not used as a source of drinking water.

Surficial aquifers are located in the Westchester County area; however, these aquifers are not currently used as a significant source of potable water. Potable drinking water is provided to the Village of Bronxville by New Rochelle Water Company, which obtains potable water via an extensive reservoir and aqueduct system from upstate New York. A total of ten USGS wells are identified within a 1.0-mile radius of the subject property. No Public Water Supply wells are indicated.

## **1.4 Background**

Historical laboratory analysis of soil and groundwater samples collected from the south end of the subject property (former Gramatan Garage) have demonstrated the presence of elevated petroleum constituents. Laboratory analysis of soil samples collected from the area of the former heat, light and power plant have shown the presence of elevated total petroleum hydrocarbons. Both these areas of the subject property have been assigned spill numbers by the New York State Department of Environmental Conservation (NYSDEC).

A summary of the laboratory analytical results from soil samples collected from the above referenced areas of subject property are provided in Table 1.4a. The locations of the soil borings are indicated on Exhibit 35, as prepared by Henry George Green AIA dated June 17, 1992, which is provided in Appendix B.

Table 1.4a. Summary Of The Available Historical Soil Analytical Data							
Date Sample Collected		October 1989	June 1992	June 1992	June 1992	June 1992	June 1992
Compound	RSCO* ug/kg (ppb)	UST Excavation ug/kg	B-1 (12-14 feet) mg/kg	B-3 (6-7 feet) mg/kg	B-4a (1-2 feet) mg/kg	B-7 (10-12 feet) mg/kg	B-11 (15-17 feet) mg/kg
Benzene	60	3,770					
Toluene	1,500	93,300					
Ethylbenzene	5,500	38,900					
p and m -Xylene	1,200	247,000					
o-Xylene	1,200	107,000					
Cumene	-	8,420					
n-Propylbenzene	3,700	21,500					
1,3,5-Trimethylbenzene	3,300	63,000					
Tert-Butylbenzene and 1,2,4-Trimethylbenzene	10,000	287,000					
sec-Butylbenzene	10,000	7,970					
n-Butylbenzene	-	59,700					
Total xylenes	1.2		84				
TPH	-			27,000	6,500	13,000	4,200

RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046

"Determination of Soil Cleanup Objectives and Cleanup Levels". ppb – parts per billion ppm – parts per million

Historical laboratory analysis data for three groundwater samples collected from monitoring wells designated MW-1 through MW-3 during the period from March 1990 through November 1991 is provided in Table 1.4b. The locations of the three monitoring wells are detailed on Exhibit 35 provided in Appendix B.

Table 1.4b Groundwater Monitoring Data - March 1990 Through November 1991						
Well No.	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Total BTEX (ug/L)
		GWS* 1.0 ug/L	GWS* 5.0 ug/L	GWS* 5.0 ug/L	GWS* 5.0 ug/L	-
MW-1	11/6/91	<2,000	<1,000	<1,000	<2,000	<6,000
	7/09/91	<50	<50	530	920	1,450
	4/14/91	2.8	<0.5	<0.5	35	37.8
	1/22/91	<5	<5	32	320	352
	9/28/90	<50	<50	<50	1,100	1,100
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	3/16/90	<50	56	1,030	2,723	3,809
MW-2	11/6/91	3,800	<500	2,500	20,000	26,300
	7/09/91	6,300	13,000	10,000	140,000	169,300
	4/14/91	6,100	11,000	1,700	16,000	34,000
	1/22/91	7,700	12,000	1,300	10,000	31,000
	9/28/90	4,500	4,500	3,800	28,000	52,300
	5/29/90	8,700	16,000	2,200	14,000	40,900
	3/16/90	196	148	<5	770	1,123
MW-3	11/6/91	<4,000	<500	<500	<3,000	<8,000
	7/09/91	<500	<500	<500	<1,500	<3,000
	4/14/91	<0.5	<0.5	<5	<5	ND
	1/22/91	<0.5	<0.5	<0.5	<1	ND
	9/28/90	<2.5	<2.5	<2.5	<5	ND
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	3/16/90	<5	8	166	236	412
Notes: ug/l – micrograms per liter or parts per billion (ppb) ND = None Detected Analyses of 3/16/90 via EPA method 503.1, remaining data via EPA method 602 GWS* - New York State Department of Environmental Conservation Groundwater Quality Standards						

Available historical information for the subject property documents that two 2,000-gallon USTs containing unleaded gasoline; one 3,000-gallon UST containing unleaded gasoline; and one 3,000-gallon UST containing diesel fuel were installed circa 1970. One UST was removed in October 1989; two more of the USTs were removed in April 1991; and one UST was abandoned in place in April 1991.

Additionally, review of historical Sanborn Maps indicate the past use of four gasoline tanks at the south central portion of the south parking lot in the early 1900s, and a filling station facility with three tanks was identified at the southwest corner of the Gramatan Garage facility on the 1950 Sanborn Map. No information pertaining to the removal of these tanks discussed above was available.

## **2.0 SITE ASSESSMENT METHODOLOGY**

The Phase II ESA fieldwork was conducted on October 25 and 28, 2003 and December 1, 2003. This work was conducted in accordance with industry practice as defined in the ASTM Standard: Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E 1903-97).

Galli Engineering contracted Impact Environmental to perform a ground penetrating radar survey of the site. Soil borings were advanced by either American Standard Testing using a drill rig equipped with a hollow stem auger and split spoon for sample collection, or Impact Environmental or Aquifer Drilling and Testing, Inc. by using a *Geoprobe* direct push hydraulic driven probe for sample collection. The following sections provide a description of the fieldwork activities.

### **2.1 Ground Penetrating Radar (GPR)**

Ground penetrating radar (GPR) is a nondestructive geophysical method that produces a continuous cross-sectional profile of subsurface features. GPR profiles are used for evaluating the location and depth of buried objects (pipes, utilities, underground storage tanks (USTs), and drums) and to investigate the presence and continuity of natural subsurface conditions and features. GPR operates by transmitting pulses of radio waves down into the ground through a transducer or antenna. The transmitted radio wave is reflected from various buried objects or distinct contacts between different geologic strata. The antenna then receives the reflected waves and stores them in the digital control unit.

A shallow ground penetrating radar survey was performed at the subject property by a technician who traversed the south and central parking lots in both north-south and east-west directions. The ground penetrating radar antenna (transducer) was pulled along the ground surface at the subject property by a technician, and the reflected signals were recorded at the stationary control unit and recorded. The information is plotted as different color profile bands by the digital control unit. The antenna used was capable of detecting objects to a maximum depth of approximately thirty feet. A total of sixty-seven traverses were performed over the south and central parking lots.

## **2.2 Groundwater Sample Collection**

On October 25, 2003, a total of four soil borings were performed at the subject property in an attempt to install groundwater monitoring wells. The soil borings were advanced using a drill rig equipped with a hollow stem auger and a split spoon. Continuous split spoon samples were collected from each of the soil borings, which were advanced until refusal at bedrock. No groundwater saturated soils were encountered at the soil boring locations. These soil borings were designated SBM-1 through SBM-4 and are shown on the site plan provided in Appendix A.

Galli Engineering representatives attempted to locate the four existing monitoring wells reportedly located at the south end of the subject property on October 25, 2003. Only two of the existing monitoring wells were located. One monitoring well is located in the roadway to the southeast of the subject property, and based on review of the site plan prepared by Henry George Green AIA provided in Appendix B, this monitoring well is designated as MW-1. The other monitoring well is situated in the roadway east of the north end of the south parking lot entrance, and based on review of the above referenced site plan, this monitoring well is designated as MW-2. The manhole covers for the wells were removed and the condition of the wells was examined and the depth of each well was measured. The monitoring wells were of two-inch diameter PVC construction and the casings appeared to be intact. Monitoring well MW-1 extended to a depth of approximately 20.65 feet below the top of the casing and monitoring well MW-2 extended to a depth of approximately 21.07 feet below the top of the well casing. The location of these monitoring wells is shown on the site plan provided in Appendix A.

### **2.2.1 Groundwater Sample Collection for Laboratory Analysis**

On October 28, 2003, a representative of Galli Engineering collected groundwater samples from each of the monitoring wells for subsequent laboratory analysis. The depth to groundwater was measured from the top of the well casing in each of the monitoring wells using a water level meter. The depth to groundwater in monitoring wells MW-1 and MW-2 was 19.20 and 20.17 feet, respectively. After gauging, three volumes of groundwater were purged from each of the wells using a dedicated disposable bailer. Slight petroleum odors were observed during sample collection.

Groundwater samples were collected from each of the monitoring wells using a dedicated disposable teflon bailer. The groundwater samples were transferred into: 1) two clean 40-ml glass vials with Teflon septa; 2) one clean 250-ml plastic container containing nitric acid preservative; and 3) two clean 100-ml amber glass containers. The groundwater samples were designated MW-1 and MW-2 corresponding to the sample collection location.

Each sample jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses. Each groundwater sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative.

### **2.3 Soil Sample Collection**

As part of this assessment, American Standard Testing advanced five soil borings at the subject property on October 25, 2003 by using a drill rig equipped with a hollow stem auger and split spoon for sample collection. These soil borings were advanced until refusal at bedrock and were designated soil borings SB-1 and SBM-1 through SBM-4. On October 28, 2003, a total of seventeen soil borings were advanced at the subject property by Impact Environmental by using a vehicle mounted *Geoprobe* unit equipped with a direct push hydraulic driven probe for sample collection. These soil borings were advanced until refusal of the sampling probe and were designated GSB-1 through GSB-17. On December 1, 2003, a total of ten soil borings were advanced at the subject property by Aquifer Drilling and Testing, Inc. by using a vehicle mounted *Geoprobe* unit equipped with a direct push hydraulic driven probe for sample collection. These soil borings were advanced until refusal of the sampling probe and were designated GSB-18a, and 18 through GSB-26. All the soil boring locations are shown on the site plan provided in Appendix A.

A total of fifty-one soil samples were collected from the thirty-two soil borings for field screening with a photoionization detector (PID) during October 25 and 28, 2003, and nineteen soil samples were collected from the ten soil borings for field screening with the PID on December 1, 2003.



A total of twelve soil samples were selected for subsequent laboratory analysis from the soil borings performed on October 25 and 28, 2003, and ten soil samples were selected from the soil borings performed on December 1, 2003 for subsequent laboratory analysis.

### **2.3.1 Soil Sample Collection for Field Screening**

On October 25 and 28 a representative of Galli Engineering collected a total of fifty-one soil samples, designated field sample numbers FS-1 through FS-51, and on December 1, 2003 a total of nineteen soil samples, designated field sample numbers FS-52 through FS-70. On October 25, 2003, soil samples were collected using a clean split spoon sampling device. Soil samples were transferred from the split spoon sampler using a single-use environmental grade disposable plastic scoop and placed into clean 10-ounce glass jars fitted with aluminum foil caps. On October 28 and December 1, 2003, soil samples were collected using a single-use environmental grade disposable plastic sleeve inserted into the *Geoprobe* macropore soil sample probe. Soil samples were transferred from the plastic sleeve using a single-use environmental grade disposable plastic scoop and placed into clean 10-ounce glass jars fitted with aluminum foil caps. Each jar was labeled with the designated field sample number. The sample jars were then allowed to equilibrate.

### **2.3.2 Soil Sample Selection for Laboratory Analysis**

A representative of Galli Engineering selected a total of twelve soil samples (designated SB-1, SBM-3, GSB-2, GSB-3, GSB-9, and GSB-11 through GSB-17) for subsequent laboratory analysis from the field sampling events on October 25 and 28, 2003. A total of ten soil samples from the field-sampling event on December 1, 2003, were selected for subsequent laboratory analysis. The soil samples for laboratory analysis were selected from depths exhibiting the most elevated PID measurement from each soil boring. The samples were placed into clean 20-ounce and 6-ounce glass jars fitted with Teflon lined caps using a single-use environmental grade disposable plastic scoop.

Each jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses. Each soil sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative.

## **2.4 Field Screening and Analytical Test Methods**

A total of seventy soil samples were collected for field screening with a PID, from which thirty-two soil samples were selected based on field screening measurements and visual inspection for subsequent laboratory analyses.

### **2.4.1 Groundwater Laboratory Analysis**

The groundwater samples collected from the subject property on October 28, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on October 29, 2003. The groundwater samples were analyzed for the presence of volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 624; semi-volatile organic compounds (SVOCs) according to US EPA Method 625; polychlorinated biphenyls (PCBs) according to US EPA method 608; and 8 RCRA metals (except mercury) according to US EPA Method SW6010B; and mercury according to US EPA Method SW7470A.

### **2.4.2 Soil Field Screening**

The soil samples collected for field screening were placed in a sample collection staging area to allow for samples to equilibrate with ambient temperature. The headspace of each of the soil samples was then screened for the presence of volatile organic vapors using a broadband

photoionization detector (PID). The PID was zero calibrated and checked with a known concentration of isobutylene prior to screening soil samples at the subject property.

### **2.4.3 Soil Laboratory Analysis**

The twelve soil samples collected from the subject property on October 25 and 28, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on October 29, 2003. These soil samples were analyzed for the presence of volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471.

The ten soil samples collected from the subject property December 1, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on December 2, 2003. These soil samples were analyzed for full Toxicity Characteristic Leaching Procedure (TCLP) according to US EPA Methods SW8260B (SW1311) for TCLP VOCs; SW8270D (SW1311) for TCLP SVOCs; SW1311/6010B (SW1311) for TCLP arsenic, barium, cadmium, chromium, lead, selenium and silver; SW1311/7471B for TCLP mercury; SW8151A (SW1311) for TCLP herbicides; and SW8081B (SW1311) for TCLP pesticides.

### **3.0 GPR, FIELD SCREENING AND ANALYTICAL RESULTS**

#### **3.1 GPR Results**

The reflected signals from the GPR unit did not indicate any anomalies that would be consistent with the presence of an underground storage tank at either of the parking lots; however, an image taken on the southeast area of the south parking lot shows a rectangular anomaly that could be the abandoned tank encased in a concrete vault (traverse 707). The images for other traverses performed across the south parking lot do not clearly show the subsurface stratum. A concrete slab with wire mesh reinforcement was later identified during the performance of soil borings under a large portion of the south end of the south parking lot. Several east-west traverses across the site showed an elongated anomaly that has a north-south orientation on the western portion of the lot. This anomaly is believed to be an electrical power line that extends from the building at the north end of the lot to the off-site building at the south end of the lot. A traverse performed in an east-west direction at the north end of the site shows changes in the subsurface stratum (traverse 739).

A north-south traverse along the eastern side of the central parking lot did not show any anomalies. A traverse performed in an east-west direction at the north end of the site shows changes in the subsurface stratum (traverse 742). Other traverses across the central parking lot area showed disturbance of the subsurface layers and scattered small anomalies.

The plotted GPR results for several of the traverses are provided in Appendix C.

#### **3.2 Field Screening Results**

The field screening measurements for the seventy soil samples, collected on October 25 and 28, and December 1, 2003 from the subject property, ranged from 0.0 parts per million (ppm) to 145 ppm. The soil boring locations are identified on the site plan provided in Appendix A. Field sample information and field screening results are provided in Table 3.2.

**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-1	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at 6'6"	0 – 2	FS-1	0.0
		2 – 4	FS-2	12.7
		4 – 6'6"	FS-3	22.0
SBM-1	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at 12'8"	0 – 2	FS-4	0.0
		2 – 4	FS-5	0.0
		4 – 6	FS-6	0.5
		6 – 8	FS-7	0.0
		8 – 10	FS-8	0.2
		12 – 12'8"	FS-9	0.0
SBM-2	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at ~12'4"	0 – 2	FS-10	0.0
		2 – 4	FS-11	0.3
		4 – 6	FS-12	0.0
		6 – 8	FS-13	0.0
		8 – 10	FS-14	0.0
		10 – 12	FS-15	0.0
SBM-3	Asphalt; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 9'6"	0 – 2	FS-16	0.0
		2 – 4	FS-17	0.0
		4 – 6	FS-18	68
		6 – 8	FS-19	127
		8 – 9'6"	FS-20	132

**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SBM-4	Asphalt; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 9'6"	0 – 2	FS-21	0.0
		2 – 4	FS-22	2.2
		4 – 6	FS-23	3.8
		6 – 8	FS-24	6.7
		8 – 9	FS-25	10.2
GSB-1	Asphalt; fill material; silty to coarse, brown sand with construction debris fragments; refusal at 4'3"	0 – 4	FS-26	0.0
GSB-2	Asphalt; fill material; silty to coarse, brown-gray sand with construction debris fragments to fine to medium tan sand; refusal at 12'	0 – 4	FS-27	66.2
		4 – 8	FS-28	38.1
		8 - 12	FS-29	6.1
GSB-3	Asphalt; fill material; 4" concrete; silty to coarse, brown sand with rock and construction debris fragments to fine to medium tan sand (loamy); refusal at 10'	0 – 4	FS-30	0.5
		4 – 8	FS-31	61
		8 - 10	FS-32	145
GSB-4	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-
GSB-5	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-
GSB-6	Asphalt; fill material; concrete; refusal a ~ 2'6".	0 – 2'6"	-	-
GSB-7	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-

**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

<b>Soil Boring Designation</b>	<b>Notations</b>	<b>Sample Interval (Ft.)</b>	<b>Field Sample Number</b>	<b>Results (ppm)</b>
GSB-8	Asphalt; fill material; concrete; refusal at ~ 3'	0 - 3	-	-
GSB-9	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at ~ 16'	0 - 4	FS-33	0.0
		4 - 8	FS-34	0.0
		8 - 10	FS-35	0.5
		8 - 14	FS-36	0.9
		14 - 16	FS-37	1.1
GSB-10	Asphalt; fill material; concrete; refusal at ~ 2'6"	0 - 2'6"	-	-
GSB-11	Asphalt; fill material; silty to coarse, brown sand with some rock and construction debris fragments; refusal at 6'; oil stained soil observed and strong petroleum odor noted	0 - 4	FS-38	17
		4 - 6	FS-39	54
GSB-12	Asphalt; fill material; silty to coarse, brown sand with some rock and construction debris fragments; refusal at 7'; oil stained soil observed and strong petroleum odor noted; tar like substance observed	0 - 4	FS-40	12
		4 - 7	FS-41	68.8
GSB-13	Asphalt; concrete; fill material; silty to coarse, brown sand with rock and construction debris fragments; refusal at 8'; slight petroleum odor noted and some tar substance observed	0 - 4	FS-42	7.6
		4 - 8	FS-43	20.8
GSB-14	Asphalt; fill material; silty to coarse, brown to dark brown sand with rock and construction debris fragments; refusal at 6'; slight petroleum odor noted and some tar substance observed	0 - 4	FS-44	15.3
		4 - 6	FS-45	46.9

**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

<b>Soil Boring Designation</b>	<b>Notations</b>	<b>Sample Interval (Ft.)</b>	<b>Field Sample Number</b>	<b>Results (ppm)</b>
GSB-15	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; some tar like substance observed	0 – 4	FS-46	5.4
		4 – 8	FS-47	11.7
GSB-16	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0 – 4	FS-48	56.4
		4 – 8	FS-49	92.7
GSB-17	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at ~ 8'; some tar like substance observed and slight petroleum odor	0 – 4	FS-50	11.5
		4 – 8	FS-51	18.3
GSB-18	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 4'	0-4	FS-52	0.0
GSB-18a	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted some tar like substance observed	0-4	FS-53	11.8
		4-8	FS-54	2.1
GSB-19	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; slight petroleum odor noted	0-4	FS-55	1.3
		4-8	FS-56	1.7



**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

<b>Soil Boring Designation</b>	<b>Notations</b>	<b>Sample Interval (Ft.)</b>	<b>Field Sample Number</b>	<b>Results (Ppm)</b>
GSB-20	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; slight petroleum odor	0-4	FS-57	1.6
		4-8	FS-58	2.0
GSB-21	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted	0-4	FS-59	12.2
		4-8	FS-60	4.6
GSB-22	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'	0-4	FS-61	0.0
		4-8	FS-62	0.0
GSB-23	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'	0-4	FS-63	0.0
		4-8	FS-64	0.2
GSB-24	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted	0-4	FS-65	0.6
		4-8	FS-66	2.2
GSB-25	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0-4	FS-67	98
		4-8	FS-68	102

**TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS**

Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (Ppm)
SB-26	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0-4	FS-69	4.6
		4-8	FS-70	80

### 3.3 Laboratory Analytical Results

The laboratory results for the soil and groundwater samples collected from the subject property on October 25 and 28, and December 1, 2003 are discussed below.

#### 3.3.1 Groundwater Analytical Results

Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals were detected at varying concentrations in the groundwater samples collected from MW-1 and MW-2.

The VOCs detected above the analytical method detection limit in groundwater sample MW-1 consisted of only 1,2,4-Trimethylbenzene; and in groundwater sample MW-2 consisted of ethylbenzene and m,p-Xylene. The m,p-Xylene was detected at a concentration of 8.0 micrograms per liter (ug/L) which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

The only SVOC detected above the analytical method detection limit was bis(2-ethylhexyl)phthalate at a concentration below the NYSDEC Ambient Water Quality Standards and Guidance Values of 21 ug/L in groundwater sample MW-2.

Arsenic was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.019 mg/L and 0.221 mg/L, respectively. The arsenic concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Barium was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.829 mg/L and 2.58 mg/L, respectively. The Barium concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Cadmium was detected in groundwater sample MW-2 at a concentration of 0.145 mg/L, which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Chromium was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.0228 mg/L and 2.01 mg/L, respectively. The Chromium concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Lead was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.0692 mg/L and 7.21 mg/L, respectively. The lead concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Mercury was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.002 mg/L and 0.001 mg/L, respectively. The mercury concentrations in both of the groundwater samples was above the above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Silver was detected in groundwater sample MW-2 at a concentration of 0.792 mg/L, which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

No PCBs were detected in the groundwater samples collected from MW-1 and MW-2.

A summary table of the groundwater analytical data for groundwater samples collected on October 28, 2003 is provided in Table 3.1.1. The laboratory analytical reports are provided in Appendix D.

**Table 3.3.1 Summary of October 28, 2003 Groundwater Analytical Results**

Compounds	NYS Groundwater Quality Standards ug/L	MW-1 ug/L	MW-2 ug/L
<b>VOCs</b>			
1,2,4-Trimethylbenzene	5	2.9	-
Ethylbenzene	5	-	1.6
m,p-Xylene	5	-	<b>8.0</b>
o- Xylene	5	-	0.7J
<b>SVOCs</b>	<b>NYS Groundwater Quality Standards ug/L</b>	<b>MW-1 ug/L</b>	<b>MW-2 ug/L</b>
Bis(2-ethylhexyl)phthalate	50	-	21
<b>8 RCRA Metals</b>	<b>NYS Groundwater Quality Standards mg/L</b>	<b>MW-1 mg/L</b>	<b>MW-2 mg/L</b>
Arsenic	0.025	0.019	<b>0.221</b>
Barium	1.0	0.829	<b>2.58</b>
Cadmium	0.05	-	<b>0.145</b>
Chromium	0.05	0.0228	<b>2.01</b>
Lead	0.025	0.0692	<b>7.21</b>
Mercury	0.0007	<b>0.002</b>	<b>0.001</b>
Selenium	0.01	-	-
Silver	0.05	-	<b>0.792</b>

ug/kg – micrograms per liter      mg/kg – milligrams per liter

\*NYS Ambient Water Quality Standards and Guidance Values

Values in bold exceed the Ambient Water Quality Standards and Guidance Values

### 3.3.2 Soil Sample Analytical Results for October 25 and 28, 2003

Volatile organic compounds (VOCs) were identified in some of the soil samples. VOCs were detected in soil samples GSB-11, GSB-12 and GSB-14 at concentrations below the NYSDEC RSCO. Acetone was detected in soil sample GSB-11 at an elevated concentration of 250 micrograms per kilogram, which is above the New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objectives (RSCO) for acetone; however, this contaminant is believed to be a laboratory impurity.

Semi-volatile organic compounds (VOCs) were identified at varying concentrations in all of the soil samples collected except soil boring SB-9.

Benzo(a)anthracene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,300 ug/kg, 3,800 ug/kg, 750 ug/kg, and 4,000 ug/kg, 1,100 ug/kg, 700 ug/kg, 2,900 ug/kg, 360 ug/kg, 55,000 ug/kg and 820 ug/kg, respectively.

Benzo(a)pyrene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-3, GSB-11 through GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,200 ug/kg, 3,800 ug/kg, 510 ug/kg, 110 ug/kg, 2,500 ug/kg, 9,000 ug/kg, 640 ug/kg, 2,200 ug/kg, 350 ug/kg, 48,000 ug/kg and 720 ug/kg in soil samples SB-1, SBM-3, GSB-2, GSB-3, GSB-11 through GSB-17, respectively. Benzo(b)fluoranthene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11, GSB-12, GSB-14 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 1,400 ug/kg, 5,900 ug/kg, 930 ug/kg, and 2,800 ug/kg, 9,400 ug/kg, 3,000 ug/kg and 66,000 ug/kg, respectively. Benzo(k)fluoranthene was detected in soil samples SBM-3, GSB-11, GSB-12, GSB-14 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 2,200 ug/kg, 1,200 ug/kg, 3,800 ug/kg, 1,200 ug/kg and 24,000 ug/kg, respectively.

Chrysene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-14, GSB-16 and GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,400 ug/kg, 4,700 ug/kg, 810 ug/kg, and 4,300 ug/kg, 13,000 ug/kg, 680 ug/kg, 2,800 ug/kg, 56,000 ug/kg and 790 ug/kg, respectively.

Dibenzo-a,h-anthracene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-14, GSB-16 and GSB-17 above the NYSDEC RSCO at elevated concentrations of 250 ug/kg, 580 ug/kg, 130 ug/kg, and 450 ug/kg, 1,200 ug/kg, 120 ug/kg, 400 ug/kg, 7,200 ug/kg and 120 ug/kg, respectively.

Fluoranthene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 120,000 ug/kg. Indeno(1,2,3-cd)pyrene was detected in soil samples GSB-12 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 4,800 ug/kg and 28,000 ug/kg, respectively. Phenanthrene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 81,000 ug/kg. Pyrene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 96,000 ug/kg.

Arsenic was detected at varying concentrations in all the soil samples; however, Arsenic was detected in soil samples SBM-3, GSB-11 and GSB-12 above the NYSDEC RSCO at elevated concentrations of 14.7 mg/kg, 17.9 mg/kg and 13.6 mg/kg, respectively. Barium was detected in all the soil samples at concentrations below the NYSDEC RSCO. Cadmium was detected at varying concentrations in most of the soil samples; however, Cadmium was detected above the NYSDEC RSCO at concentrations of 2.63 mg/kg and 1.27 mg/kg in soil samples GSB-14 and GSB-16. Chromium was detected at varying concentrations in all of the soil samples; however, chromium was detected in soil sample GSB-15 above the NYSDEC RSCO at a concentration of 64.5 mg/kg.

Lead was detected at varying concentrations in all of the soil samples; however, lead was detected above the NYSDEC RSCO at concentrations of 860 mg/kg in soil sample GSB-16. Mercury was detected at concentrations below the NYSDEC RSCO in soil samples GSB-2, GSB-3 and GSB-15 and at a concentration above the NYSDEC RSCO in soil sample GSB-14 of 0.106 mg/kg. Silver was not detected above the analytical method detection limit in any of the samples collected. .

PCB compounds were detected above the analytical method detection limit in the soil samples SBM-3, GSB-13, GSB-16 and GSB-17. The PCB concentrations detected were below the NYSDEC RSCO.

Some analytes were detected in the soil samples below the analytical method detection limit (quantitation limits). A summary table of the soil analytical data is provided in Table 3.3.2. The laboratory analytical reports are provided in Appendix D.

TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003

Sample Collection Depth Below Land Surface (feet)		4-6	4-6	0-4	2-6	4-8	3-5	4-7	2-4	2-4	2-6	1-5	2-6
VOCs	RSCO ug/kg	SB-1 ug/kg	SBM-3 ug/kg	GSB-2 ug/kg	GSB-3 ug/kg	GSB-9 ug/kg	GSB-11 ug/kg	GSB-12 ug/kg	GSB-13 ug/kg	GSB-14 ug/kg	GSB-15 ug/kg	GSB-16 ug/kg	GSB-17 ug/kg
1,2,4,5-Tetramethylbenzene	-	-	-	-	-	-	-	180	-	-	-	-	-
1,2,4-Trimethylbenzene	10,000	-	-	-	-	-	47	55	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	69	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	69	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-	69	45	-	-	-	-	-
Acetone	200	-	-	-	-	-	250 <sup>†</sup>	-	-	-	-	-	-
Benzene	60	-	-	-	-	-	4.0J	-	-	-	-	-	-
Carbon Disulfide	2,700	-	-	-	-	-	16	-	-	-	-	-	-
Ethylbenzene	5,500	-	-	-	-	-	79	13	-	-	-	-	-
Isopropylbenzene	2,300	-	-	-	-	-	48	13	-	-	-	-	-
m,p- Xylene	1,200	-	-	-	-	-	10J	9J	-	-	-	-	-
Naphthalene (as VOC)	13,000	-	-	-	-	-	44	76	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-	110	50	-	-	-	-	-

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

<b>VOCs Continued</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB-3 ug/kg</b>	<b>GSB-9 ug/kg</b>	<b>GSB-11 ug/kg</b>	<b>GSB-12 ug/kg</b>	<b>GSB-13 ug/kg</b>	<b>GSB-14 ug/kg</b>	<b>GSB-15 ug/kg</b>	<b>GSB-16 ug/kg</b>	<b>GSB-17 ug/kg</b>
n-Propylbenzene	3,700	-	-	-	-	-	76	20	-	-	-	-	-
o-Xylene	1,200	-	-	-	-	-	45	18	-	-	-	-	-
p-Diethylbenzene	-	-	-	-	-	-	-	300	-	-	-	-	-
p-Ethyltoluene		-	-	-	-	-	-	64	-	-	-	-	-
Sec-Butylbenzene	10,000	-	-	-	-	-	73	31	-	-	-	-	-
Tetrachloroethene	1,400	-	-	-	-	-	-	-	-	14	-	-	-
<b>BN/A SVOCs</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB-3 ug/kg</b>	<b>GSB-9 ug/kg</b>	<b>GSB-11 ug/kg</b>	<b>GSB-12 ug/kg</b>	<b>GSB-13 Ug/kg</b>	<b>GSB-14 ug/kg</b>	<b>GSB-15 ug/kg</b>	<b>GSB-16 ug/kg</b>	<b>GSB-17 ug/kg</b>
2,6-Dinitrotoluene	1,000	-	-	-	-	-	-	-	-	120	-	-	-
2-Methylnaphthalene	36,400	260	720	-	-	-	18,000	27,000	-	-	-	930	-
Acenaphthene	50,000	90	310	-	-	-	1,700	7,500	120	310	-	8,600	140
Acenaphthylene	41,000	110	210	150	-	-	-	-	-	-	-	740	-
Anthracene	50,000	350	900	170	-	-	2,200	6,100	240	1,000	85	23,000	320
Benzo(a)Anthracene	224 or MDL	1,300	3,800	750	120	-	4,000	11,000	700	2,900	360	55,000	820



**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

<b>BN/A SVOCs Continued</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB-3 ug/kg</b>	<b>GSB-9 ug/kg</b>	<b>GSB-11 ug/kg</b>	<b>GSB-12 ug/kg</b>	<b>GSB-13 ug/kg</b>	<b>GSB-14 ug/kg</b>	<b>GSB-15 ug/kg</b>	<b>GSB-16 ug/kg</b>	<b>GSB-17 ug/kg</b>
Benzo(a)Pyrene	61 or MDL	1,200	3,800	510	110	-	2,500	9,000	640	2,200	350	48,000	720
Benzo(b)fluoranthene	1,100	1,400	5,900	930	150	-	2,800	9,400	870	3,000	440	66,000	800
Benzo(g,h,i)perylene	50,000	960	2,700	380	92	-	1,400	4,200	380	1,500	250	26,000	400
Benzo(k)fluoranthene	1,100	800	2,200	400	50	-	1,200	3,800	280	1,200	190	24,000	340
Bis(2-ethylhexyl)phthalate	50,000	-	90	-	-	-	870	820	280	100	67	3,900	170
Carbazole	-	210	540	30J	-	-	880	3,000	88	700	-	6,300	110
Chrysene	400	1,400	4,700	810	150	-	4,300	13,000	680	2,800	350	56,000	790
Dibenzo(a,h)anthracene	14	250	580	130	-	-	450	1,200	120	400	-	7,200	120
Dibenzofuran	6,200	120	320	-	-	-	1,100	-	58	180	-	4,200	65
Fluoranthene	50,000	2,500	7,800	1,100	210	-	7,700	25,000	1,500	7,400	780	120,000	1,700
Fluorene	50,000	100	300	-	-	-	2,600	7,500	110	200	-	9,800	140
Indeno(1,2,3-cd)Pyrene	3,200	-	2,900	430	100	-	1,700	4,800	420	1,600	260	28,000	510

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

BN/A SVOCs Continued	RSCO ug/kg	SB-1 ug/kg	SBM-3 ug/kg	GSB-2 ug/kg	GSB-3 ug/kg	GSB-9 ug/kg	GSB-11 ug/kg	GSB-12 ug/kg	GSB-13 ug/kg	GSB-14 ug/kg	GSB-15 ug/kg	GSB-16 ug/kg	GSB-17 ug/kg
Naphthalene	13,000	190	570	-	-	-	5,200	6,100	70	160	-	810	-
N-Nitrosodi-n-propylamine	-	-	-	-	-	-	-	-	84	-	-	-	-
Phenanthrene	50,000	1,600	5,100	320	100	-	11,000	40,000	720	5,600	360	81,000	1,100
Pyrene	50,000	2,300	8,300	1,100	180	-	7,800	24,000	1,300	6,700	720	96,000	1,500
8 RCRA Metals	RSCO mg/kg	SB-1 mg/kg	SBM-3 mg/kg	GSB-2 mg/kg	GSB-3 mg/kg	GSB-9 mg/kg	GSB-11 mg/kg	GSB-12 mg/kg	GSB-13 Mg/kg	GSB-14 mg/kg	GSB-15 mg/kg	GSB-16 mg/kg	GSB-17 mg/kg
Arsenic	7.5 or SB (SB=3-12)	8.68	14.7	3.47	3.26	0.24J	17.9	13.6	7.33	6.79	1.67	8.56	8.13
Barium	300 or SB (SB=15-600)	129	127	72.1	74.9	20.2	79.8	186	101	193	53.8	355	71.0
Cadmium	1 or SB (0.1 -1)	0.285	0.366	0.130J	0.19J	-	0.451	0.331	0.357	2.63	0.12J	1.27	0.21J
Chromium	10.0 or SB (SB=1.4-40)	16.4	19.9	18.7	14.2	8.02	14.8	13.1	22.1	20.3	64.5	19.7	14.2
Lead	* (SB=200-500)	93.3	99.5	40.8	52.2	8.24	113	90.9	66.9	146	242	860	47.1
Mercury	0.1 (SB=0.001-0.2)	-	-	0.0272	0.0604	-	-	-	-	0.106	0.0932	-	-

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

8 RCRA Metals Cont.	RSCO mg/kg	SB-1 mg/kg	SBM-3 mg/kg	GSB-2 mg/kg	GSB-3 mg/kg	GSB-9 mg/kg	GSB-11 mg/kg	GSB-12 mg/kg	GSB-13 Mg/kg	GSB-14 mg/kg	GSB-15 mg/kg	GSB-16 mg/kg	GSB-17 mg/kg
Silver	SB (SB not available)	0.467	-	-	-	-	-	-	-	-	-	0.36J	-
PCBs	RSCO ug/kg	SB-1 ug/kg	SBM-3 ug/kg	GSB-2 ug/kg	GSB-3 ug/kg	GSB-9 ug/kg	GSB-11 ug/kg	GSB-12 ug/kg	GSB-13 ug/kg	GSB-14 ug/kg	GSB-15 ug/kg	GSB-16 ug/kg	GSB-17 ug/kg
Aroclor 1016	1,000 (surface) 10,000 (sub-surface)	-	-	-	-	-	-	-	-	-	-	120	-
Aroclor 1254	1,000 (surface) 10,000 (sub-surface)	60J	120	-	-	-	60J	-	260	-	60J	170	120
Aroclor 1260	1,000 (surface) 10,000 (sub-surface)	-	-	-	-	-	-	-	80J	-	-	50J	-

- Analyte not detected.

ug/kg = micrograms per kilogram

† -Contaminant is believed to be a laboratory impurity.

RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels".

\*Lead levels for metropolitan or suburban areas or near highways range from 200 – 500 ppm

Values in bold exceed the RSCO Values

J – Analyte detected below analytical method detection limit s (quantitation limits).

mg/kg = milligrams per kilogram

SB = site background metal levels for eastern USA in mg/kg

### **3.3.3 Soil Sample TCLP Analytical Results for December 1, 2003**

No TCLP VOCs, SVOCs, pesticides or herbicides were detected in any of in the soil samples collected on December 1, 2003. Some metals were detected in the soil samples below the analytical method detection limit (quantitation limits).

Arsenic was detected in soil sample GSB-26 at a concentration below the Hazardous Waste Regulatory Level (HWRL) for the Toxicity Characteristic for arsenic. Lead was detected in soil samples GSB-18, GSB-18a, GSB-25 and GSB-26 at concentrations below the HWRL for the Toxicity Characteristic for lead.

A summary table of the TCLP soil analytical data is provided in Table 3.3.3. The laboratory analytical reports are provided in Appendix E.

TABLE 3.3.3 Summary TCLP Analytical Results For Soil Samples Collected on December 1, 2003												
Sample Collection Depth Below Land Surface (feet)		4-6	4-6	0-4	2-6	4-8	3-5	4-7	2-4	2-4	2-4	2-6
TCLP Metals		HWRL mg/L	GSB-18 mg/L	GSB-18a mg/L	GSB-19 mg/L	GSB-20 mg/L	GSB-21 mg/L	GSB-22 mg/kg	GSB-23 mg/kg	GSB-24 mg/kg	GSB-25 mg/kg	GSB-26 mg/kg
Arsenic		5.0	-	-	-	-	-	0.012J	0.038J	-	0.046J	0.121
Barium		100.0	0.416J	0.490J	0.558J	0.526J	0.710J	0.761J	0.527J	0.507J	0.590J	0.805J
Cadmium		1.0	0.005J	0.005J	-	-	-	-	0.009J	0.006J	-	-
Chromium		5.0	-	0.013J	-	-	-	-	-	-	0.010J	-
Lead		5.0	0.326	2.164	0.040J	-	0.024J	-	-	0.010J	0.170	0.028
Silver		5.0	0.014J	-	-	-	-	-	-	-	-	-

- Analyte not detected.

J - Analyte detected below analytical method detection limit s (quantitation limits).

mg/L = milligrams per liter

**HWRL - Hazardous Waste Regulatory Levels for Toxicity Characteristic as provided in the NYSDEC Spill Technology and Remediation Series (STARS) Memo #1 "Petroleum-Contaminated Soil Guidance Policy".**

## **4.0 EVALUATION OF RESULTS**

### **4.1 GPR**

The GPR survey indicated the presence of a rectangular anomaly at the southeast portion of the south parking lot that could be the abandoned tank, which may be encased in a concrete vault. Traverses across the central parking lot area showed a disturbance in the subsurface layers and scattered small anomalies, which could be indicative of buried debris on this portion of the subject property. Many of the geoprobe soil borings met refusal, and wood fragments, concrete, brick and other debris were observed in soil samples. Geotechnical core samples show significant presence of concrete.

Due to the extent and type of prior uses of the subject property parcels, these limited anomalies are not unusual and when assessed in conjunction with the extensive and varied soils analysis performed do not appear to pose a significant concern.

### **4.2 Field Screening**

PID readings were measured in field samples collected from the subject property ranging from 0.0 ppm to 145 ppm. The PID is designed to detect volatile organic vapors, and the contaminants detected by the laboratory in the soil samples were primarily semi-volatile organic compounds (SVOCs) and metals. PID information is useful for qualitative screening purposes but is not accurate enough for evaluation with regulatory standards or guidance values.

### **4.3 Groundwater Sample**

The groundwater laboratory analytical results were evaluated in accordance with the New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards and Guidance Values.

Laboratory analysis of groundwater sample MW-1 showed a mercury concentration higher than NYSDEC Ambient Water Quality Standards and Guidance Values, and concentrations of 1,2,4-Trimethylbenzene, arsenic, barium, chromium and lead below the NYSDEC Ambient Water Quality Standards and Guidance Values. Laboratory analysis of groundwater sample MW-2 showed elevated m,p-Xylene, arsenic, barium, cadmium, chromium, lead, mercury and silver concentrations above the NYSDEC Ambient Water Quality Standards and Guidance Values, and concentrations of ethylbenzene and bis(2-ethylhexyl)phthalate below the NYSDEC Ambient Water Quality Standards and Guidance Values.

These monitoring wells are located in the vicinity of the southeast portion of the south parking lot where there has been former USTs and automotive repair work performed. The groundwater in this area has been impacted by VOCs, SVOCs and metals.

#### **4.4 Soil Sample**

The soil laboratory analytical results were evaluated in accordance with the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels".

Soil samples SB-1, GSB-2, GSB-3 and GSB-9 were collected from accessible areas of the south parking lot. No VOCs appear to have impacted soils in this area; however, SVOCs above the NYSDEC RSCO have impacted this area of the subject property. Arsenic, barium, cadmium, chromium, lead and silver are present in this area at concentrations below the NYSDEC RSCO. No PCBs were detected in the locations and depths tested in the south parking lot.

Soil samples SBM-3, GSB-11 through GSB-17 were collected from accessible areas of the central parking lot. Varying concentrations of VOCs were detected in soil samples GS-11 and GSB-12. These two soil samples were collected from the southeast area of the central parking lot.

SVOCs above the NYSDEC RSCO were detected in all the soil samples collected from the central parking lot. Soils in the area of GSB-16 have exhibited a higher degree of SVOC impact versus the remaining areas.

Elevated Arsenic concentrations above the NYSDEC RSCO were detected in soils at locations SBM-3, GSB-11 and GSB-12. Cadmium and mercury concentrations above the NYSDEC RSCO were detected in soils at location GSB-14. Chromium concentrations above the NYSDEC RSCO were detected in soil at location GSB-15. Cadmium and lead concentrations above the NYSDEC RSCO were detected in soils at location GSB-16. Concentrations of arsenic, barium, cadmium, chromium, lead and mercury were also detected below the NYSDEC RSCO in soil samples collected from the central parking lot.

PCBs were detected at concentrations below the NYSDEC RSCO at the locations of soil borings SBM-3, GSB-13, GSB-16 and GSB-17. These soil samples were collected from depths ranging from approximately 4 to 8 feet below grade. The depth to bedrock documented as part of the geotechnical soil borings performed at this area of the subject property ranges from approximately one foot to twenty-nine feet below grade. There is the potential for soils below 8 feet below grade to exhibit increased concentrations of PCBs.

It should also be noted that a dark tar like substance (possibly coal tar) was observed in soil samples obtained from both geoprobe and geotechnical soil borings performed at the central parking lot. Coal tar is a typical residual byproduct from coal gasification, which is a process that was commonly used to generate gas for power and heat in the mid 1800s up to the mid 1900s. Historical data from historic Sanborn Maps indicated that coal piles were maintained at the former power plant facility and the plant operated during the time frame that coal gasification was popular.

Contaminants typically associated with coal gasification include: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, carbazole, chrysene, dibenzofuran, fluoranthene, fluorine, indeno(1,2,3-cd) pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, pyrene, and metals such as Arsenic, Cadmium, Chromium (hexavalent/total), Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc. Many of these contaminants were detected at concentrations above the NYSDEC RSCO in soil samples collected from the central parking lot.



## **4.5 TCLP Soil Samples**

Based on the elevated concentrations of contaminants detected at the subject property, Galli Engineering was concerned that some of the soils, primarily the central parking lot, could be characterized as hazardous for disposal purposes based on the available analytical data and historical use of the site. Therefore additional soil samples were collected for toxicity characteristic leaching procedure (TCLP) analysis to determine legal disposal options.

The TCLP test is one means used to characterize wastes as hazardous or non-hazardous. The TCLP is an extraction and analysis procedure that is designed to simulate the leaching potential of organic and inorganic contaminants present in soil. This methodology was used for a hazardous waste determination at the central portion of the subject property, and based on the TCLP analytical results, the soils at the locations and depths tested on the central portion of the subject property do not meet the criteria of hazardous waste.

Soils in the south parking lot area have impacts associated with concentrations of SVOC and arsenic above the Recommended Soil Cleanup Objectives; however, the concentrations present do not appear to warrant disposal as a hazardous waste.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Galli Engineering, P.C. has prepared this Phase II Environmental Site Assessment (ESA) report on behalf of Spectrum Communities to establish the current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property. Specifically, this report is intended to provide information in terms of the absence or presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), 8 RCRA metals, and polychlorinated biphenyls (PCBs) at the locations and depths tested. Based on the analytical data, the following key findings are identified:

- Groundwater samples were collected from the existing monitoring wells, which are located in the easement along Kensington Road and the south parking lot area (former gas station, garage and automotive repair facility). Some VOCs and metals were detected in the groundwater samples above the NYSDEC Ambient Water Quality Standards and Guidance Values. It should be noted that endeavors to install additional down gradient monitoring wells on the subject property were attempted, but attempted soil borings met refusal and groundwater was not encountered. Additionally, groundwater was not encountered in deep structural soil borings performed at the site as part of a geotechnical investigation.
- Concentrations of SVOCs and some metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- Concentrations of some VOCs, SVOCs and metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the central parking lot (former power plant parcel).
- Based on the analytical results from soil samples collected from the central parking lot (former power plant parcel), a full TCLP analysis of soil samples from this area of the subject property was performed. The TCLP analysis indicates that the soils at the locations and depths tested do not meet the criteria for hazardous waste.

The analytical data confirms that the subject property has been impacted by contaminants that are consistent with the past use of the parcels (i.e., former gasoline service station, automotive repair and parking facility at the south parking lot; and a former heat, light and power plant at the central parking lot property). The nature of contaminants detected is not unusual for previously developed urban sites. The analytical data collected as part of this investigation indicates that the impacted soils do not meet the criteria for hazardous waste, and the area of

groundwater impact appears to be isolated.

Soil laboratory analytical results are evaluated in accordance with NYSDEC TAGM 4046. The Recommended Soil Cleanup Objectives (RSCO) provided in TAGM #4046 are not regulatory standards and are not strict thresholds that dictate absolute cleanup levels; however, the TAGM #4046, in conjunction with the STARS Memo #1: Petroleum Contaminated Soil Guidance Policy, are the only current guidelines available for soils in the New York State, and as such are used to identify contaminated sites.

The proposed redevelopment of the subject property would require the demolition of existing structures and the removal of soil inundated with rocks and debris from past demolition activities to accommodate a subsurface parking garage. The impacted soil to be excavated for construction activities would require transport to an appropriate disposal or treatment facility. Subsurface construction and demolition debris should be separated from the impacted soils and taken to a recycling or disposal facility, as appropriate.

In the past, the NYSDEC has allowed contaminated soil to stay in place in urban areas provided there are no sensitive receptors on or proximate to the site, and a cap or barrier is used to isolate the remaining impacted soils and provide reliable protection of human health and the environment. Whereas, the subject property is not in a flood prone zone; the groundwater in the subject property area is not a source of potable drinking water; most of the contaminated soil will be excavated and removed from the site; and a cap or barrier with a passive soil gas collection system that vents to the atmosphere can be implemented in conjunction with the construction of the subsurface parking garage; the subject property would be developed with or without engineering or physical controls, as appropriate, depending on residual contaminant levels. Galli Engineering anticipates that the NYSDEC will require additional assessment at the site in the form of a remedial investigation that addresses the feasibility of the remedial option or the submittal of a remedial action plan.

**GALLI ENGINEERING, P.C.**

---

Juliana de la Fuente  
Senior Hydrogeologist

---

Date



# **Phase II Environmental Site Assessment**

---

**May 20, 2004**

**Privileged and Confidential Information**

**Disclose Only to Authorized Parties**

Conducted at:

**Three Contiguous Parking Lot Parcels**

**5 - 27 Kensington Road**

**Bronxville, New York 10708**

**Village Of Bronxville Tax Identification Number:**

**Section 11, Block 5, Lots 1, 6, 7, 13, 14, 15, 16 and 16A**

Prepared by:

**Galli Engineering, P.C.**

**734 Walt Whitman, Suite 402A**

**Melville, NY 11747**

## EXECUTIVE SUMMARY

Galli Engineering, P.C. has prepared this Phase II Environmental Site Assessment (ESA) report to establish current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property. Based on the analytical data, the following key findings are identified:

- Groundwater samples were collected from the existing monitoring wells, which are located in the easement along Kensington Road and the south parking lot area (former gas station, garage and automotive repair facility). Some VOCs and metals were detected in the groundwater samples above the NYSDEC Ambient Water Quality Standards and Guidance Values. It should be noted that endeavors to install additional down gradient monitoring wells on the subject property were attempted, but attempted soil borings met refusal and groundwater was not encountered. Additionally, groundwater was not encountered in deep structural soil borings performed at the site as part of a geotechnical investigation.
- Concentrations of SVOCs and some metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- Concentrations of some VOCs, SVOCs and metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the central parking lot (former power plant parcel).
- Based on the analytical results from soil samples collected from the central parking lot (former power plant parcel), a full TCLP analysis of soil samples from this area of the subject property was performed. The TCLP analysis indicates that the soils at the locations and depths tested do not meet the criteria for hazardous waste.

The analytical data confirms that the subject property has been impacted by contaminants that are consistent with the past use of the parcels (i.e., former gasoline service station, automotive repair and parking facility at the south parking lot; and a former heat, light and power plant at the central parking lot property). The nature of contaminants detected is not unusual for previously developed urban sites. The analytical data collected as part of this investigation indicates that the impacted soils do not meet the criteria for hazardous waste, and the area of groundwater impact appears to be isolated.

Soil laboratory analytical results are evaluated in accordance with NYSDEC TAGM 4046. The Recommended Soil Cleanup Objectives (RSCO) provided in TAGM #4046 are not regulatory standards and are not strict thresholds that dictate absolute cleanup levels; however, the TAGM #4046, in conjunction with the STARS Memo #1: Petroleum Contaminated Soil Guidance Policy, are the only current guidelines available for soils in the New York State, and as such are used to identify contaminated sites.

The proposed redevelopment of the subject property would require the demolition of existing structures and the removal of soil inundated with rocks and debris from past demolition activities to accommodate a subsurface parking garage. The impacted soil to be excavated for construction activities would require transport to an appropriate disposal or treatment facility. Subsurface construction and demolition debris should be separated from the impacted soils and taken to a recycling or disposal facility, as appropriate.

In the past, the NYSDEC has allowed contaminated soil to stay in place in urban areas provided there are no sensitive receptors on or proximate to the site, and a cap or barrier is used to isolate the remaining impacted soils and provide reliable protection of human health and the environment. Whereas, the subject property is not in a flood prone zone; the groundwater in the subject property area is not a source of potable drinking water; most of the contaminated soil will be excavated and removed from the site; and a cap or barrier with a passive soil gas collection system that vents to the atmosphere can be implemented in conjunction with the construction of the subsurface parking garage; the subject property would be developed with or without engineering or physical controls, as appropriate, depending on residual contaminant levels. Galli Engineering anticipates that the NYSDEC will require additional assessment at the site in the form of a remedial investigation that addresses the feasibility of the remedial option or the submittal of a remedial action plan.

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Purpose.....	1
1.2	Scope of Work .....	2
1.3	Existing Conditions.....	3
1.3.1	<i>Subject Property Description .....</i>	<i>3</i>
1.3.2	<i>Physiography and Topography.....</i>	<i>4</i>
1.3.3	<i>Geology .....</i>	<i>5</i>
1.3.4	<i>Soils .....</i>	<i>5</i>
1.3.5	<i>Surface and Groundwater Resources .....</i>	<i>5</i>
1.4	Background .....	6
<b>2.0</b>	<b>SITE ASSESSMENT METHODOLOGY.....</b>	<b>10</b>
2.1	Ground Penetrating Radar (GPR).....	10
2.2	Groundwater Sample Collection .....	11
2.2.1	<i>Groundwater Sample Collection for Laboratory Analysis .....</i>	<i>11</i>
2.3	Soil Sample Collection .....	12
2.3.1	<i>Soil Sample Collection for Field Screening.....</i>	<i>13</i>
2.3.2	<i>Soil Sample Selection for Laboratory Analysis .....</i>	<i>13</i>
2.4	Field Screening and Analytical Test Methods.....	14
2.4.1	<i>Groundwater Laboratory Analysis .....</i>	<i>14</i>
2.4.2	<i>Soil Field Screening.....</i>	<i>14</i>
2.4.3	<i>Soil Laboratory Analysis.....</i>	<i>15</i>
<b>3.0</b>	<b>GPR, FIELD SCREENING AND ANALYTICAL RESULTS.....</b>	<b>16</b>
3.1	GPR Results.....	16
3.2	Field Screening Results .....	16
3.3	Laboratory Analytical Results.....	22
3.3.1	<i>Groundwater Analytical Results.....</i>	<i>22</i>
3.3.2	<i>Soil Sample Analytical Results for October 25 and 28, 2003.....</i>	<i>24</i>
3.3.3	<i>Soil Sample TCLP Analytical Results for December 1, 2003 .....</i>	<i>32</i>
<b>4.0</b>	<b>EVALUATION OF RESULTS.....</b>	<b>34</b>
4.1	GPR.....	34

<b>4.2</b>	<b>Field Screening</b> .....	<b>34</b>
<b>4.3</b>	<b>Groundwater Sample</b> .....	<b>34</b>
<b>4.4</b>	<b>Soil Sample</b> .....	<b>35</b>
<b>4.5</b>	<b>TCLP Soil Samples</b> .....	<b>37</b>
<b>5.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>38</b>

## **APPENDICES**

Appendix A	Figure 1 - Site Layout Figure with Soil Boring and Monitoring Well Locations
Appendix B	Exhibit 35 Prepared By Henry George Green AIA
Appendix C	GPR Plotted Results for Selected Anomalies
Appendix D	Laboratory Analytical Reports
Appendix E	TCLP Laboratory Analytical Reports



## **1.0 INTRODUCTION**

Galli Engineering, P.C. (Galli) has prepared this Phase II Environmental Site Assessment (ESA) for the property known as the Three Contiguous Parking Lot Parcels located at 5 - 27 Kensington Road in Bronxville, Westchester County, New York, herein identified as the “subject property”. The three subject property parcels are comprised of eight individual lots that have the Village Of Bronxville Tax Identification Numbers, Section 11, Block 5, Lots 1, 6, 7, 13, 14, 15, 16 and 16A.

### **1.1 Purpose**

This Phase II ESA is intended to establish current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property, and to locate potential underground storage tanks, subsurface structures and other buried material on the south and central parking lots. Specifically, the purpose of this investigation is to: 1) collect soil and groundwater samples through the advancement of soil borings, the installation of additional monitoring wells, and the collection of groundwater samples from the available existing monitoring wells (reportedly four existing); and 2) use ground penetration radar (GPR) to identify the location of the known abandoned tank at the south parking lot and any other potential tanks or subsurface structures (e.g., drainage structures, hydraulic automobile lift equipment), and determine the extent of debris buried beneath the south and central parking lots which would require separate disposal from that of contaminated soils.

This Phase II ESA was conducted in accordance with industry practice as defined in the American Society for Testing and Materials (ASTM) Standard: Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E 1903-97). The laboratory results of groundwater samples collected as part of this investigation have been evaluated based on Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR), Chapter X, Part 703, entitled Surface Water And Groundwater Quality Standards And Groundwater Effluent Limitations. The laboratory results of the soil samples collected for full TCLP analyses have been evaluated based on applicable standards and guidance values promulgated by the NYSDEC in the Spill Technology and Remediation Series

(STARS) Memo #1 *"Petroleum-Contaminated Soil Guidance Policy"*. Presented herein are the results of the sampling and analyses performed by Galli Engineering, P.C. as part of the Phase II ESA activities conducted on October 25 and 28, and December 1, 2003.

## **1.2 Scope of Work**

The scope of work developed for the subject property was based on the findings of the Phase I Environmental Site Assessment (ESA), Galli Engineering, P.C., dated October 23, 2003 for the subject property. The Phase I ESA report identified that the subject property has been previously utilized for housing; a heat, electric and power generating plant; a gasoline filling station and automotive repair facility; and for parking facilities. Prior historical uses of the subject property are documented to have impacted the environmental quality of the south and central portions of the subject property. Based on the findings of the Phase I ESA, Galli Engineering recommended additional assessment to further delineate the extent of soil and groundwater contamination at the subject property.

The initial scope of work developed for this Phase II ESA included: 1) the collection of soil samples for subsequent field screening and laboratory analysis from fourteen of the initial twenty-four geotechnical soil borings to be performed at the site; 2) the installation of four monitoring wells down-gradient of the former Gramatan Garage facility and the heat, electric and power generating plant, and one monitoring well at an up-gradient location of the property; 3) collection of groundwater samples from the five newly installed monitoring wells and from existing monitoring wells for subsequent laboratory analysis; and 4) ground penetrating radar (GPR) to produce profiles of subsurface features inclusive of buried objects.

Due to time constraints for completion of field work, repositioning of the geotechnical soil boring locations, and the limited quantity of soil being recovered from some of the geotechnical soil borings (significant fill materials present) the following scope of work was implemented:

- Perform ground penetrating radar (GPR) survey over the south parking lot and central parking lot areas on October 28, 2003;
- Collection of soil samples from the split spoon sampler for field screening with a photo ionization detector (PID) and collection of one soil sample from geotechnical soil boring SB-1 for subsequent laboratory analysis on October 25, 2003;
- Advanced four soil borings associated with the attempted installation of four monitoring wells using a split spoon sampler through a hollow stem auger and collected four soil

samples for field screening with a PID and selected one soil sample for subsequent laboratory analysis (no groundwater encountered; therefore no monitoring well installation performed) on October 25, 2003;

- Advance seventeen soil borings using a *Geoprobe* and collected fifty-one soil samples for field screening with a PID and selected twelve soil samples for subsequent laboratory analysis on October 28, 2003;
- Advance ten soil borings using a *Geoprobe* and collected ten soil samples on December 1, 2003 for subsequent laboratory analysis;
- Laboratory analysis of a total of twelve soil samples, collected on October 25 and 28, 2003, for VOC, SVOCs, 8 RCRA metals and PCBs analyses;
- Collection of a set of groundwater samples from each of the two existing monitoring wells, collected on October 28, 2003, for subsequent VOC, SVOCs, 8 RCRA metals and PCBs analyses;
- Laboratory analysis of a total of ten soil samples, collected on December 1, 2003, for subsequent full toxicity characteristic leaching procedure (TCLP) analysis; and
- Prepare a Phase II ESA report describing environmental conditions, field activities, evaluation of findings, and recommendations.

This assessment is limited to the scope of work described above, and to the depths and locations tested as part of this assessment.

## **1.3 Existing Conditions**

### **1.3.1 Subject Property Description**

The subject property, shown on Figure 1 provided in Appendix A, consists of approximately 1.74 acres of land. The subject property is an irregular shaped parcel of land that is oriented in a predominantly north-south direction, and is situated west-northwest of the intersection of Kensington Road and Sagamore Road. The subject property is currently developed with three detached paved parking areas, designated as the south lot, middle lot and north lot for the purposes of this report. The parking lots consist of both metered and permit parking.

A concrete ramp structure with no outlet is located at the south end of the south parking lot and a one-story building of stone and concrete block masonry construction is located at the north end (building segregates the south and middle parking lots). A concrete block wall encloses the west and a portion of the east perimeters of the parking lot. These structures appear to be the remnants associated with the former two-story parking garage facility (Gramatan Garage). The vehicle entrance for this parking lot is at the southeast corner and this lot approximates street

grade.

The south end of the middle parking lot is situated approximately six feet below street grade and an access stairway is located at the southeast corner near the stone and concrete block building at the south end. The vehicle entrance to this lot is located the northeast corner, and the east perimeter of this parking lot is enclosed by a concrete wall or chain link fence. A metal guardrail runs along the west property perimeter. An access way to a concrete platform (associated with Metro North railroad) is located at the southwest corner of this lot. A small strip of land containing bushes and trees separates this parking lot from the north parking lot.

The north parking lot approximates road grade, which has an increasing elevation to the northeast. A small four bay garage structure is located at the southeast corner of the lot. The vehicle entrance to this lot is to the north of the garage structure. The east and north perimeter of this parking lot is enclosed by a low concrete wall. A metal guardrail runs along the west property perimeter.

The one-story building situated between the south and central parking lots was not accessible at the time of the site inspection performed as part of the Phase I ESA, however, the Village of Bronxville made the building accessible on October 31, 2003. For the most part, this building is empty with the exception of several major electrical conduit lines (approximately three inch diameter). Two lines exit the building to the south (under south parking lot - below grade), which are believed to provide power to the off-site medical arts building to the south. Concrete debris was observed on the floor within the building.

### **1.3.2 Physiography and Topography**

The subject property is located within the New England Upland physiographic province. Elevations in the area surrounding the subject property range from approximately 72 to 251 feet above mean sea level (msl).

The United States Geologic Survey (USGS) 7.5 minute series topographic map of Mount Vernon, New York indicates that the topographic gradient for the subject property is generally to

the west-southwest. The average elevation of the subject property is approximately 114 feet above msl.

### **1.3.3 Geology**

The Westchester County region is distinguished by complex folded and faulted rocks ranging from pre-Cambrian to Triassic age. Metamorphic gneiss and schist bedrock is dominant in the area, but other bedrock types occur. Bedrock is overlain by unconsolidated deposits of Pleistocene age associated with the Nebraskan, Kansan, Illinoian, and Wisconsinian glacial stages. These deposits consist of a mix of clays, silts, and sands, with boulders.

Site specific geological information was reviewed for the subject property and the depth to bedrock at: 1) the north parking lot property ranged from approximately half a foot below the land surface (bls) at the northeastern perimeter of the property to approximately nineteen feet bls at the southwestern portion of the lot; 2) the central parking lot ranged from approximately one foot bls at the east central perimeter of the lot to approximately twenty-four feet bls on the west central perimeter with the exception of a depression to a depth of 29 feet bls at the north central portion of the lot; and 3) the south parking lot property ranged from approximately six feet bls at the northeastern corner to a depth of approximately twenty-two feet at the west central perimeter of the lot. The over all bedrock trend is from the east-northeast to the west-southwest.

### **1.3.4 Soils**

The United States Department of Agriculture (USDA) Soil Conservation Service (SCS) information indicates that the soils on the subject property are classified as Urban Land where the land surface is predominantly covered by roads, building footprints and other impervious surfaces, or for areas that are highly developed. This soil type is described as gravelly to fine sandy loam.

### **1.3.5 Surface and Groundwater Resources**

There are no surface water features located on the subject property lots. The subject property is located within the Bronx River Drainage Basin, and is physically located approximately 2,400 feet to the east-southeast of the Bronx River. No other surface water features are in close proximity to the subject property. The Bronx River is not used as a source of drinking water.

Surficial aquifers are located in the Westchester County area; however, these aquifers are not currently used as a significant source of potable water. Potable drinking water is provided to the Village of Bronxville by New Rochelle Water Company, which obtains potable water via an extensive reservoir and aqueduct system from upstate New York. A total of ten USGS wells are identified within a 1.0-mile radius of the subject property. No Public Water Supply wells are indicated.

## **1.4 Background**

Historical laboratory analysis of soil and groundwater samples collected from the south end of the subject property (former Gramatan Garage) have demonstrated the presence of elevated petroleum constituents. Laboratory analysis of soil samples collected from the area of the former heat, light and power plant have shown the presence of elevated total petroleum hydrocarbons. Both these areas of the subject property have been assigned spill numbers by the New York State Department of Environmental Conservation (NYSDEC).

A summary of the laboratory analytical results from soil samples collected from the above referenced areas of subject property are provided in Table 1.4a. The locations of the soil borings are indicated on Exhibit 35, as prepared by Henry George Green AIA dated June 17, 1992, which is provided in Appendix B.

Table 1.4a. Summary Of The Available Historical Soil Analytical Data							
Date Sample Collected		October 1989	June 1992	June 1992	June 1992	June 1992	June 1992
Compound	RSCO* ug/kg (ppb)	UST Excavation ug/kg	B-1 (12-14 feet) mg/kg	B-3 (6-7 feet) mg/kg	B-4a (1-2 feet) mg/kg	B-7 (10-12 feet) mg/kg	B-11 (15-17 feet) mg/kg
<b>Benzene</b>	<b>60</b>	<b>3,770</b>					
<b>Toluene</b>	<b>1,500</b>	<b>93,300</b>					
<b>Ethylbenzene</b>	<b>5,500</b>	<b>38,900</b>					
<b>p and m -Xylene</b>	<b>1,200</b>	<b>247,000</b>					
<b>o-Xylene</b>	<b>1,200</b>	<b>107,000</b>					
<b>Cumene</b>	<b>-</b>	<b>8,420</b>					
<b>n-Propylbenzene</b>	<b>3,700</b>	<b>21,500</b>					
<b>1,3,5-Trimethylbenzene</b>	<b>3,300</b>	<b>63,000</b>					
<b>Tert-Butylbenzene and 1,2,4-Trimethylbenzene</b>	<b>10,000</b>	<b>287,000</b>					
<b>sec-Butylbenzene</b>	<b>10,000</b>	<b>7,970</b>					
<b>n-Butylbenzene</b>	<b>-</b>	<b>59,700</b>					
<b>Total xylenes</b>	<b>1.2</b>		<b>84</b>				
<b>TPH</b>	<b>-</b>			<b>27,000</b>	<b>6,500</b>	<b>13,000</b>	<b>4,200</b>

RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046

“Determination of Soil Cleanup Objectives and Cleanup Levels”.

ppb – parts per billion

ppm – parts per million

Historical laboratory analysis data for three groundwater samples collected from monitoring wells designated MW-1 through MW-3 during the period from March 1990 through November 1991 is provided in Table 1.4b. The locations of the three monitoring wells are detailed on Exhibit 35 provided in Appendix B.

Table 1.4b Groundwater Monitoring Data - March 1990 Through November 1991						
Well No.	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Total BTEX (ug/L)
		GWS* 1.0 ug/L	GWS* 5.0 ug/L	GWS* 5.0 ug/L	GWS* 5.0 ug/L	-
MW-1	11/6/91	<2,000	<1,000	<1,000	<2,000	<6,000
	7/09/91	<50	<50	530	920	1,450
	4/14/91	2.8	<0.5	<0.5	35	37.8
	1/22/91	<5	<5	32	320	352
	9/28/90	<50	<50	<50	1,100	1,100
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	3/16/90	<50	56	1,030	2,723	3,809
MW-2	11/6/91	3,800	<500	2,500	20,000	26,300
	7/09/91	6,300	13,000	10,000	140,000	169,300
	4/14/91	6,100	11,000	1,700	16,000	34,000
	1/22/91	7,700	12,000	1,300	10,000	31,000
	9/28/90	4,500	4,500	3,800	28,000	52,300
	5/29/90	8,700	16,000	2,200	14,000	40,900
	3/16/90	196	148	<5	770	1,123
MW-3	11/6/91	<4,000	<500	<500	<3,000	<8,000
	7/09/91	<500	<500	<500	<1,500	<3,000
	4/14/91	<0.5	<0.5	<5	<5	ND
	1/22/91	<0.5	<0.5	<0.5	<1	ND
	9/28/90	<2.5	<2.5	<2.5	<5	ND
	5/29/90	<0.5	<0.5	<0.5	<1	ND
	3/16/90	<5	8	166	236	412
Notes: ug/l – micrograms per liter or parts per billion (ppb) ND = None Detected Analyses of 3/16/90 via EPA method 503.1, remaining data via EPA method 602 GWS* - New York State Department of Environmental Conservation Groundwater Quality Standards						



Available historical information for the subject property documents that two 2,000-gallon USTs containing unleaded gasoline; one 3,000-gallon UST containing unleaded gasoline; and one 3,000-gallon UST containing diesel fuel were installed circa 1970. One UST was removed in October 1989; two more of the USTs were removed in April 1991; and one UST was abandoned in place in April 1991.

Additionally, review of historical Sanborn Maps indicate the past use of four gasoline tanks at the south central portion of the south parking lot in the early 1900s, and a filling station facility with three tanks was identified at the southwest corner of the Gramatan Garage facility on the 1950 Sanborn Map. No information pertaining to the removal of these tanks discussed above was available.

## **2.0 SITE ASSESSMENT METHODOLOGY**

The Phase II ESA fieldwork was conducted on October 25 and 28, 2003 and December 1, 2003. This work was conducted in accordance with industry practice as defined in the ASTM Standard: Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (E 1903-97).

Galli Engineering contracted Impact Environmental to perform a ground penetrating radar survey of the site. Soil borings were advanced by either American Standard Testing using a drill rig equipped with a hollow stem auger and split spoon for sample collection, or Impact Environmental or Aquifer Drilling and Testing, Inc. by using a *Geoprobe* direct push hydraulic driven probe for sample collection. The following sections provide a description of the fieldwork activities.

### **2.1 Ground Penetrating Radar (GPR)**

Ground penetrating radar (GPR) is a nondestructive geophysical method that produces a continuous cross-sectional profile of subsurface features. GPR profiles are used for evaluating the location and depth of buried objects (pipes, utilities, underground storage tanks (USTs), and drums) and to investigate the presence and continuity of natural subsurface conditions and features. GPR operates by transmitting pulses of radio waves down into the ground through a transducer or antenna. The transmitted radio wave is reflected from various buried objects or distinct contacts between different geologic strata. The antenna then receives the reflected waves and stores them in the digital control unit.

A shallow ground penetrating radar survey was performed at the subject property by a technician who traversed the south and central parking lots in both north-south and east-west directions. The ground penetrating radar antenna (transducer) was pulled along the ground surface at the subject property by a technician, and the reflected signals were recorded at the stationary control unit and recorded. The information is plotted as different color profile bands by the digital control unit. The antenna used was capable of detecting objects to a maximum depth of approximately thirty feet. A total of sixty-seven traverses were performed over the south and central parking lots.

## **2.2 Groundwater Sample Collection**

On October 25, 2003, a total of four soil borings were performed at the subject property in an attempt to install groundwater monitoring wells. The soil borings were advanced using a drill rig equipped with a hollow stem auger and a split spoon. Continuous split spoon samples were collected from each of the soil borings, which were advanced until refusal at bedrock. No groundwater saturated soils were encountered at the soil boring locations. These soil borings were designated SBM-1 through SBM-4 and are shown on the site plan provided in Appendix A.

Galli Engineering representatives attempted to locate the four existing monitoring wells reportedly located at the south end of the subject property on October 25, 2003. Only two of the existing monitoring wells were located. One monitoring well is located in the roadway to the southeast of the subject property, and based on review of the site plan prepared by Henry George Green AIA provided in Appendix B, this monitoring well is designated as MW-1. The other monitoring well is situated in the roadway east of the north end of the south parking lot entrance, and based on review of the above referenced site plan, this monitoring well is designated as MW-2. The manhole covers for the wells were removed and the condition of the wells was examined and the depth of each well was measured. The monitoring wells were of two-inch diameter PVC construction and the casings appeared to be intact. Monitoring well MW-1 extended to a depth of approximately 20.65 feet below the top of the casing and monitoring well MW-2 extended to a depth of approximately 21.07 feet below the top of the well casing. The location of these monitoring wells is shown on the site plan provided in Appendix A.

### **2.2.1 Groundwater Sample Collection for Laboratory Analysis**

On October 28, 2003, a representative of Galli Engineering collected groundwater samples from each of the monitoring wells for subsequent laboratory analysis. The depth to groundwater was measured from the top of the well casing in each of the monitoring wells using a water level meter. The depth to groundwater in monitoring wells MW-1 and MW-2 was 19.20 and 20.17 feet, respectively. After gauging, three volumes of groundwater were purged from each of the wells using a dedicated disposable bailer. Slight petroleum odors were observed during sample collection.

Groundwater samples were collected from each of the monitoring wells using a dedicated disposable teflon bailer. The groundwater samples were transferred into: 1) two clean 40-ml glass vials with Teflon septa; 2) one clean 250-ml plastic container containing nitric acid preservative; and 3) two clean 100-ml amber glass containers. The groundwater samples were designated MW-1 and MW-2 corresponding to the sample collection location.

Each sample jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses. Each groundwater sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative.

## **2.3 Soil Sample Collection**

As part of this assessment, American Standard Testing advanced five soil borings at the subject property on October 25, 2003 by using a drill rig equipped with a hollow stem auger and split spoon for sample collection. These soil borings were advanced until refusal at bedrock and were designated soil borings SB-1 and SBM-1 through SBM-4. On October 28, 2003, a total of seventeen soil borings were advanced at the subject property by Impact Environmental by using a vehicle mounted *Geoprobe* unit equipped with a direct push hydraulic driven probe for sample collection. These soil borings were advanced until refusal of the sampling probe and were designated GSB-1 through GSB-17. On December 1, 2003, a total of ten soil borings were advanced at the subject property by Aquifer Drilling and Testing, Inc. by using a vehicle mounted *Geoprobe* unit equipped with a direct push hydraulic driven probe for sample collection. These soil borings were advanced until refusal of the sampling probe and were designated GSB-18a, and 18 through GSB-26. All the soil boring locations are shown on the site plan provided in Appendix A.

A total of fifty-one soil samples were collected from the thirty-two soil borings for field screening with a photoionization detector (PID) during October 25 and 28, 2003, and nineteen soil samples were collected from the ten soil borings for field screening with the PID on December 1, 2003.

A total of twelve soil samples were selected for subsequent laboratory analysis from the soil borings performed on October 25 and 28, 2003, and ten soil samples were selected from the soil borings performed on December 1, 2003 for subsequent laboratory analysis.

### **2.3.1 Soil Sample Collection for Field Screening**

On October 25 and 28 a representative of Galli Engineering collected a total of fifty-one soil samples, designated field sample numbers FS-1 through FS-51, and on December 1, 2003 a total of nineteen soil samples, designated field sample numbers FS-52 through FS-70. On October 25, 2003, soil samples were collected using a clean split spoon sampling device. Soil samples were transferred from the split spoon sampler using a single-use environmental grade disposable plastic scoop and placed into clean 10-ounce glass jars fitted with aluminum foil caps. On October 28 and December 1, 2003, soil samples were collected using a single-use environmental grade disposable plastic sleeve inserted into the *Geoprobe* macropore soil sample probe. Soil samples were transferred from the plastic sleeve using a single-use environmental grade disposable plastic scoop and placed into clean 10-ounce glass jars fitted with aluminum foil caps. Each jar was labeled with the designated field sample number. The sample jars were then allowed to equilibrate.

### **2.3.2 Soil Sample Selection for Laboratory Analysis**

A representative of Galli Engineering selected a total of twelve soil samples (designated SB-1, SBM-3, GSB-2, GSB-3, GSB-9, and GSB-11 through GSB-17) for subsequent laboratory analysis from the field sampling events on October 25 and 28, 2003. A total of ten soil samples from the field-sampling event on December 1, 2003, were selected for subsequent laboratory analysis. The soil samples for laboratory analysis were selected from depths exhibiting the most elevated PID measurement from each soil boring. The samples were placed into clean 20-ounce and 6-ounce glass jars fitted with Teflon lined caps using a single-use environmental grade disposable plastic scoop.

Each jar was then labeled with designated sample identification, date and time of collection, and the requested laboratory analyses. Each soil sample jar was packed in a plastic bag and placed in a secure cooler with separately bagged ice. The samples were then logged on a chain of custody document by sampling personnel, and remained in the custody of Galli Engineering until transport of the samples to the analytical laboratory via hand delivery by a Galli Engineering representative.

## **2.4 Field Screening and Analytical Test Methods**

A total of seventy soil samples were collected for field screening with a PID, from which thirty-two soil samples were selected based on field screening measurements and visual inspection for subsequent laboratory analyses.

### **2.4.1 Groundwater Laboratory Analysis**

The groundwater samples collected from the subject property on October 28, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on October 29, 2003. The groundwater samples were analyzed for the presence of volatile organic compounds (VOCs) according to United States Environmental Protection Agency (US EPA) Method 624; semi-volatile organic compounds (SVOCs) according to US EPA Method 625; polychlorinated biphenyls (PCBs) according to US EPA method 608; and 8 RCRA metals (except mercury) according to US EPA Method SW6010B; and mercury according to US EPA Method SW7470A.

### **2.4.2 Soil Field Screening**

The soil samples collected for field screening were placed in a sample collection staging area to allow for samples to equilibrate with ambient temperature. The headspace of each of the soil samples was then screened for the presence of volatile organic vapors using a broadband

photoionization detector (PID). The PID was zero calibrated and checked with a known concentration of isobutylene prior to screening soil samples at the subject property.

### **2.4.3 Soil Laboratory Analysis**

The twelve soil samples collected from the subject property on October 25 and 28, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on October 29, 2003. These soil samples were analyzed for the presence of volatile organic compounds according to United States Environmental Protection Agency (US EPA) Method 8260; semi-volatile organic compounds (SVOCs) according to US EPA Method 8270; PCBs according to US EPA Method 8082; priority pollutant metals (except mercury) according to US EPA Method 6010; and mercury according to US EPA Method 7470/7471.

The ten soil samples collected from the subject property December 1, 2003 were maintained in a secure refrigerator until hand delivery to American Analytical Laboratories, Inc., a New York State Certified Commercial Laboratory for analysis on December 2, 2003. These soil samples were analyzed for full Toxicity Characteristic Leaching Procedure (TCLP) according to US EPA Methods SW8260B (SW1311) for TCLP VOCs; SW8270D (SW1311) for TCLP SVOCs; SW1311/6010B (SW1311) for TCLP arsenic, barium, cadmium, chromium, lead, selenium and silver; SW1311/7471B for TCLP mercury; SW8151A (SW1311) for TCLP herbicides; and SW8081B (SW1311) for TCLP pesticides.

### **3.0 GPR, FIELD SCREENING AND ANALYTICAL RESULTS**

#### **3.1 GPR Results**

The reflected signals from the GPR unit did not indicate any anomalies that would be consistent with the presence of an underground storage tank at either of the parking lots; however, an image taken on the southeast area of the south parking lot shows a rectangular anomaly that could be the abandoned tank encased in a concrete vault (traverse 707). The images for other traverses performed across the south parking lot do not clearly show the subsurface stratum. A concrete slab with wire mesh reinforcement was later identified during the performance of soil borings under a large portion of the south end of the south parking lot. Several east-west traverses across the site showed an elongated anomaly that has a north-south orientation on the western portion of the lot. This anomaly is believed to be an electrical power line that extends from the building at the north end of the lot to the off-site building at the south end of the lot. A traverse performed in an east-west direction at the north end of the site shows changes in the subsurface stratum (traverse 739).

A north-south traverse along the eastern side of the central parking lot did not show any anomalies. A traverse performed in an east-west direction at the north end of the site shows changes in the subsurface stratum (traverse 742). Other traverses across the central parking lot area showed disturbance of the subsurface layers and scattered small anomalies.

The plotted GPR results for several of the traverses are provided in Appendix C.

#### **3.2 Field Screening Results**

The field screening measurements for the seventy soil samples, collected on October 25 and 28, and December 1, 2003 from the subject property, ranged from 0.0 parts per million (ppm) to 145 ppm. The soil boring locations are identified on the site plan provided in Appendix A. Field sample information and field screening results are provided in Table 3.2.



TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SB-1	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at 6'6"	0 – 2	FS-1	0.0
		2 – 4	FS-2	12.7
		4 – 6'6"	FS-3	22.0
SBM-1	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at 12'8"	0 – 2	FS-4	0.0
		2 – 4	FS-5	0.0
		4 – 6	FS-6	0.5
		6 – 8	FS-7	0.0
		8 – 10	FS-8	0.2
		12 – 12'8"	FS-9	0.0
SBM-2	Asphalt; fill material; silty to coarse brown sand with construction debris fragments; refusal at ~12'4"	0 – 2	FS-10	0.0
		2 – 4	FS-11	0.3
		4 – 6	FS-12	0.0
		6 – 8	FS-13	0.0
		8 – 10	FS-14	0.0
		10 – 12	FS-15	0.0
SBM-3	Asphalt; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 9'6"	0 – 2	FS-16	0.0
		2 – 4	FS-17	0.0
		4 – 6	FS-18	68
		6 – 8	FS-19	127
		8 – 9'6"	FS-20	132

TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
SBM-4	Asphalt; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 9'6"	0 – 2	FS-21	0.0
		2 – 4	FS-22	2.2
		4 – 6	FS-23	3.8
		6 – 8	FS-24	6.7
		8 – 9	FS-25	10.2
GSB-1	Asphalt; fill material; silty to coarse, brown sand with construction debris fragments; refusal at 4'3"	0 – 4	FS-26	0.0
GSB-2	Asphalt; fill material; silty to coarse, brown-gray sand with construction debris fragments to fine to medium tan sand; refusal at 12'	0 – 4	FS-27	66.2
		4 – 8	FS-28	38.1
		8 - 12	FS-29	6.1
GSB-3	Asphalt; fill material; 4" concrete; silty to coarse, brown sand with rock and construction debris fragments to fine to medium tan sand (loamy); refusal at 10'	0 – 4	FS-30	0.5
		4 – 8	FS-31	61
		8 - 10	FS-32	145
GSB-4	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-
GSB-5	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-
GSB-6	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-
GSB-7	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 – 2'6"	-	-

TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
GSB-8	Asphalt; fill material; concrete; refusal a ~ 3'	0 - 3	-	-
GSB-9	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at ~ 16'	0 - 4	FS-33	0.0
		4 - 8	FS-34	0.0
		8 - 10	FS-35	0.5
		8 - 14	FS-36	0.9
		14 - 16	FS-37	1.1
GSB-10	Asphalt; fill material; concrete; refusal a ~ 2'6"	0 - 2'6"	-	-
GSB-11	Asphalt; fill material; silty to coarse, brown sand with some rock and construction debris fragments; refusal at 6'; oil stained soil observed and strong petroleum odor noted	0 - 4	FS-38	17
		4 - 6	FS-39	54
GSB-12	Asphalt; fill material; silty to coarse, brown sand with some rock and construction debris fragments; refusal at 7'; oil stained soil observed and strong petroleum odor noted; tar like substance observed	0 - 4	FS-40	12
		4 - 7	FS-41	68.8
GSB-13	Asphalt; concrete; fill material; silty to coarse, brown sand with rock and construction debris fragments; refusal at 8'; slight petroleum odor noted and some tar substance observed	0 - 4	FS-42	7.6
		4 - 8	FS-43	20.8
GSB-14	Asphalt; fill material; silty to coarse, brown to dark brown sand with rock and construction debris fragments; refusal at 6'; slight petroleum odor noted and some tar substance observed	0 - 4	FS-44	15.3
		4 - 6	FS-45	46.9

TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (ppm)
GSB-15	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; some tar like substance observed	0 – 4	FS-46	5.4
		4 – 8	FS-47	11.7
GSB-16	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0 – 4	FS-48	56.4
		4 – 8	FS-49	92.7
GSB-17	Asphalt; concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at ~ 8'; some tar like substance observed and slight petroleum odor	0 – 4	FS-50	11.5
		4 – 8	FS-51	18.3
GSB-18	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 4'	0-4	FS-52	0.0
GSB-18a	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted some tar like substance observed	0-4	FS-53	11.8
		4-8	FS-54	2.1
GSB-19	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; slight petroleum odor noted	0-4	FS-55	1.3
		4-8	FS-56	1.7

TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (Ppm)
GSB-20	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; slight petroleum odor	0-4	FS-57	1.6
		4-8	FS-58	2.0
GSB-21	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted	0-4	FS-59	12.2
		4-8	FS-60	4.6
GSB-22	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'	0-4	FS-61	0.0
		4-8	FS-62	0.0
GSB-23	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'	0-4	FS-63	0.0
		4-8	FS-64	0.2
GSB-24	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; petroleum odor noted	0-4	FS-65	0.6
		4-8	FS-66	2.2
GSB-25	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0-4	FS-67	98
		4-8	FS-68	102

TABLE 3.2 SUMMARY OF SOIL FIELD SCREENING RESULTS				
Soil Boring Designation	Notations	Sample Interval (Ft.)	Field Sample Number	Results (Ppm)
SB-26	Asphalt; some concrete; fill material; silty to coarse, brown to dark brown sand with construction debris fragments; refusal at 8'; strong petroleum odor noted and significant tar like substance observed	0-4	FS-69	4.6
		4-8	FS-70	80

### 3.3 Laboratory Analytical Results

The laboratory results for the soil and groundwater samples collected from the subject property on October 25 and 28, and December 1, 2003 are discussed below.

#### 3.3.1 Groundwater Analytical Results

Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals were detected at varying concentrations in the groundwater samples collected from MW-1 and MW-2.

The VOCs detected above the analytical method detection limit in groundwater sample MW-1 consisted of only 1,2,4-Trimethylbenzene; and in groundwater sample MW-2 consisted of ethylbenzene and m,p-Xylene. The m,p-Xylene was detected at a concentration of 8.0 micrograms per liter (ug/L) which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

The only SVOC detected above the analytical method detection limit was bis(2-ethylhexyl)phthalate at a concentration below the NYSDEC Ambient Water Quality Standards and Guidance Values of 21 ug/L in groundwater sample MW-2.

Arsenic was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.019 mg/L and 0.221 mg/L, respectively. The arsenic concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Barium was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.829 mg/L and 2.58 mg/L, respectively. The Barium concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Cadmium was detected in groundwater sample MW-2 at a concentration of 0.145 mg/L, which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Chromium was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.0228 mg/L and 2.01 mg/L, respectively. The Chromium concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Lead was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.0692 mg/L and 7.21 mg/L, respectively. The lead concentration detected in groundwater sample MW-2 is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Mercury was detected in groundwater samples MW-1 and MW-2 at concentrations of 0.002 mg/L and 0.001 mg/L, respectively. The mercury concentrations in both of the groundwater samples was above the above the NYSDEC Ambient Water Quality Standards and Guidance Values.

Silver was detected in groundwater sample MW-2 at a concentration of 0.792 mg/L, which is above the NYSDEC Ambient Water Quality Standards and Guidance Values.

No PCBs were detected in the groundwater samples collected from MW-1 and MW-2.

A summary table of the groundwater analytical data for groundwater samples collected on October 28, 2003 is provided in Table 3.1.1. The laboratory analytical reports are provided in Appendix D.

Table 3.3.1 Summary of October 28, 2003 Groundwater Analytical Results			
Compounds	NYS Groundwater Quality Standards ug/L	MW-1 ug/L	MW-2 ug/L
VOCs			
1,2,4-Trimethylbenzene	5	2.9	-
Ethylbenzene	5	-	1.6
m,p-Xylene	5	-	<b>8.0</b>
o- Xylene	5	-	0.7J
SVOCs	NYS Groundwater Quality Standards ug/L	MW-1 ug/L	MW-2 ug/L
Bis(2-ethylhexyl)phthalate	50	-	21
8 RCRA Metals	NYS Groundwater Quality Standards mg/L	MW-1 mg/L	MW-2 mg/L
Arsenic	0.025	0.019	<b>0.221</b>
Barium	1.0	0.829	<b>2.58</b>
Cadmium	0.05	-	<b>0.145</b>
Chromium	0.05	0.0228	<b>2.01</b>
Lead	0.025	0.0692	<b>7.21</b>
Mercury	0.0007	<b>0.002</b>	<b>0.001</b>
Selenium	0.01	-	-
Silver	0.05	-	<b>0.792</b>

ug/kg – micrograms per liter      mg/kg – milligrams per liter

\*NYS Ambient Water Quality Standards and Guidance Values

Values in bold exceed the Ambient Water Quality Standards and Guidance Values

### 3.3.2 Soil Sample Analytical Results for October 25 and 28, 2003

Volatile organic compounds (VOCs) were identified in some of the soil samples. VOCs were detected in soil samples GSB-11, GSB-12 and GSB-14 at concentrations below the NYSDEC RSCO. Acetone was detected in soil sample GSB-11 at an elevated concentration of 250 micrograms per kilogram, which is above the New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objectives (RSCO) for acetone; however, this contaminant is believed to be a laboratory impurity.



Semi-volatile organic compounds (VOCs) were identified at varying concentrations in all of the soil samples collected except soil boring SB-9.

Benzo(a)anthracene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,300 ug/kg, 3,800 ug/kg, 750 ug/kg, and 4,000 ug/kg, 1,100 ug/kg, 700 ug/kg, 2,900 ug/kg, 360 ug/kg, 55,000 ug/kg and 820 ug/kg, respectively.

Benzo(a)pyrene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-3, GSB-11 through GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,200 ug/kg, 3,800 ug/kg, 510 ug/kg, 110 ug/kg, 2,500 ug/kg, 9,000 ug/kg, 640 ug/kg, 2,200 ug/kg, 350 ug/kg, 48,000 ug/kg and 720 ug/kg in soil samples SB-1, SBM-3, GSB-2, GSB-3, GSB-11 through GSB-17, respectively. Benzo(b)fluoranthene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11, GSB-12, GSB-14 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 1,400 ug/kg, 5,900 ug/kg, 930 ug/kg, and 2,800 ug/kg, 9,400 ug/kg, 3,000 ug/kg and 66,000 ug/kg, respectively. Benzo(k)fluoranthene was detected in soil samples SBM-3, GSB-11, GSB-12, GSB-14 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 2,200 ug/kg, 1,200 ug/kg, 3,800 ug/kg, 1,200 ug/kg and 24,000 ug/kg, respectively.

Chrysene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-14, GSB-16 and GSB-17 above the NYSDEC RSCO at elevated concentrations of 1,400 ug/kg, 4,700 ug/kg, 810 ug/kg, and 4,300 ug/kg, 13,000 ug/kg, 680 ug/kg, 2,800 ug/kg, 56,000 ug/kg and 790 ug/kg, respectively.

Dibenzo-a,h-anthracene was detected in soil samples SB-1, SBM-3, GSB-2, GSB-11 through GSB-14, GSB-16 and GSB-17 above the NYSDEC RSCO at elevated concentrations of 250 ug/kg, 580 ug/kg, 130 ug/kg, and 450 ug/kg, 1,200 ug/kg, 120 ug/kg, 400 ug/kg, 7,200 ug/kg and 120 ug/kg, respectively.

Fluoranthene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 120,000 ug/kg. Indeno(1,2,3-cd)pyrene was detected in soil samples GSB-12 and GSB-16 above the NYSDEC RSCO at elevated concentrations of 4,800 ug/kg and 28,000 ug/kg, respectively. Phenanthrene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 81,000 ug/kg. Pyrene was detected in soil sample GSB-16 above the NYSDEC RSCO at an elevated concentration of 96,000 ug/kg.

Arsenic was detected at varying concentrations in all the soil samples; however, Arsenic was detected in soil samples SBM-3, GSB-11 and GSB-12 above the NYSDEC RSCO at elevated concentrations of 14.7 mg/kg, 17.9 mg/kg and 13.6 mg/kg, respectively. Barium was detected in all the soil samples at concentrations below the NYSDEC RSCO. Cadmium was detected at varying concentrations in most of the soil samples; however, Cadmium was detected above the NYSDEC RSCO at concentrations of 2.63 mg/kg and 1.27 mg/kg in soil samples GSB-14 and GSB-16. Chromium was detected at varying concentrations in all of the soil samples; however, chromium was detected in soil sample GSB-15 above the NYSDEC RSCO at a concentration of 64.5 mg/kg.

Lead was detected at varying concentrations in all of the soil samples; however, lead was detected above the NYSDEC RSCO at concentrations of 860 mg/kg in soil sample GSB-16. Mercury was detected at concentrations below the NYSDEC RSCO in soil samples GSB-2, GSB-3 and GSB-15 and at a concentration above the NYSDEC RSCO in soil sample GSB-14 of 0.106 mg/kg. Silver was not detected above the analytical method detection limit in any of the samples collected. .

PCB compounds were detected above the analytical method detection limit in the soil samples SBM-3, GSB-13, GSB-16 and GSB-17. The PCB concentrations detected were below the NYSDEC RSCO.

Some analytes were detected in the soil samples below the analytical method detection limit (quantitation limits). A summary table of the soil analytical data is provided in Table 3.3.2. The laboratory analytical reports are provided in Appendix D.

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

Sample Collection Depth Below Land Surface (feet)		4-6	4-6	0-4	2-6	4-8	3-5	4-7	2-4	2-4	2-6	1-5	2-6
VOCs	RSCO ug/kg	SB-1 ug/kg	SBM-3 ug/kg	GSB-2 ug/kg	GSB -3 ug/kg	GSB -9 ug/kg	GSB -11 ug/kg	GSB -12 ug/kg	GSB -13 ug/kg	GSB -14 ug/kg	GSB -15 ug/kg	GSB -16 ug/kg	GSB -17 ug/kg
1,2,4,5-Tetramethylbenzene	-	-	-	-	-	-	-	180	-	-	-	-	-
1,2,4-Trimethylbenzene	10,000	-	-	-	-	-	47	55	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	69	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	69	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-	69	45	-	-	-	-	-
Acetone	200	-	-	-	-	-	250 <sup>†</sup>	-	-	-	-	-	-
Benzene	60	-	-	-	-	-	4.0J	-	-	-	-	-	-
Carbon Disulfide	2,700	-	-	-	-	-	16	-	-	-	-	-	-
Ethylbenzene	5,500	-	-	-	-	-	79	13	-	-	-	-	-
Isopropylbenzene	2,300	-	-	-	-	-	48	13	-	-	-	-	-
m,p- Xylene	1,200	-	-	-	-	-	10J	9J	-	-	-	-	-
Naphthalene (as VOC)	13,000	-	-	-	-	-	44	76	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-	110	50	-	-	-	-	-

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

<b>VOCs Continued</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB -3 ug/kg</b>	<b>GSB -9 ug/kg</b>	<b>GSB -11 ug/kg</b>	<b>GSB -12 ug/kg</b>	<b>GSB -13 ug/kg</b>	<b>GSB -14 ug/kg</b>	<b>GSB -15 ug/kg</b>	<b>GSB -16 ug/kg</b>	<b>GSB -17 ug/kg</b>
n-Propylbenzene	3,700	-	-	-	-	-	76	20	-	-	-	-	-
o-Xylene	1,200	-	-	-	-	-	45	18	-	-	-	-	-
p-Diethylbenzene	-	-	-	-	-	-	-	300	-	-	-	-	-
p-Ethyltoluene		-	-	-	-	-	-	64	-	-	-	-	-
Sec-Butylbenzene	10,000	-	-	-	-	-	73	31	-	-	-	-	-
Tetrachloroethene	1,400	-	-	-	-	-	-	-	-	14	-	-	-
<b>BNA SVOCs</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB -3 ug/kg</b>	<b>GSB -9 ug/kg</b>	<b>GSB -11 ug/kg</b>	<b>GSB -12 ug/kg</b>	<b>GSB -13 Ug/kg</b>	<b>GSB -14 ug/kg</b>	<b>GSB -15 ug/kg</b>	<b>GSB -16 ug/kg</b>	<b>GSB -17 ug/kg</b>
2,6-Dinitrotoluene	1,000	-	-	-	-	-	-	-	-	120	-	-	-
2-Methylnaphthalene	36,400	260	720	-	-	-	18,000	27,000	-	-	-	930	-
Acenaphthene	50,000	90	310	-	-	-	1,700	7,500	120	310	-	8,600	140
Acenaphthylene	41,000	110	210	150	-	-	-	-	-	-	-	740	-
Anthracene	50,000	350	900	170	-	-	2,200	6,100	240	1,000	85	23,000	320
Benzo(a)Anthracene	224 or MDL	<b>1,300</b>	<b>3,800</b>	<b>750</b>	120	-	<b>4,000</b>	<b>11,000</b>	<b>700</b>	<b>2,900</b>	<b>360</b>	<b>55,000</b>	<b>820</b>

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

<b>BN/A SVOCs Continued</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB -3 ug/kg</b>	<b>GSB -9 ug/kg</b>	<b>GSB -11 ug/kg</b>	<b>GSB -12 ug/kg</b>	<b>GSB -13 ug/kg</b>	<b>GSB -14 ug/kg</b>	<b>GSB -15 ug/kg</b>	<b>GSB -16 ug/kg</b>	<b>GSB -17 ug/kg</b>
Benzo(a)Pyrene	61 or MDL	<b>1,200</b>	<b>3,800</b>	<b>510</b>	<b>110</b>	-	<b>2,500</b>	<b>9,000</b>	<b>640</b>	<b>2,200</b>	<b>350</b>	<b>48,000</b>	<b>720</b>
Benzo(b)flouranthene	1,100	<b>1,400</b>	<b>5,900</b>	<b>930</b>	150	-	<b>2,800</b>	<b>9,400</b>	870	<b>3,000</b>	440	<b>66,000</b>	800
Benzo(g,h,i)perylene	50,000	960	2,700	380	92	-	1,400	4,200	380	1,500	250	26,000	400
Benzo(k)flouranthene	1,100	800	<b>2,200</b>	400	50	-	<b>1,200</b>	<b>3,800</b>	280	<b>1,200</b>	190	<b>24,000</b>	340
Bis(2-ethylhexyl)phthalate	50,000	-	90	-	-	-	870	820	280	100	67	3,900	170
Carbazole	-	210	540	30J	-	-	880	3,000	88	700	-	6,300	110
Chrysene	400	<b>1,400</b>	<b>4,700</b>	<b>810</b>	150	-	<b>4,300</b>	<b>13,000</b>	<b>680</b>	<b>2,800</b>	350	<b>56,000</b>	<b>790</b>
Dibenzo(a,h)anthracene	14	<b>250</b>	<b>580</b>	<b>130</b>	-	-	<b>450</b>	<b>1,200</b>	<b>120</b>	<b>400</b>	-	<b>7,200</b>	<b>120</b>
Dibenzofuran	6,200	120	320	-	-	-	1,100	-	58	180	-	4,200	65
Fluoranthene	50,000	2,500	7,800	1,100	210	-	7,700	25,000	1,500	7,400	780	<b>120,000</b>	1,700
Fluorene	50,000	100	300	-	-	-	2,600	7,500	110	200	-	9,800	140
Indeno(1,2,3-cd)Pyrene	3,200	-	2,900	430	100	-	1,700	<b>4,800</b>	420	1,600	260	<b>28,000</b>	510

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

<b>BN/A SVOCs Continued</b>	<b>RSCO ug/kg</b>	<b>SB-1 ug/kg</b>	<b>SBM-3 ug/kg</b>	<b>GSB-2 ug/kg</b>	<b>GSB -3 ug/kg</b>	<b>GSB -9 ug/kg</b>	<b>GSB -11 ug/kg</b>	<b>GSB -12 ug/kg</b>	<b>GSB -13 ug/kg</b>	<b>GSB -14 ug/kg</b>	<b>GSB -15 ug/kg</b>	<b>GSB -16 ug/kg</b>	<b>GSB -17 ug/kg</b>
Naphthalene	13,000	190	570	-	-	-	5,200	6,100	70	160	-	810	-
N-Nitrosodi-n-propylamine	-	-	-	-	-	-	-	-	84	-	-	-	-
Phenanthrene	50,000	1,600	5,100	320	100	-	11,000	40,000	720	5,600	360	<b>81,000</b>	1,100
Pyrene	50,000	2,300	8,300	1,100	180	-	7,800	24,000	1,300	6,700	720	<b>96,000</b>	1,500
<b>8 RCRA Metals</b>	<b>RSCO mg/kg</b>	<b>SB-1 mg/kg</b>	<b>SBM-3 mg/kg</b>	<b>GSB-2 mg/kg</b>	<b>GSB -3 mg/kg</b>	<b>GSB -9 mg/kg</b>	<b>GSB -11 mg/kg</b>	<b>GSB -12 mg/kg</b>	<b>GSB -13 Mg/kg</b>	<b>GSB -14 mg/kg</b>	<b>GSB -15 mg/kg</b>	<b>GSB -16 mg/kg</b>	<b>GSB -17 mg/kg</b>
Arsenic	7.5 or SB (SB=3-12)	8.68	<b>14.7</b>	3.47	3.26	0.24J	<b>17.9</b>	<b>13.6</b>	7.33	6.79	1.67	8.56	8.13
Barium	300 or SB (SB=15-600)	129	127	72.1	74.9	20.2	79.8	186	101	193	53.8	355	71.0
Cadmium	1 or SB (0.1 –1)	0.285	0.366	0.130J	0.19J	-	0.451	0.331	0.357	<b>2.63</b>	0.12J	<b>1.27</b>	0.21J
Chromium	10.0 or SB (SB=1.4-40)	16.4	19.9	18.7	14.2	8.02	14.8	13.1	22.1	20.3	<b>64.5</b>	19.7	14.2
Lead	* (SB=200-500)	93.3	99.5	40.8	52.2	8.24	113	90.9	66.9	146	242	<b>860</b>	47.1
Mercury	0.1 (SB=0.001-0.2)	-	-	0.0272	0.0604	-	-	-	-	<b>0.106</b>	0.0932	-	-

**TABLE 3.3.2 Summary Analytical Results For Soil Samples Collected on October 25 and 28, 2003**

8 RCRA Metals Cont.	RSCO mg/kg	SB-1 mg/kg	SBM-3 mg/kg	GSB-2 mg/kg	GSB -3 mg/kg	GSB -9 mg/kg	GSB -11 mg/kg	GSB -12 mg/kg	GSB -13 Mg/kg	GSB -14 mg/kg	GSB -15 mg/kg	GSB -16 mg/kg	GSB -17 mg/kg
Silver	SB (SB not available)	0.467	-	-	-	-	-	-	-	-	-	0.36J	-
PCBs	RSCO ug/kg	SB-1 ug/kg	SBM-3 ug/kg	GSB-2 ug/kg	GSB -3 ug/kg	GSB -9 ug/kg	GSB -11 ug/kg	GSB -12 ug/kg	GSB -13 ug/kg	GSB -14 ug/kg	GSB -15 ug/kg	GSB -16 ug/kg	GSB -17 ug/kg
Aroclor 1016	1,000 (surface) 10,000 (sub-surface)	-	-	-	-	-	-	-	-	-	-	120	-
Aroclor 1254	1,000 (surface) 10,000 (sub-surface)	60J	120	-	-	-	60J	-	260	-	60J	170	120
Aroclor 1260	1,000 (surface) 10,000 (sub-surface)	-	-	-	-	-	-	-	80J	-	-	50J	-

- Analyte not detected.

J – Analyte detected below analytical method detection limit s (quantitation limits).

ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

SB = site background metal levels for eastern USA in mg/kg

† -Contaminant is believed to be a laboratory impurity.

RSCO = Recommended Soil Cleanup Objectives pursuant to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels".

† New York State background metal levels in mg/kg.

\*Lead levels for metropolitan or suburban areas or near highways range from 200 – 500 ppm

Values in bold exceed the RSCO Values

### **3.3.3 Soil Sample TCLP Analytical Results for December 1, 2003**

No TCLP VOCs, SVOCs, pesticides or herbicides were detected in any of in the soil samples collected on December 1, 2003. Some metals were detected in the soil samples below the analytical method detection limit (quantitation limits).

Arsenic was detected in soil sample GSB-26 at a concentration below the Hazardous Waste Regulatory Level (HWRL) for the Toxicity Characteristic for arsenic. Lead was detected in soil samples GSB-18, GSB-18a, GSB-25 and GSB-26 at concentrations below the HWRL for the Toxicity Characteristic for lead.

A summary table of the TCLP soil analytical data is provided in Table 3.3.3. The laboratory analytical reports are provided in Appendix E.



TABLE 3.3.3 Summary TCLP Analytical Results For Soil Samples Collected on December 1, 2003											
Sample Collection Depth Below Land Surface (feet)		4-6	4-6	0-4	2-6	4-8	3-5	4-7	2-4	2-4	2-6
TCLP Metals	HWRL mg/L	GSB-18 mg/L	GSB-18a mg/L	GSB-19 mg/L	GSB-20 mg/L	GSB-21 mg/L	GSB-22 mg/kg	GSB-23 mg/kg	GSB-24 mg/kg	GSB-25 mg/kg	GSB-26 mg/kg
Arsenic	5.0	-	-	-	-	-	0.012J	0.038J	-	0.046J	0.121
Barium	100.0	0.416J	0.490J	0.558J	0.526J	0.710J	0.761J	0.527J	0.507J	0.590J	0.805J
Cadmium	1.0	0.005J	0.005J	-	-	-	-	0.009J	0.006J	-	-
Chromium	5.0	-	0.013J	-	-	-	-	-	-	0.010J	-
Lead	5.0	0.326	2.164	0.040J	-	0.024J	-	-	0.010J	0.170	0.028
Silver	5.0	0.014J	-	-	-	-	-	-	-	-	-

- Analyte not detected.

J – Analyte detected below analytical method detection limit s (quantitation limits).

mg/L = milligrams per liter

**HWRL – Hazardous Waste Regulatory Levels for Toxicity Characteristic as provided in the NYSDEC Spill Technology and Remediation Series (STARS)**

Memo #1 "Petroleum-Contaminated Soil Guidance Policy".

## **4.0 EVALUATION OF RESULTS**

### **4.1 GPR**

The GPR survey indicated the presence of a rectangular anomaly at the southeast portion of the south parking lot that could be the abandoned tank, which may be encased in a concrete vault. Traverses across the central parking lot area showed a disturbance in the subsurface layers and scattered small anomalies, which could be indicative of buried debris on this portion of the subject property. Many of the geoprobe soil borings met refusal, and wood fragments, concrete, brick and other debris were observed in soil samples. Geotechnical core samples show significant presence of concrete.

Due to the extent and type of prior uses of the subject property parcels, these limited anomalies are not unusual and when assessed in conjunction with the extensive and varied soils analysis performed do not appear to pose a significant concern.

### **4.2 Field Screening**

PID readings were measured in field samples collected from the subject property ranging from 0.0 ppm to 145 ppm. The PID is designed to detect volatile organic vapors, and the contaminants detected by the laboratory in the soil samples were primarily semi-volatile organic compounds (SVOCs) and metals. PID information is useful for qualitative screening purposes but is not accurate enough for evaluation with regulatory standards or guidance values.

### **4.3 Groundwater Sample**

The groundwater laboratory analytical results were evaluated in accordance with the New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards and Guidance Values.

Laboratory analysis of groundwater sample MW-1 showed a mercury concentration higher than NYSDEC Ambient Water Quality Standards and Guidance Values, and concentrations of 1,2,4-Trimethylbenzene, arsenic, barium, chromium and lead below the NYSDEC Ambient Water Quality Standards and Guidance Values. Laboratory analysis of groundwater sample MW-2 showed elevated m,p-Xylene, arsenic, barium, cadmium, chromium, lead, mercury and silver concentrations above the NYSDEC Ambient Water Quality Standards and Guidance Values, and concentrations of ethylbenzene and bis(2-ethylhexyl)phthalate below the NYSDEC Ambient Water Quality Standards and Guidance Values.

These monitoring wells are located in the vicinity of the southeast portion of the south parking lot where there has been former USTs and automotive repair work performed. The groundwater in this area has been impacted by VOCs, SVOCs and metals.

#### **4.4 Soil Sample**

The soil laboratory analytical results were evaluated in accordance with the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) #4046 "Determination of Soil Cleanup Objectives and Cleanup Levels".

Soil samples SB-1, GSB-2, GSB-3 and GSB-9 were collected from accessible areas of the south parking lot. No VOCs appear to have impacted soils in this area; however, SVOCs above the NYSDEC RSCO have impacted this area of the subject property. Arsenic, barium, cadmium, chromium, lead and silver are present in this area at concentrations below the NYSDEC RSCO. No PCBs were detected in the locations and depths tested in the south parking lot.

Soil samples SBM-3, GSB-11 through GSB-17 were collected from accessible areas of the central parking lot. Varying concentrations of VOCs were detected in soil samples GS-11 and GSB-12. These two soil samples were collected from the southeast area of the central parking lot.

SVOCs above the NYSDEC RSCO were detected in all the soil samples collected from the central parking lot. Soils in the area of GSB-16 have exhibited a higher degree of SVOC impact versus the remaining areas.

Elevated Arsenic concentrations above the NYSDEC RSCO were detected in soils at locations SBM-3, GSB-11 and GSB-12. Cadmium and mercury concentrations above the NYSDEC RSCO were detected in soils at location GSB-14. Chromium concentrations above the NYSDEC RSCO were detected in soil at location GSB-15. Cadmium and lead concentrations above the NYSDEC RSCO were detected in soils at location GSB-16. Concentrations of arsenic, barium, cadmium, chromium, lead and mercury were also detected below the NYSDEC RSCO in soil samples collected from the central parking lot.

PCBs were detected at concentrations below the NYSDEC RSCO at the locations of soil borings SBM-3, GSB-13, GSB-16 and GSB-17. These soil samples were collected from depths ranging from approximately 4 to 8 feet below grade. The depth to bedrock documented as part of the geotechnical soil borings performed at this area of the subject property ranges from approximately one foot to twenty-nine feet below grade. There is the potential for soils below 8 feet below grade to exhibit increased concentrations of PCBs.

It should also be noted that a dark tar like substance (possibly coal tar) was observed in soil samples obtained from both geoprobe and geotechnical soil borings performed at the central parking lot. Coal tar is a typical residual byproduct from coal gasification, which is a process that was commonly used to generate gas for power and heat in the mid 1800s up to the mid 1900s. Historical data from historic Sanborn Maps indicated that coal piles were maintained at the former power plant facility and the plant operated during the time frame that coal gasification was popular.

Contaminants typically associated with coal gasification include: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, carbazole, chrysene, dibenzofuran, fluoranthene, fluorine, indeno(1,2,3-cd) pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, pyrene, and metals such as Arsenic, Cadmium, Chromium (hexavalent/total), Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc. Many of these contaminants were detected at concentrations above the NYSDEC RSCO in soil samples collected from the central parking lot.

## **4.5 TCLP Soil Samples**

Based on the elevated concentrations of contaminants detected at the subject property, Galli Engineering was concerned that some of the soils, primarily the central parking lot, could be characterized as hazardous for disposal purposes based on the available analytical data and historical use of the site. Therefore additional soil samples were collected for toxicity characteristic leaching procedure (TCLP) analysis to determine legal disposal options.

The TCLP test is one means used to characterize wastes as hazardous or non-hazardous. The TCLP is an extraction and analysis procedure that is designed to simulate the leaching potential of organic and inorganic contaminants present in soil. This methodology was used for a hazardous waste determination at the central portion of the subject property, and based on the TCLP analytical results, the soils at the locations and depths tested on the central portion of the subject property do not meet the criteria of hazardous waste.

Soils in the south parking lot area have impacts associated with concentrations of SVOC and arsenic above the Recommended Soil Cleanup Objectives; however, the concentrations present do not appear to warrant disposal as a hazardous waste.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Galli Engineering, P.C. has prepared this Phase II Environmental Site Assessment (ESA) report to establish the current conditions of soil and groundwater, which have reportedly been impacted due to past uses of subject property. Specifically, this report is intended to provide information in terms of the absence or presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), 8 RCRA metals, and polychlorinated biphenyls (PCBs) at the locations and depths tested. Based on the analytical data, the following key findings are identified:

- Groundwater samples were collected from the existing monitoring wells, which are located in the easement along Kensington Road and the south parking lot area (former gas station, garage and automotive repair facility). Some VOCs and metals were detected in the groundwater samples above the NYSDEC Ambient Water Quality Standards and Guidance Values. It should be noted that endeavors to install additional down gradient monitoring wells on the subject property were attempted, but attempted soil borings met refusal and groundwater was not encountered. Additionally, groundwater was not encountered in deep structural soil borings performed at the site as part of a geotechnical investigation.
- Concentrations of SVOCs and some metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the south parking lot property (former gas station, garage and automotive repair facility).
- Concentrations of some VOCs, SVOCs and metals were detected above the NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives in the soil samples collected from the central parking lot (former power plant parcel).
- Based on the analytical results from soil samples collected from the central parking lot (former power plant parcel), a full TCLP analysis of soil samples from this area of the subject property was performed. The TCLP analysis indicates that the soils at the locations and depths tested do not meet the criteria for hazardous waste.

The analytical data confirms that the subject property has been impacted by contaminants that are consistent with the past use of the parcels (i.e., former gasoline service station, automotive repair and parking facility at the south parking lot; and a former heat, light and power plant at the central parking lot property). The nature of contaminants detected is not unusual for previously developed urban sites. The analytical data collected as part of this investigation indicates that the impacted soils do not meet the criteria for hazardous waste, and the area of

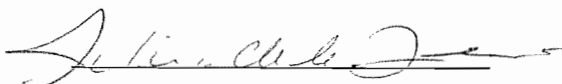
groundwater impact appears to be isolated.

Soil laboratory analytical results are evaluated in accordance with NYSDEC TAGM 4046. The Recommended Soil Cleanup Objectives (RSCO) provided in TAGM #4046 are not regulatory standards and are not strict thresholds that dictate absolute cleanup levels; however, the TAGM #4046, in conjunction with the STARS Memo #1: Petroleum Contaminated Soil Guidance Policy, are the only current guidelines available for soils in the New York State, and as such are used to identify contaminated sites.

The proposed redevelopment of the subject property would require the demolition of existing structures and the removal of soil inundated with rocks and debris from past demolition activities to accommodate a subsurface parking garage. The impacted soil to be excavated for construction activities would require transport to an appropriate disposal or treatment facility. Subsurface construction and demolition debris should be separated from the impacted soils and taken to a recycling or disposal facility, as appropriate.

In the past, the NYSDEC has allowed contaminated soil to stay in place in urban areas provided there are no sensitive receptors on or proximate to the site, and a cap or barrier is used to isolate the remaining impacted soils and provide reliable protection of human health and the environment. Whereas, the subject property is not in a flood prone zone; the groundwater in the subject property area is not a source of potable drinking water; most of the contaminated soil will be excavated and removed from the site; and a cap or barrier with a passive soil gas collection system that vents to the atmosphere can be implemented in conjunction with the construction of the subsurface parking garage; the subject property would be developed with or without engineering or physical controls, as appropriate, depending on residual contaminant levels. Galli Engineering anticipates that the NYSDEC will require additional assessment at the site in the form of a remedial investigation that addresses the feasibility of the remedial option or the submittal of a remedial action plan.

**GALLI ENGINEERING, P.C.**



Juliana de la Fuente

Senior Hydrogeologist

5-20-04

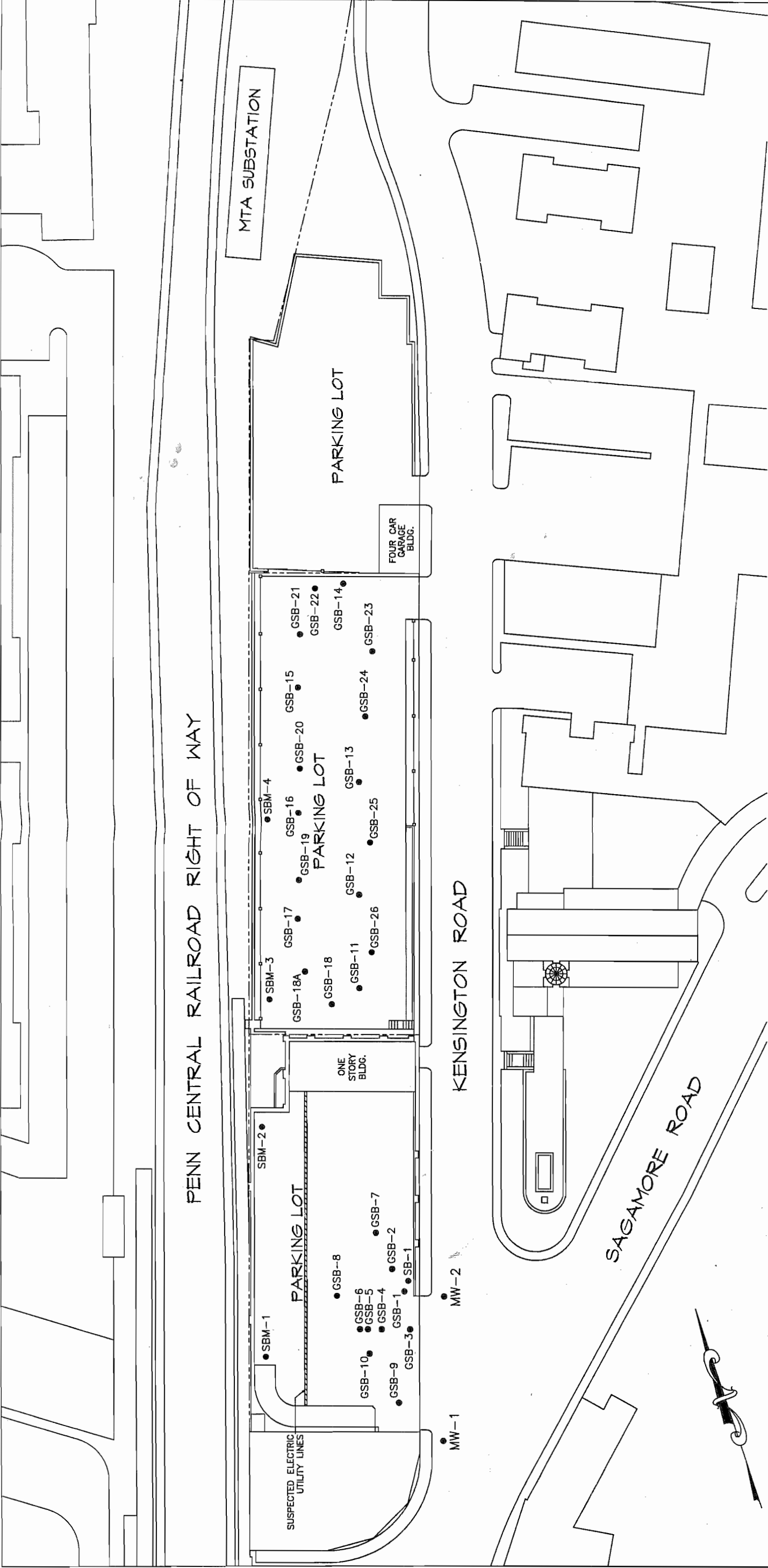
Date



## **APPENDIX A**

### **SITE LAYOUT FIGURE WITH SOIL BORING AND MONITORING WELL LOCATIONS**

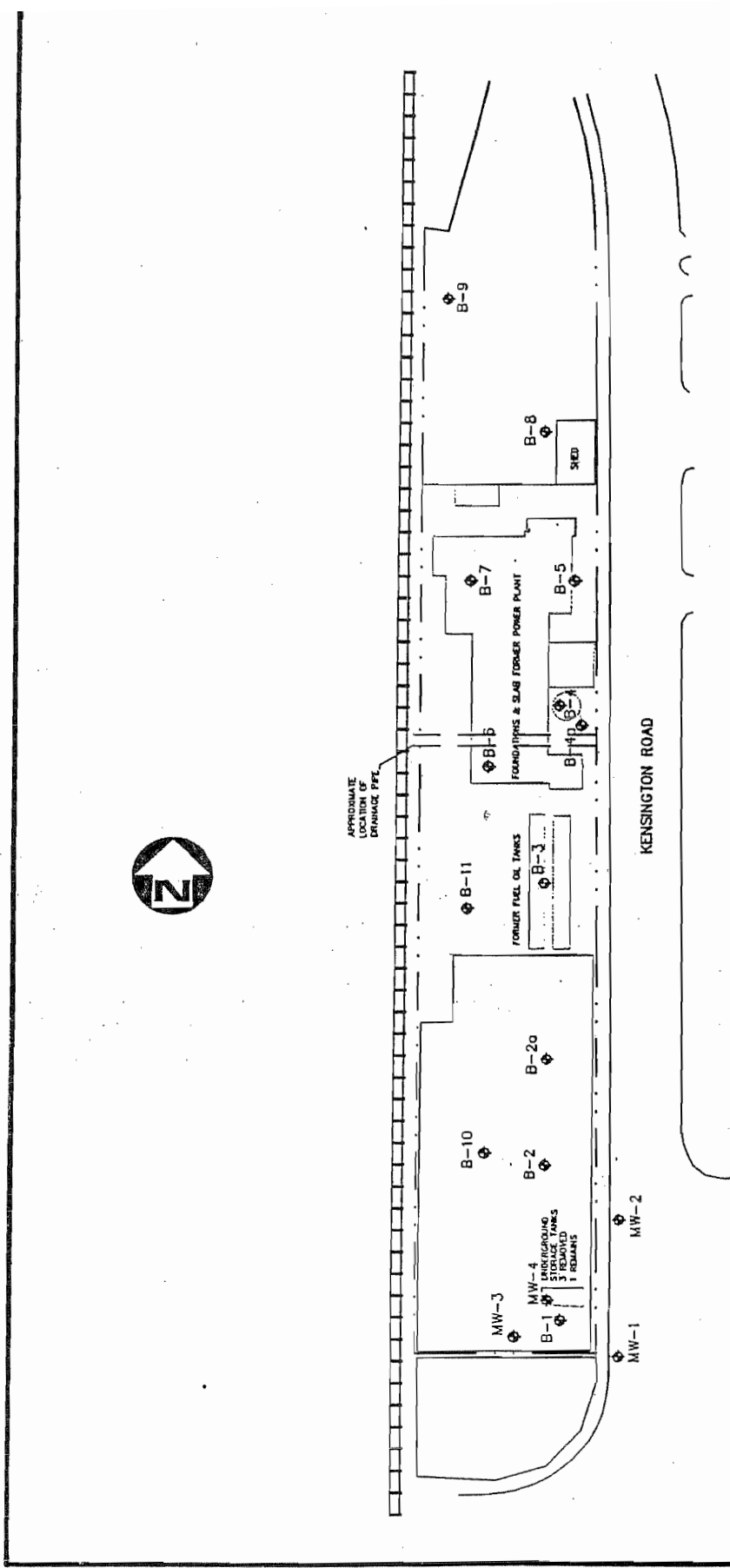




<b>THREE CONTIGUOUS PARKING LOTS</b> 3-27 KENSINGTON RD., BRONXVILLE, N.Y.			
<b>SOIL BORING &amp; MONITORING WELL LOCATION PLAN</b>			
JOB NO. 0221-17-002	Galli engineering, P.C. 734 West Whitman Road, Suite 402A Melville, New York 11747		
DRAWN AXC			
CHECKED RDG			
APPROVED RDG	DATE 10-31-03	SCALE 1"=60'	FIGURE NO. 1

## **APPENDIX B**

**EXHIBIT 35 PREPARED BY HENRY GEORGE GREEN AIA**



# KENSINGTON ♦ MANOR

BRONXVILLE NEW YORK

**EXHIBIT : 35**  
 SOIL BORINGS LOCATION MAP

**HENRY GEORGE GREENE & ASSOCIATES**  
 ARCHITECTS PLANNER



## **APPENDIX C**

### **GPR PLOTTED RESULTS FOR SELECT ANOMALIES**

**Ground Penetrating Radar (GPR) Survey Images**  
5 Kensington Rd., Bronxville, NY 10708

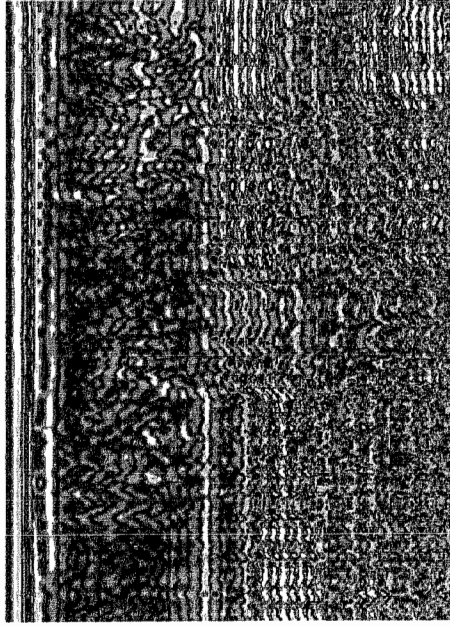


Image taken along the target area showing the change in subsurface layers. Traverse 739.

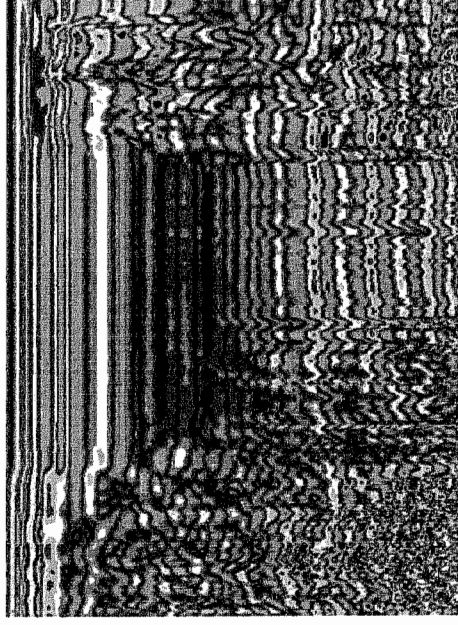


Image taken along the target area showing a rectangular anomaly. Traverse 707.

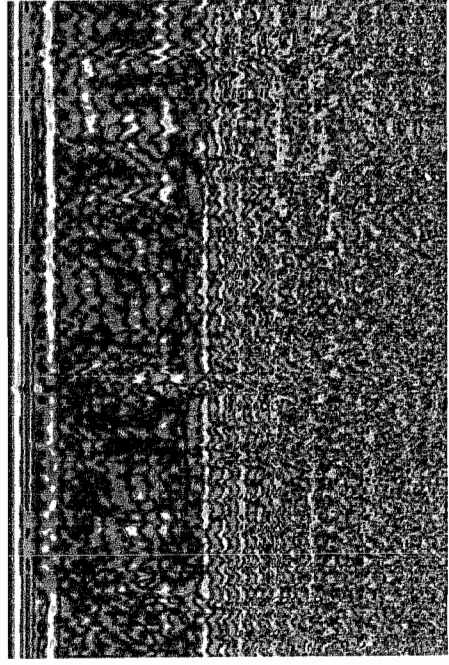
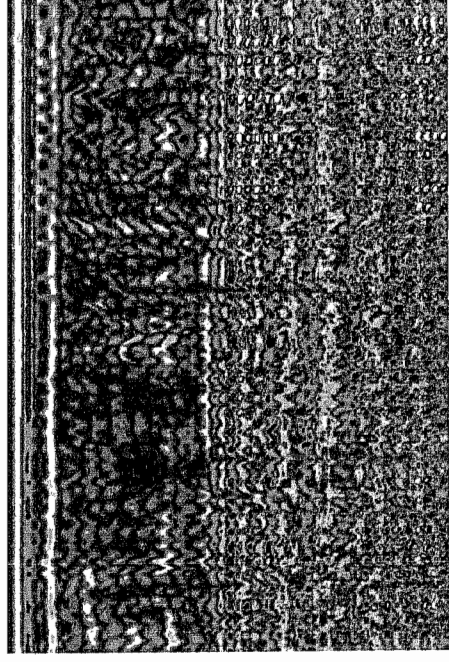
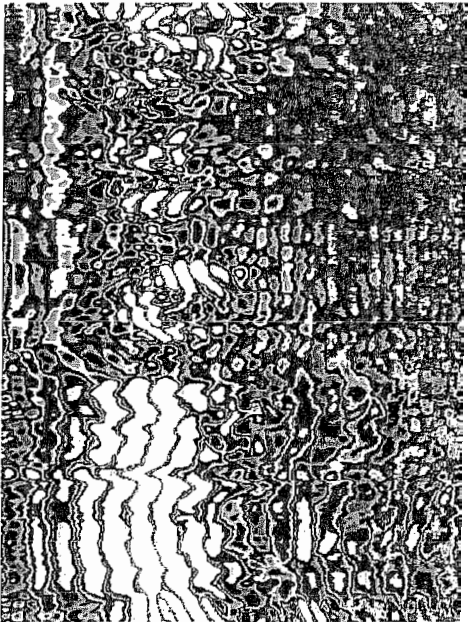
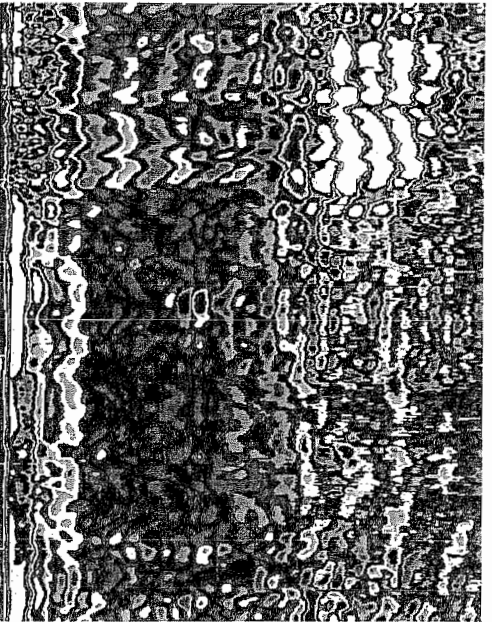
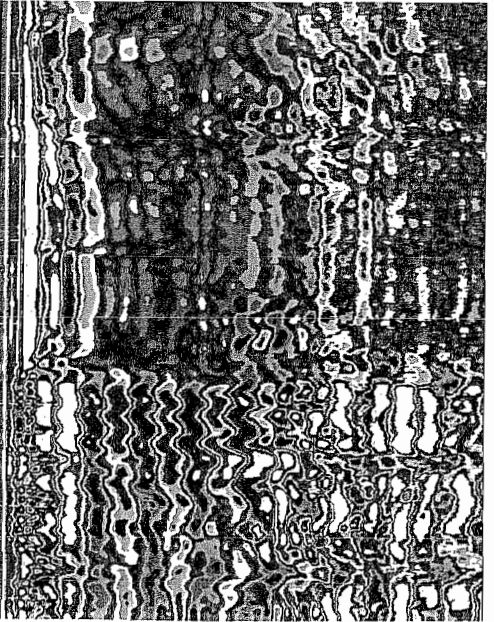
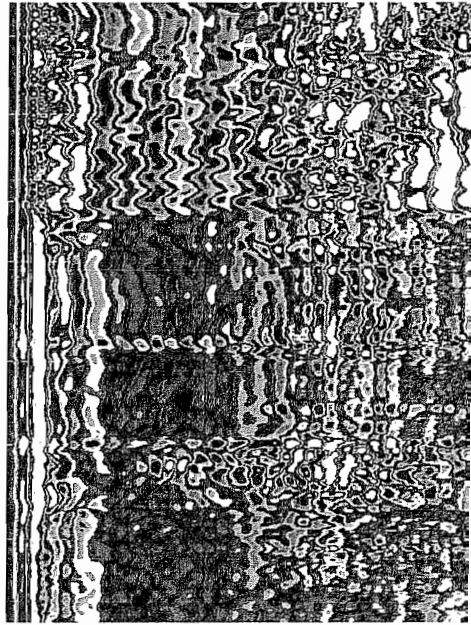
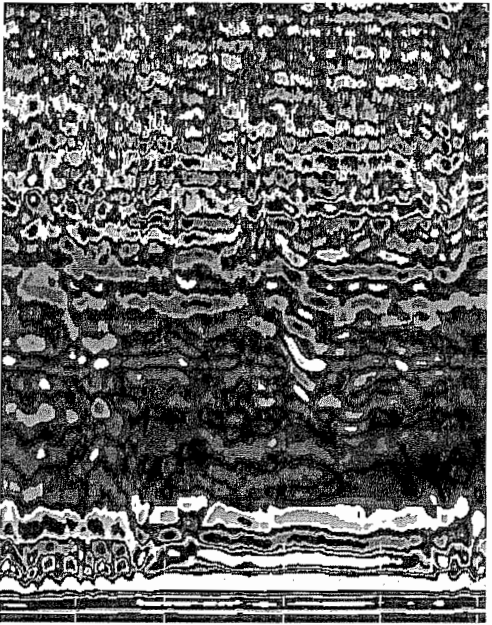
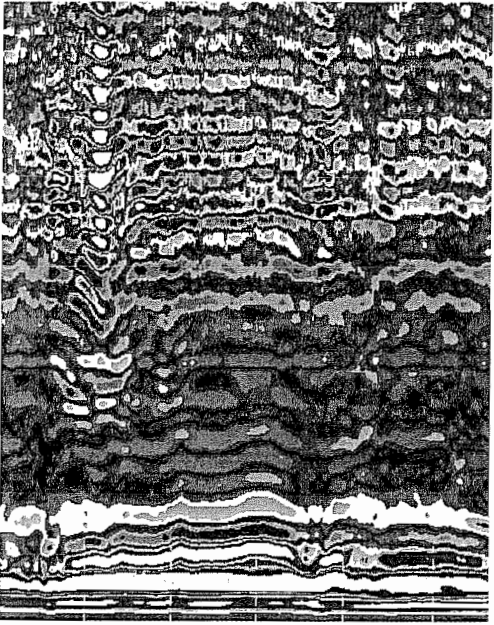
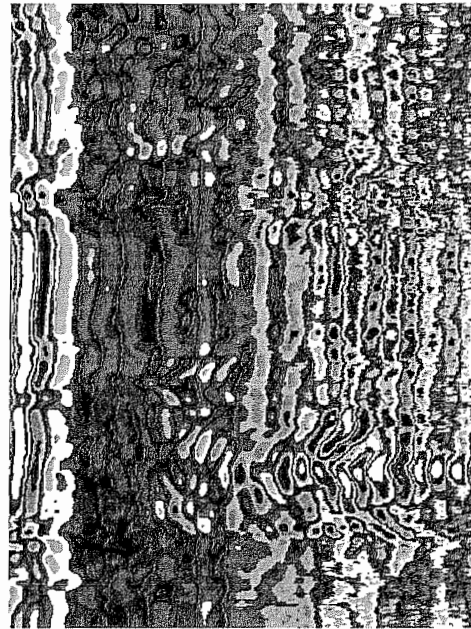
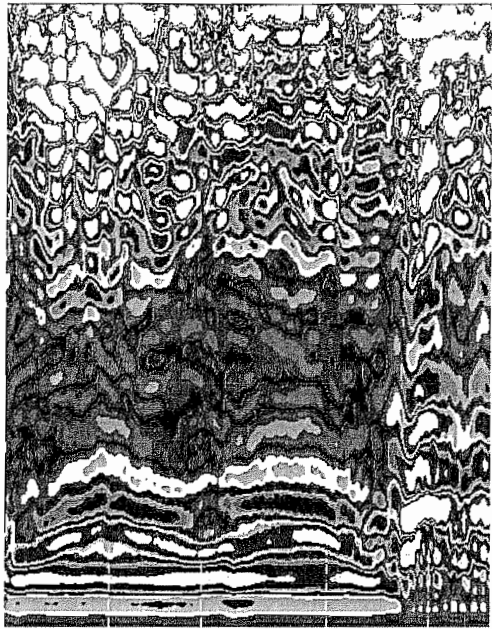
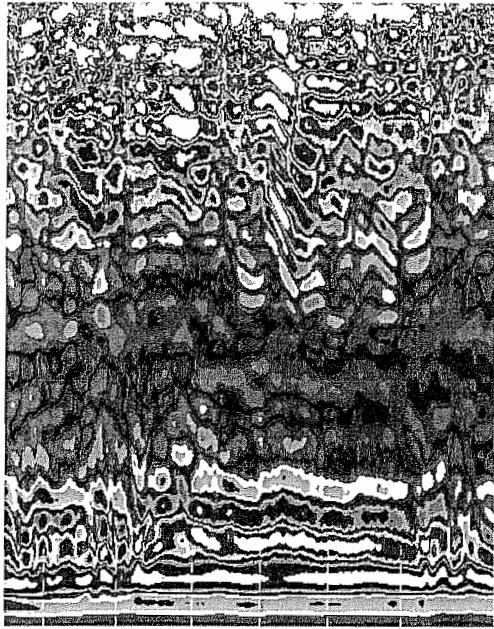


Image taken along the target area showing the subsurface layers found across the site. No anomalies consistent with USTs were detected. Traverse 742.









## **APPENDIX D**

### **LABORATORY ANALYTICAL REPORTS**

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01A

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1,1-Trichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1,2,2-Tetrachloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1,2-Trichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1-Dichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,1-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2,3-Trichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2,3-Trichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2,4,5-Tetramethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2,4-Trichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2,4-Trimethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2-Dibromo-3-chloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2-Dibromoethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2-Dichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,2-Dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,3,5-Trimethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,3-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,3-dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
1,4-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
2,2-Dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
2-Butanone	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
2-Chloroethyl vinyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
2-Chlorotoluene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
2-Hexanone	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
4-Chlorotoluene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
4-Isopropyltoluene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
4-Methyl-2-pentanone	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Acetone	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Acrolein	U	27		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Acrylonitrile	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Benzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Bromobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Bromochloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Bromodichloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Bromoform	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Bromomethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Carbon disulfide	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01A

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
Carbon tetrachloride	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Chlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Chlorodifluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Chloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Chloroform	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Chloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
cis-1,2-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
cis-1,3-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Dibromochloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Dibromomethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Dichlorodifluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Diisopropyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Ethanol	U	27		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Ethyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Ethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Freon-114	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Hexachlorobutadiene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Isopropyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Isopropylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Methyl tert-butyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Methylene chloride	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Naphthalene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
n-Butyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
n-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
n-Propyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
n-Propylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
o-Xylene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
p-Diethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
p-Ethyltoluene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
sec-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Styrene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
t-Butyl alcohol	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
tert-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Tetrachloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Toluene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
trans-1,2-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
trans-1,3-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Trichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Trichlorofluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01A

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM
Vinyl chloride	U	5.3		µg/Kg-dry	1	11/5/2003 1:38:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01B

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
Mercury	U	0.0106		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
Aroclor 1016	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1221	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1232	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1242	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1248	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1254	60	85	J	µg/Kg-dry	1	11/4/2003 9:56:00 PM
Aroclor 1260	U	85		µg/Kg-dry	1	11/4/2003 9:56:00 PM
<b>METALS-RCRA (8)</b>						
Arsenic	8.68	0.476		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Barium	129	0.381		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Cadmium	0.285	0.190		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Chromium	16.4	0.381		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Lead	93.3	0.286		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Selenium	U	0.476		mg/Kg-dry	1	10/30/2003 1:06:51 PM
Silver	0.467	0.381		mg/Kg-dry	1	10/30/2003 1:06:51 PM
<b>SEMIVOLATILES SW-846 8270</b>						
1,2,4-Trichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
1,2-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
1,3-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
1,4-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4,5-Trichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4,6-Trichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4-Dichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4-Dimethylphenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4-Dinitrophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,4-Dinitrotoluene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2,6-Dinitrotoluene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Chloronaphthalene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Chlorophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Methylnaphthalene	260	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Methylphenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
2-Nitrophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
3,3'-Dichlorobenzidine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
3+4-Methylphenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
3-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4,6-Dinitro-2-methylphenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01B

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4-Chloro-3-methylphenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4-Chloroaniline	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4-Chlorophenyl phenyl ether	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
4-Nitrophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Acenaphthene	90	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Acenaphthylene	110	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Aniline	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Anthracene	350	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Azobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzidine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzo(a)anthracene	1300	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzo(a)pyrene	1200	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzo(b)fluoranthene	1400	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzo(g,h,i)perylene	960	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzo(k)fluoranthene	800	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzoic acid	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Benzyl alcohol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Bis(2-chloroethoxy)methane	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Bis(2-chloroethyl)ether	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Bis(2-chloroisopropyl)ether	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Bis(2-ethylhexyl)phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Butyl benzyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Carbazole	210	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Chrysene	1400	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Dibenzo(a,h)anthracene	250	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Dibenzofuran	120	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Diethyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Dimethyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Di-n-butyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Di-n-octyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Fluoranthene	2500	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Fluorene	100	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Hexachlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Hexachlorobutadiene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Hexachlorocyclopentadiene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Hexachloroethane	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Indeno(1,2,3-c,d)pyrene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Isophorone	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-01B

**Client Sample ID:** SB-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	190	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Nitrobenzene	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
N-Nitrosodimethylamine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
N-Nitrosodi-n-propylamine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
N-Nitrosodiphenylamine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Pentachlorophenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Phenanthrene	1600	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Phenol	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Pyrene	2300	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
Pyridine	U	43		µg/Kg-dry	1	11/9/2003 4:27:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	5.90	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02A

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
1,1,1,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1,1-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1,2,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1,2-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,1-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2,3-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2,3-Trichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2,4,5-Tetramethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2,4-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2,4-Trimethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2-Dibromo-3-chloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2-Dibromoethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,3,5-Trimethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,3-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,3-dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
1,4-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
2,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
2-Butanone	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
2-Chloroethyl vinyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
2-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
2-Hexanone	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
4-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
4-Isopropyltoluene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
4-Methyl-2-pentanone	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Acetone	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Acrolein	U	29		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Acrylonitrile	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Benzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Bromobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Bromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Bromodichloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Bromoform	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Bromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Carbon disulfide	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02A

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Chlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Chlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Chloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Chloroform	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Chloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
cis-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
cis-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Dibromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Dibromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Dichlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Diisopropyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Ethanol	U	29		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Ethyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Ethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Freon-114	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Hexachlorobutadiene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Isopropyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Isopropylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
m,p-Xylene	U	12		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Methyl tert-butyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Methylene chloride	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Naphthalene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
n-Butyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
n-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
n-Propyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
n-Propylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
o-Xylene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
p-Diethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
p-Ethyltoluene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
sec-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Styrene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
t-Butyl alcohol	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
tert-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Tetrachloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Toluene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
trans-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
trans-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Trichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Trichlorofluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02A

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM
Vinyl chloride	U	5.8		µg/Kg-dry	1	11/5/2003 2:14:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02B

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
Mercury	U	0.0116		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
Aroclor 1016	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1221	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1232	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1242	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1248	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1254	120	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
Aroclor 1260	U	93		µg/Kg-dry	1	11/4/2003 10:37:00 PM
<b>METALS-RCRA (8)</b>						
Arsenic	14.7	0.561		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Barium	127	0.449		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Cadmium	0.366	0.224		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Chromium	19.9	0.449		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Lead	99.5	0.336		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Selenium	U	0.561		mg/Kg-dry	1	10/30/2003 1:09:03 PM
Silver	U	0.449		mg/Kg-dry	1	10/30/2003 1:09:03 PM
<b>SEMIVOLATILES SW-846 8270</b>						
1,2,4-Trichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
1,2-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
1,3-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
1,4-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4,5-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4,6-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4-Dichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4-Dimethylphenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4-Dinitrophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,4-Dinitrotoluene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2,6-Dinitrotoluene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Chloronaphthalene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Chlorophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Methylnaphthalene	720	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
2-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
3,3'-Dichlorobenzidine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
3+4-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
3-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4,6-Dinitro-2-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02B

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4-Chloro-3-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4-Chloroaniline	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4-Chlorophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
4-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Acenaphthene	310	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Acenaphthylene	210	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Aniline	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Anthracene	900	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Azobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Benzidine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Benzo(a)anthracene	3800	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Benzo(a)pyrene	3800	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Benzo(b)fluoranthene	5900	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Benzo(g,h,i)perylene	2700	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Benzo(k)fluoranthene	2200	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Benzoic acid	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Benzyl alcohol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Bis(2-chloroethoxy)methane	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Bis(2-chloroethyl)ether	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Bis(2-chloroisopropyl)ether	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Bis(2-ethylhexyl)phthalate	90	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Butyl benzyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Carbazole	540	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Chrysene	4700	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Dibenzo(a,h)anthracene	580	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Dibenzofuran	320	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Diethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Dimethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Di-n-butyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Di-n-octyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Fluoranthene	7800	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Fluorene	300	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Hexachlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Hexachlorobutadiene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Hexachlorocyclopentadiene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Hexachloroethane	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Indeno(1,2,3-c,d)pyrene	2900	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Isophorone	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-02B

**Client Sample ID:** SBM-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	570	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Nitrobenzene	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
N-Nitrosodimethylamine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
N-Nitrosodi-n-propylamine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
N-Nitrosodiphenylamine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Pentachlorophenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Phenanthrene	5100	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Phenol	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
Pyrene	8300	230		µg/Kg-dry	5	11/10/2003 11:47:00 AM
Pyridine	U	46		µg/Kg-dry	1	11/9/2003 5:02:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	13.6	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-03A

**Client Sample ID:** GSB-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
1,1,1,2-Tetrachloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1,1-Trichloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1,2,2-Tetrachloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1,2-Trichloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1-Dichloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1-Dichloroethene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,1-Dichloropropene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2,3-Trichlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2,3-Trichloropropane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2,4,5-Tetramethylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2,4-Trichlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2,4-Trimethylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2-Dibromo-3-chloropropane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2-Dibromoethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2-Dichlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2-Dichloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,2-Dichloropropane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,3,5-Trimethylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,3-Dichlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,3-dichloropropane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
1,4-Dichlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
2,2-Dichloropropane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
2-Butanone	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
2-Chloroethyl vinyl ether	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
2-Chlorotoluene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
2-Hexanone	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
4-Chlorotoluene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
4-Isopropyltoluene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
4-Methyl-2-pentanone	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Acetone	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Acrolein	U	27		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Acrylonitrile	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Benzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Bromobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Bromochloromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Bromodichloromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Bromoform	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Bromomethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Carbon disulfide	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-03A

**Client Sample ID:** GSB-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
Carbon tetrachloride	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Chlorobenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Chlorodifluoromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Chloroethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Chloroform	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Chloromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
cis-1,2-Dichloroethene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
cis-1,3-Dichloropropene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Dibromochloromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Dibromomethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Dichlorodifluoromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Diisopropyl ether	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Ethanol	U	27		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Ethyl acetate	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Ethylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Freon-114	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Hexachlorobutadiene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Isopropyl acetate	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Isopropylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Methyl tert-butyl ether	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Methylene chloride	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Naphthalene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
n-Butyl acetate	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
n-Butylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
n-Propyl acetate	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
n-Propylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
o-Xylene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
p-Diethylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
p-Ethyltoluene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
sec-Butylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Styrene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
t-Butyl alcohol	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
tert-Butylbenzene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Tetrachloroethene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Toluene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
trans-1,2-Dichloroethene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
trans-1,3-Dichloropropene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Trichloroethene	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Trichlorofluoromethane	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-2**Lab Order:** 0310178**Tag Number:****Project:** Bronxville**Collection Date:** 10/28/2003**Lab ID:** 0310178-03A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM
Vinyl chloride	U	5.4		µg/Kg-dry	1	11/5/2003 2:51:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-03B

**Client Sample ID:** GSB-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>		<b>SW7471B</b>				<b>Analyst: JP</b>
Mercury	0.0272	0.0109		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3550)</b>		<b>Analyst: KB</b>
Aroclor 1016	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1221	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1232	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1242	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1248	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1254	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
Aroclor 1260	U	87		µg/Kg-dry	1	11/4/2003 11:18:00 PM
<b>METALS-RCRA (8)</b>		<b>SW6010B</b>		<b>(SW3050A)</b>		<b>Analyst: JP</b>
Arsenic	3.47	0.517		mg/Kg-dry	1	10/30/2003 1:11:39 PM
Barium	72.1	0.413		mg/Kg-dry	1	10/30/2003 1:11:39 PM
Cadmium	0.13	0.207	J	mg/Kg-dry	1	10/30/2003 1:11:39 PM
Chromium	18.7	0.413		mg/Kg-dry	1	10/30/2003 1:11:39 PM
Lead	40.8	0.310		mg/Kg-dry	1	10/30/2003 1:11:39 PM
Selenium	U	0.517		mg/Kg-dry	1	10/30/2003 1:11:39 PM
Silver	U	0.413		mg/Kg-dry	1	10/30/2003 1:11:39 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
1,2,4-Trichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
1,2-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
1,3-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
1,4-Dichlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4,5-Trichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4,6-Trichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4-Dichlorophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4-Dimethylphenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4-Dinitrophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,4-Dinitrotoluene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2,6-Dinitrotoluene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Chloronaphthalene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Chlorophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Methylnaphthalene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Methylphenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
2-Nitrophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
3,3'-Dichlorobenzidine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
3+4-Methylphenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
3-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4,6-Dinitro-2-methylphenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-03B

**Client Sample ID:** GSB-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4-Chloro-3-methylphenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4-Chloroaniline	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4-Chlorophenyl phenyl ether	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4-Nitroaniline	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
4-Nitrophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Acenaphthene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Acenaphthylene	150	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Aniline	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Anthracene	170	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Azobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzidine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzo(a)anthracene	750	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzo(a)pyrene	510	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzo(b)fluoranthene	930	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzo(g,h,i)perylene	380	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzo(k)fluoranthene	400	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzoic acid	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Benzyl alcohol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Bis(2-chloroethoxy)methane	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Bis(2-chloroethyl)ether	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Bis(2-chloroisopropyl)ether	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Bis(2-ethylhexyl)phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Butyl benzyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Carbazole	30	43	J	µg/Kg-dry	1	11/9/2003 5:38:00 PM
Chrysene	810	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Dibenzo(a,h)anthracene	130	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Dibenzofuran	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Diethyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Dimethyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Di-n-butyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Di-n-octyl phthalate	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Fluoranthene	1100	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Fluorene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Hexachlorobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Hexachlorobutadiene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Hexachlorocyclopentadiene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Hexachloroethane	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Indeno(1,2,3-c,d)pyrene	430	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Isophorone	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range



**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-03B

**Client Sample ID:** GSB-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Nitrobenzene	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
N-Nitrosodimethylamine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
N-Nitrosodi-n-propylamine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
N-Nitrosodiphenylamine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Pentachlorophenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Phenanthrene	320	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Phenol	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Pyrene	1100	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
Pyridine	U	43		µg/Kg-dry	1	11/9/2003 5:38:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	8.00	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-04A

**Client Sample ID:** GSB-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1,1-Trichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1,2,2-Tetrachloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1,2-Trichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1-Dichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,1-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2,3-Trichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2,3-Trichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2,4,5-Tetramethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2,4-Trichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2,4-Trimethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2-Dibromo-3-chloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2-Dibromoethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2-Dichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,2-Dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,3,5-Trimethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,3-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,3-dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
1,4-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
2,2-Dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
2-Butanone	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
2-Chloroethyl vinyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
2-Chlorotoluene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
2-Hexanone	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
4-Chlorotoluene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
4-Isopropyltoluene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
4-Methyl-2-pentanone	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Acetone	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Acrolein	U	28		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Acrylonitrile	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Benzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Bromobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Bromochloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Bromodichloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Bromoform	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Bromomethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Carbon disulfide	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-04A

**Client Sample ID:** GSB-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Chlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Chlorodifluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Chloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Chloroform	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Chloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
cis-1,2-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
cis-1,3-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Dibromochloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Dibromomethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Dichlorodifluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Diisopropyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Ethanol	U	28		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Ethyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Ethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Freon-114	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Hexachlorobutadiene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Isopropyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Isopropylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Methyl tert-butyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Methylene chloride	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Naphthalene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
n-Butyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
n-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
n-Propyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
n-Propylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
o-Xylene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
p-Diethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
p-Ethyltoluene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
sec-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Styrene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
t-Butyl alcohol	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
tert-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Tetrachloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Toluene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
trans-1,2-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
trans-1,3-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Trichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Trichlorofluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-04A

**Client Sample ID:** GSB-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM
Vinyl chloride	U	5.7		µg/Kg-dry	1	11/5/2003 3:27:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-04B

**Client Sample ID:** GSB-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>		<b>SW7471B</b>				<b>Analyst: JP</b>
Mercury	0.0604	0.0114		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3550)</b>		<b>Analyst: KB</b>
Aroclor 1016	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1221	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1232	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1242	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1248	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1254	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
Aroclor 1260	U	91		µg/Kg-dry	1	11/4/2003 11:59:00 PM
<b>METALS-RCRA (8)</b>		<b>SW6010B</b>		<b>(SW3050A)</b>		<b>Analyst: JP</b>
Arsenic	3.26	0.541		mg/Kg-dry	1	10/30/2003 1:14:02 PM
Barium	74.9	0.433		mg/Kg-dry	1	10/30/2003 1:14:02 PM
Cadmium	0.19	0.217	J	mg/Kg-dry	1	10/30/2003 1:14:02 PM
Chromium	14.2	0.433		mg/Kg-dry	1	10/30/2003 1:14:02 PM
Lead	52.2	0.325		mg/Kg-dry	1	10/30/2003 1:14:02 PM
Selenium	U	0.541		mg/Kg-dry	1	10/30/2003 1:14:02 PM
Silver	U	0.433		mg/Kg-dry	1	10/30/2003 1:14:02 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
1,2,4-Trichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
1,2-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
1,3-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
1,4-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4,5-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4,6-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4-Dichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4-Dimethylphenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4-Dinitrophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,4-Dinitrotoluene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2,6-Dinitrotoluene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Chloronaphthalene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Chlorophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Methylnaphthalene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
2-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
3,3'-Dichlorobenzidine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
3+4-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
3-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4,6-Dinitro-2-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-04B

**Client Sample ID:** GSB-3  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4-Chloro-3-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4-Chloroaniline	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4-Chlorophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
4-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Acenaphthene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Acenaphthylene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Aniline	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Anthracene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Azobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzidine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzo(a)anthracene	120	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzo(a)pyrene	110	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzo(b)fluoranthene	150	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzo(g,h,i)perylene	92	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzo(k)fluoranthene	50	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzoic acid	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Benzyl alcohol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Bis(2-chloroethoxy)methane	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Bis(2-chloroethyl)ether	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Bis(2-chloroisopropyl)ether	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Bis(2-ethylhexyl)phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Butyl benzyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Carbazole	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Chrysene	150	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Dibenzo(a,h)anthracene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Dibenzofuran	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Diethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Dimethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Di-n-butyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Di-n-octyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Fluoranthene	210	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Fluorene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Hexachlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Hexachlorobutadiene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Hexachlorocyclopentadiene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Hexachloroethane	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Indeno(1,2,3-c,d)pyrene	100	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Isophorone	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-3

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-04B

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Nitrobenzene	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
N-Nitrosodimethylamine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
N-Nitrosodi-n-propylamine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
N-Nitrosodiphenylamine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Pentachlorophenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Phenanthrene	100	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Phenol	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Pyrene	180	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
Pyridine	U	46		µg/Kg-dry	1	11/9/2003 3:52:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	12.2	0		wt%	1	10/30/2003

**Qualifiers:**

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- \* - Value exceeds Maximum Contaminant Level

- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-05A

Client Sample ID: GSB-9  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1,1-Trichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1,2,2-Tetrachloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1,2-Trichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1-Dichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,1-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2,3-Trichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2,3-Trichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2,4,5-Tetramethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2,4-Trichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2,4-Trimethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2-Dibromo-3-chloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2-Dibromoethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2-Dichloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,2-Dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,3,5-Trimethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,3-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,3-dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
1,4-Dichlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
2,2-Dichloropropane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
2-Butanone	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
2-Chloroethyl vinyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
2-Chlorotoluene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
2-Hexanone	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
4-Chlorotoluene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
4-Isopropyltoluene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
4-Methyl-2-pentanone	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Acetone	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Acrolein	U	26		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Acrylonitrile	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Benzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Bromobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Bromochloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Bromodichloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Bromoform	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Bromomethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Carbon disulfide	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-05A

**Client Sample ID:** GSB-9  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Chlorobenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Chlorodifluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Chloroethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Chloroform	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Chloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
cis-1,2-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
cis-1,3-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Dibromochloromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Dibromomethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Dichlorodifluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Diisopropyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Ethanol	U	26		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Ethyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Ethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Freon-114	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Hexachlorobutadiene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Isopropyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Isopropylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Methyl tert-butyl ether	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Methylene chloride	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Naphthalene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
n-Butyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
n-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
n-Propyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
n-Propylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
o-Xylene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
p-Diethylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
p-Ethyltoluene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
sec-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Styrene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
t-Butyl alcohol	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
tert-Butylbenzene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Tetrachloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Toluene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
trans-1,2-Dichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
trans-1,3-Dichloropropene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Trichloroethene	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Trichlorofluoromethane	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-05A

**Client Sample ID:** GSB-9  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM
Vinyl chloride	U	5.3		µg/Kg-dry	1	11/5/2003 4:03:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-05B

**Client Sample ID:** GSB-9  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
Mercury	U	0.0106		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
Aroclor 1016	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1221	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1232	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1242	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1248	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1254	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
Aroclor 1260	U	85		µg/Kg-dry	1	11/5/2003 12:40:00 AM
<b>METALS-RCRA (8)</b>						
Arsenic	0.24	0.456	J	mg/Kg-dry	1	10/30/2003 1:16:32 PM
Barium	20.2	0.365		mg/Kg-dry	1	10/30/2003 1:16:32 PM
Cadmium	U	0.182		mg/Kg-dry	1	10/30/2003 1:16:32 PM
Chromium	8.02	0.365		mg/Kg-dry	1	10/30/2003 1:16:32 PM
Lead	8.24	0.274		mg/Kg-dry	1	10/30/2003 1:16:32 PM
Selenium	U	0.456		mg/Kg-dry	1	10/30/2003 1:16:32 PM
Silver	U	0.365		mg/Kg-dry	1	10/30/2003 1:16:32 PM
<b>SEMIVOLATILES SW-846 8270</b>						
1,2,4-Trichlorobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
1,2-Dichlorobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
1,3-Dichlorobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
1,4-Dichlorobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4,5-Trichlorophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4,6-Trichlorophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4-Dichlorophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4-Dimethylphenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4-Dinitrophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,4-Dinitrotoluene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2,6-Dinitrotoluene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Chloronaphthalene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Chlorophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Methylnaphthalene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Methylphenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Nitroaniline	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
2-Nitrophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
3,3'-Dichlorobenzidine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
3+4-Methylphenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
3-Nitroaniline	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4,6-Dinitro-2-methylphenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-05B

**Client Sample ID:** GSB-9  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4-Chloro-3-methylphenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4-Chloroaniline	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4-Chlorophenyl phenyl ether	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4-Nitroaniline	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
4-Nitrophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Acenaphthene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Acenaphthylene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Aniline	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Anthracene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Azobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzidine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzo(a)anthracene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzo(a)pyrene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzo(b)fluoranthene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzo(g,h,i)perylene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzo(k)fluoranthene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzoic acid	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Benzyl alcohol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Bis(2-chloroethoxy)methane	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Bis(2-chloroethyl)ether	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Bis(2-chloroisopropyl)ether	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Bis(2-ethylhexyl)phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Butyl benzyl phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Carbazole	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Chrysene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Dibenzo(a,h)anthracene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Dibenzofuran	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Diethyl phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Dimethyl phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Di-n-butyl phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Di-n-octyl phthalate	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Fluoranthene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Fluorene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Hexachlorobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Hexachlorobutadiene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Hexachlorocyclopentadiene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Hexachloroethane	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Indeno(1,2,3-c,d)pyrene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Isophorone	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-9**Lab Order:** 0310178**Tag Number:****Project:** Bronxville**Collection Date:** 10/28/2003**Lab ID:** 0310178-05B**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Nitrobenzene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
N-Nitrosodimethylamine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
N-Nitrosodi-n-propylamine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
N-Nitrosodiphenylamine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Pentachlorophenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Phenanthrene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Phenol	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Pyrene	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
Pyridine	U	42		µg/Kg-dry	1	11/9/2003 6:13:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	5.50	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-06A

Client Sample ID: GSB-11  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1,1-Trichloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1,2,2-Tetrachloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1,2-Trichloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1-Dichloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1-Dichloroethene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,1-Dichloropropene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2,3-Trichlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2,3-Trichloropropane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2,4,5-Tetramethylbenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2,4-Trichlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2,4-Trimethylbenzene	47	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2-Dibromo-3-chloropropane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2-Dibromoethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2-Dichlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2-Dichloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,2-Dichloropropane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,3,5-Trimethylbenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,3-Dichlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,3-dichloropropane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
1,4-Dichlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
2,2-Dichloropropane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
2-Butanone	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
2-Chloroethyl vinyl ether	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
2-Chlorotoluene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
2-Hexanone	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
4-Chlorotoluene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
4-Isopropyltoluene	69	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
4-Methyl-2-pentanone	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Acetone	250	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Acrolein	U	30		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Acrylonitrile	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Benzene	4	6.1	J	µg/Kg-dry	1	11/5/2003 4:39:00 PM
Bromobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Bromochloromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Bromodichloromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Bromoform	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Bromomethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Carbon disulfide	16	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-06A

**Client Sample ID:** GSB-11  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Chlorobenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Chlorodifluoromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Chloroethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Chloroform	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Chloromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
cis-1,2-Dichloroethene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
cis-1,3-Dichloropropene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Dibromochloromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Dibromomethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Dichlorodifluoromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Diisopropyl ether	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Ethanol	U	30		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Ethyl acetate	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Ethylbenzene	79	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Freon-114	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Hexachlorobutadiene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Isopropyl acetate	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Isopropylbenzene	48	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
m,p-Xylene	10	12	J	µg/Kg-dry	1	11/5/2003 4:39:00 PM
Methyl tert-butyl ether	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Methylene chloride	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Naphthalene	44	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
n-Butyl acetate	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
n-Butylbenzene	110	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
n-Propyl acetate	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
n-Propylbenzene	76	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
o-Xylene	45	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
p-Diethylbenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
p-Ethyltoluene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
sec-Butylbenzene	73	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Styrene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
t-Butyl alcohol	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
tert-Butylbenzene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Tetrachloroethene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Toluene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
trans-1,2-Dichloroethene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
trans-1,3-Dichloropropene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Trichloroethene	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Trichlorofluoromethane	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-06A

**Client Sample ID:** GSB-11  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM
Vinyl chloride	U	6.1		µg/Kg-dry	1	11/5/2003 4:39:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-06B

Client Sample ID: GSB-11  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
Mercury	U	0.0121		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
Aroclor 1016	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1221	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1232	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1242	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1248	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1254	60	97	J	µg/Kg-dry	1	11/5/2003 1:21:00 AM
Aroclor 1260	U	97		µg/Kg-dry	1	11/5/2003 1:21:00 AM
<b>METALS-RCRA (8)</b>						
Arsenic	17.9	0.606		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Barium	79.8	0.485		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Cadmium	0.451	0.242		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Chromium	14.8	0.485		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Lead	113	0.364		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Selenium	U	0.606		mg/Kg-dry	1	10/30/2003 1:18:54 PM
Silver	U	0.485		mg/Kg-dry	1	10/30/2003 1:18:54 PM
<b>SEMIVOLATILES SW-846 8270</b>						
1,2,4-Trichlorobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
1,2-Dichlorobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
1,3-Dichlorobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
1,4-Dichlorobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4,5-Trichlorophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4,6-Trichlorophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4-Dichlorophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4-Dimethylphenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4-Dinitrophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,4-Dinitrotoluene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2,6-Dinitrotoluene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2-Chloronaphthalene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2-Chlorophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2-Methylnaphthalene	18000	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
2-Methylphenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2-Nitroaniline	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
2-Nitrophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
3,3'-Dichlorobenzidine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
3+4-Methylphenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
3-Nitroaniline	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4,6-Dinitro-2-methylphenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-06B

Client Sample ID: GSB-11  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4-Chloro-3-methylphenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4-Chloroaniline	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4-Chlorophenyl phenyl ether	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4-Nitroaniline	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
4-Nitrophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Acenaphthene	1700	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Acenaphthylene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Aniline	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Anthracene	2200	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Azobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzidine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzo(a)anthracene	4000	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Benzo(a)pyrene	2500	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzo(b)fluoranthene	2800	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzo(g,h,i)perylene	1400	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzo(k)fluoranthene	1200	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzoic acid	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Benzyl alcohol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Bis(2-chloroethoxy)methane	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Bis(2-chloroethyl)ether	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Bis(2-chloroisopropyl)ether	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Bis(2-ethylhexyl)phthalate	870	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Butyl benzyl phthalate	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Carbazole	880	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Chrysene	4300	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Dibenzo(a,h)anthracene	450	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Dibenzofuran	1100	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Diethyl phthalate	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Dimethyl phthalate	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Di-n-butyl phthalate	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Di-n-octyl phthalate	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Fluoranthene	7700	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Fluorene	2600	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Hexachlorobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Hexachlorobutadiene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Hexachlorocyclopentadiene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Hexachloroethane	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Indeno(1,2,3-c,d)pyrene	1700	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Isophorone	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM

**Qualifiers:**  
ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-06B

**Client Sample ID:** GSB-11  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	5200	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Nitrobenzene	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
N-Nitrosodimethylamine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
N-Nitrosodi-n-propylamine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
N-Nitrosodiphenylamine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Pentachlorophenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Phenanthrene	11000	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Phenol	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
Pyrene	7800	480		µg/Kg-dry	10	11/10/2003 12:59:00 PM
Pyridine	U	48		µg/Kg-dry	1	11/9/2003 6:48:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	17.5	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-12

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-07A

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1,1-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1,2,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1,2-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,1-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2,3-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2,3-Trichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2,4,5-Tetramethylbenzene	180	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2,4-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2,4-Trimethylbenzene	55	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2-Dibromo-3-chloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2-Dibromoethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,3,5-Trimethylbenzene	69	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,3-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,3-dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
1,4-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
2,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
2-Butanone	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
2-Chloroethyl vinyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
2-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
2-Hexanone	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
4-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
4-Isopropyltoluene	45	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
4-Methyl-2-pentanone	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Acetone	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Acrolein	U	29		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Acrylonitrile	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Benzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Bromobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Bromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Bromodichloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Bromoform	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Bromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Carbon disulfide	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-07A

**Client Sample ID:** GSB-12  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Chlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Chlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Chloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Chloroform	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Chloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
cis-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
cis-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Dibromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Dibromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Dichlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Diisopropyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Ethanol	U	29		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Ethyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Ethylbenzene	13	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Freon-114	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Hexachlorobutadiene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Isopropyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Isopropylbenzene	13	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
m,p-Xylene	9	12	J	µg/Kg-dry	1	11/5/2003 5:16:00 PM
Methyl tert-butyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Methylene chloride	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Naphthalene	76	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
n-Butyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
n-Butylbenzene	50	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
n-Propyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
n-Propylbenzene	20	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
o-Xylene	18	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
p-Diethylbenzene	300	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
p-Ethyltoluene	64	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
sec-Butylbenzene	31	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Styrene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
t-Butyl alcohol	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
tert-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Tetrachloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Toluene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
trans-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
trans-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Trichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Trichlorofluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-12**Lab Order:** 0310178**Tag Number:****Project:** Bronxville**Collection Date:** 10/28/2003**Lab ID:** 0310178-07A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM
Vinyl chloride	U	5.8		µg/Kg-dry	1	11/5/2003 5:16:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-12

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-07B

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
Mercury	U	0.0116		mg/Kg-dry	1	Analyst: JP 10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
		<b>SW8082A</b>		<b>(SW3550)</b>		Analyst: KB
Aroclor 1016	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1221	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1232	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1242	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1248	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1254	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
Aroclor 1260	U	92		µg/Kg-dry	1	11/5/2003 2:25:00 AM
<b>METALS-RCRA (8)</b>						
		<b>SW6010B</b>		<b>(SW3050A)</b>		Analyst: JP
Arsenic	13.6	0.525		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Barium	186	0.420		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Cadmium	0.331	0.210		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Chromium	13.1	0.420		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Lead	90.9	0.315		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Selenium	U	0.525		mg/Kg-dry	1	10/30/2003 1:29:15 PM
Silver	U	0.420		mg/Kg-dry	1	10/30/2003 1:29:15 PM
<b>SEMIVOLATILES SW-846 8270</b>						
		<b>SW8270D</b>		<b>(SW3550A)</b>		Analyst: RN
1,2,4-Trichlorobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
1,2-Dichlorobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
1,3-Dichlorobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
1,4-Dichlorobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4,5-Trichlorophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4,6-Trichlorophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4-Dichlorophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4-Dimethylphenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4-Dinitrophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,4-Dinitrotoluene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2,6-Dinitrotoluene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2-Chloronaphthalene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2-Chlorophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2-Methylnaphthalene	27000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
2-Methylphenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2-Nitroaniline	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
2-Nitrophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
3,3'-Dichlorobenzidine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
3+4-Methylphenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
3-Nitroaniline	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4,6-Dinitro-2-methylphenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-07B

**Client Sample ID:** GSB-12  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4-Chloro-3-methylphenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4-Chloroaniline	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4-Chlorophenyl phenyl ether	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4-Nitroaniline	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
4-Nitrophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Acenaphthene	7500	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Acenaphthylene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Aniline	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Anthracene	6100	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Azobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Benzidine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Benzo(a)anthracene	11000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Benzo(a)pyrene	9000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Benzo(b)fluoranthene	9400	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Benzo(g,h,i)perylene	4200	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Benzo(k)fluoranthene	3800	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Benzoic acid	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Benzyl alcohol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Bis(2-chloroethoxy)methane	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Bis(2-chloroethyl)ether	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Bis(2-chloroisopropyl)ether	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Bis(2-ethylhexyl)phthalate	820	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Butyl benzyl phthalate	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Carbazole	3000	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Chrysene	13000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Dibenzo(a,h)anthracene	1200	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Dibenzofuran	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Diethyl phthalate	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Dimethyl phthalate	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Di-n-butyl phthalate	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Di-n-octyl phthalate	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Fluoranthene	25000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Fluorene	7500	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Hexachlorobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Hexachlorobutadiene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Hexachlorocyclopentadiene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Hexachloroethane	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Indeno(1,2,3-c,d)pyrene	4800	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Isophorone	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-12**Lab Order:** 0310178**Tag Number:****Project:** Bronxville**Collection Date:** 10/28/2003**Lab ID:** 0310178-07B**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	6100	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Nitrobenzene	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
N-Nitrosodimethylamine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
N-Nitrosodi-n-propylamine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
N-Nitrosodiphenylamine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Pentachlorophenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Phenanthrene	40000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Phenol	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
Pyrene	24000	920		µg/Kg-dry	20	11/10/2003 1:34:00 PM
Pyridine	U	92		µg/Kg-dry	2	11/9/2003 7:23:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	13.5	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-08A

**Client Sample ID:** GSB-13  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>				<b>Analyst: LDS</b>
1,1,1,2-Tetrachloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1,1-Trichloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1,2,2-Tetrachloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1,2-Trichloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1-Dichloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1-Dichloroethene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,1-Dichloropropene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2,3-Trichlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2,3-Trichloropropane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2,4,5-Tetramethylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2,4-Trichlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2,4-Trimethylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2-Dibromo-3-chloropropane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2-Dibromoethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2-Dichlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2-Dichloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,2-Dichloropropane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,3,5-Trimethylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,3-Dichlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,3-dichloropropane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
1,4-Dichlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
2,2-Dichloropropane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
2-Butanone	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
2-Chloroethyl vinyl ether	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
2-Chlorotoluene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
2-Hexanone	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
4-Chlorotoluene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
4-Isopropyltoluene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
4-Methyl-2-pentanone	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Acetone	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Acrolein	U	28		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Acrylonitrile	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Benzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Bromobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Bromochloromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Bromodichloromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Bromoform	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Bromomethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Carbon disulfide	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-08A

**Client Sample ID:** GSB-13  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
Carbon tetrachloride	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Chlorobenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Chlorodifluoromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Chloroethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Chloroform	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Chloromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
cis-1,2-Dichloroethene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
cis-1,3-Dichloropropene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Dibromochloromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Dibromomethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Dichlorodifluoromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Diisopropyl ether	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Ethanol	U	28		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Ethyl acetate	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Ethylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Freon-114	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Hexachlorobutadiene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Isopropyl acetate	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Isopropylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Methyl tert-butyl ether	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Methylene chloride	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Naphthalene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
n-Butyl acetate	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
n-Butylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
n-Propyl acetate	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
n-Propylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
o-Xylene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
p-Diethylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
p-Ethyltoluene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
sec-Butylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Styrene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
t-Butyl alcohol	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
tert-Butylbenzene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Tetrachloroethene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Toluene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
trans-1,2-Dichloroethene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
trans-1,3-Dichloropropene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Trichloroethene	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Trichlorofluoromethane	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-13**Lab Order:** 0310178**Tag Number:****Project:** Bronxville**Collection Date:** 10/28/2003**Lab ID:** 0310178-08A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM
Vinyl chloride	U	5.6		µg/Kg-dry	1	11/5/2003 5:52:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-08B

**Client Sample ID:** GSB-13  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
		<b>SW7471B</b>				<b>Analyst: JP</b>
Mercury	U	0.0112		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
		<b>SW8082A</b>				<b>Analyst: KB</b>
						<b>(SW3550)</b>
Aroclor 1016	U	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1221	U	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1232	U	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1242	U	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1248	U	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1254	260	90		µg/Kg-dry	1	11/5/2003 3:06:00 AM
Aroclor 1260	80	90	J	µg/Kg-dry	1	11/5/2003 3:06:00 AM
<b>METALS-RCRA (8)</b>						
		<b>SW6010B</b>				<b>Analyst: JP</b>
						<b>(SW3050A)</b>
Arsenic	7.33	0.543		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Barium	101	0.434		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Cadmium	0.357	0.217		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Chromium	22.1	0.434		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Lead	66.9	0.326		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Selenium	U	0.543		mg/Kg-dry	1	10/30/2003 1:31:18 PM
Silver	U	0.434		mg/Kg-dry	1	10/30/2003 1:31:18 PM
<b>SEMIVOLATILES SW-846 8270</b>						
		<b>SW8270D</b>				<b>Analyst: RN</b>
						<b>(SW3550A)</b>
1,2,4-Trichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
1,2-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
1,3-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
1,4-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4,5-Trichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4,6-Trichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4-Dichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4-Dimethylphenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4-Dinitrophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,4-Dinitrotoluene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2,6-Dinitrotoluene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Chloronaphthalene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Chlorophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Methylnaphthalene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Methylphenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
2-Nitrophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
3,3'-Dichlorobenzidine	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
3+4-Methylphenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
3-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4,6-Dinitro-2-methylphenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-08B

**Client Sample ID:** GSB-13  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4-Chloro-3-methylphenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4-Chloroaniline	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4-Chlorophenyl phenyl ether	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
4-Nitrophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Acenaphthene	120	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Acenaphthylene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Aniline	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Anthracene	240	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Azobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzidine	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzo(a)anthracene	700	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzo(a)pyrene	640	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzo(b)fluoranthene	870	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzo(g,h,i)perylene	380	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzo(k)fluoranthene	280	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzoic acid	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Benzyl alcohol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Bis(2-chloroethoxy)methane	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Bis(2-chloroethyl)ether	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Bis(2-chloroisopropyl)ether	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Bis(2-ethylhexyl)phthalate	280	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Butyl benzyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Carbazole	88	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Chrysene	680	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Dibenzo(a,h)anthracene	120	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Dibenzofuran	58	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Diethyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Dimethyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Di-n-butyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Di-n-octyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Fluoranthene	1500	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Fluorene	110	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Hexachlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Hexachlorobutadiene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Hexachlorocyclopentadiene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Hexachloroethane	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Indeno(1,2,3-c,d)pyrene	420	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Isophorone	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-08B

**Client Sample ID:** GSB-13  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	70	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Nitrobenzene	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
N-Nitrosodimethylamine	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
N-Nitrosodi-n-propylamine	84	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
N-Nitrosodiphenylamine	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Pentachlorophenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Phenanthrene	720	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Phenol	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Pyrene	1300	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
Pyridine	U	45		µg/Kg-dry	1	11/9/2003 7:59:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	10.7	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-09A

**Client Sample ID:** GSB-14  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1,1-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1,2,2-Tetrachloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1,2-Trichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,1-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2,3-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2,3-Trichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2,4,5-Tetramethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2,4-Trichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2,4-Trimethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2-Dibromo-3-chloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2-Dibromoethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2-Dichloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,3,5-Trimethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,3-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,3-dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
1,4-Dichlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
2,2-Dichloropropane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
2-Butanone	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
2-Chloroethyl vinyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
2-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
2-Hexanone	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
4-Chlorotoluene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
4-Isopropyltoluene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
4-Methyl-2-pentanone	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Acetone	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Acrolein	U	29		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Acrylonitrile	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Benzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Bromobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Bromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Bromodichloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Bromoform	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Bromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Carbon disulfide	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-09A

**Client Sample ID:** GSB-14  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Chlorobenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Chlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Chloroethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Chloroform	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Chloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
cis-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
cis-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Dibromochloromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Dibromomethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Dichlorodifluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Diisopropyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Ethanol	U	29		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Ethyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Ethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Freon-114	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Hexachlorobutadiene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Isopropyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Isopropylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
m,p-Xylene	U	12		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Methyl tert-butyl ether	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Methylene chloride	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Naphthalene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
n-Butyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
n-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
n-Propyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
n-Propylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
o-Xylene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
p-Diethylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
p-Ethyltoluene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
sec-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Styrene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
t-Butyl alcohol	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
tert-Butylbenzene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Tetrachloroethene	14	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Toluene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
trans-1,2-Dichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
trans-1,3-Dichloropropene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Trichloroethene	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Trichlorofluoromethane	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-09A

**Client Sample ID:** GSB-14  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM
Vinyl chloride	U	5.8		µg/Kg-dry	1	11/5/2003 6:28:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-09B

Client Sample ID: GSB-14  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>		<b>SW7471B</b>				Analyst: JP
Mercury	0.106	0.0116		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3550)</b>		Analyst: KB
Aroclor 1016	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1221	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1232	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1242	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1248	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1254	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
Aroclor 1260	U	93		µg/Kg-dry	1	11/10/2003 4:28:00 PM
<b>METALS-RCRA (8)</b>		<b>SW6010B</b>		<b>(SW3050A)</b>		Analyst: JP
Arsenic	6.79	0.554		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Barium	193	0.443		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Cadmium	2.63	0.222		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Chromium	20.3	0.443		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Lead	146	0.333		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Selenium	U	0.554		mg/Kg-dry	1	10/30/2003 1:33:55 PM
Silver	U	0.443		mg/Kg-dry	1	10/30/2003 1:33:55 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		Analyst: RN
1,2,4-Trichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
1,2-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
1,3-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
1,4-Dichlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4,5-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4,6-Trichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4-Dichlorophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4-Dimethylphenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4-Dinitrophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,4-Dinitrotoluene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2,6-Dinitrotoluene	120	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Chloronaphthalene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Chlorophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Methylnaphthalene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
2-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
3,3'-Dichlorobenzidine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
3+4-Methylphenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
3-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4,6-Dinitro-2-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-09B

Client Sample ID: GSB-14  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		Analyst: RN
4-Bromophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4-Chloro-3-methylphenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4-Chloroaniline	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4-Chlorophenyl phenyl ether	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4-Nitroaniline	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
4-Nitrophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Acenaphthene	310	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Acenaphthylene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Aniline	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Anthracene	1000	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Azobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzidine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzo(a)anthracene	2900	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzo(a)pyrene	2200	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzo(b)fluoranthene	3000	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzo(g,h,i)perylene	1500	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzo(k)fluoranthene	1200	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzoic acid	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Benzyl alcohol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Bis(2-chloroethoxy)methane	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Bis(2-chloroethyl)ether	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Bis(2-chloroisopropyl)ether	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Bis(2-ethylhexyl)phthalate	100	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Butyl benzyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Carbazole	700	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Chrysene	2800	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Dibenzo(a,h)anthracene	400	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Dibenzofuran	180	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Diethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Dimethyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Di-n-butyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Di-n-octyl phthalate	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Fluoranthene	7400	230		µg/Kg-dry	5	11/10/2003 12:24:00 PM
Fluorene	200	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Hexachlorobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Hexachlorobutadiene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Hexachlorocyclopentadiene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Hexachloroethane	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Indeno(1,2,3-c,d)pyrene	1600	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Isophorone	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-09B

**Client Sample ID:** GSB-14  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	160	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Nitrobenzene	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
N-Nitrosodimethylamine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
N-Nitrosodi-n-propylamine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
N-Nitrosodiphenylamine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Pentachlorophenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Phenanthrene	5600	230		µg/Kg-dry	5	11/10/2003 12:24:00 PM
Phenol	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
Pyrene	6700	230		µg/Kg-dry	5	11/10/2003 12:24:00 PM
Pyridine	U	46		µg/Kg-dry	1	11/9/2003 8:34:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	13.6	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10A

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1,1-Trichloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1,2,2-Tetrachloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1,2-Trichloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1-Dichloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1-Dichloroethene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,1-Dichloropropene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2,3-Trichlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2,3-Trichloropropane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2,4,5-Tetramethylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2,4-Trichlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2,4-Trimethylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2-Dibromo-3-chloropropane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2-Dibromoethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2-Dichlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2-Dichloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,2-Dichloropropane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,3,5-Trimethylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,3-Dichlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,3-dichloropropane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
1,4-Dichlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
2,2-Dichloropropane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
2-Butanone	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
2-Chloroethyl vinyl ether	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
2-Chlorotoluene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
2-Hexanone	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
4-Chlorotoluene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
4-Isopropyltoluene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
4-Methyl-2-pentanone	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Acetone	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Acrolein	U	27		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Acrylonitrile	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Benzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Bromobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Bromochloromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Bromodichloromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Bromoform	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Bromomethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Carbon disulfide	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10A

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Chlorobenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Chlorodifluoromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Chloroethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Chloroform	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Chloromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
cis-1,2-Dichloroethene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
cis-1,3-Dichloropropene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Dibromochloromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Dibromomethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Dichlorodifluoromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Diisopropyl ether	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Ethanol	U	27		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Ethyl acetate	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Ethylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Freon-114	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Hexachlorobutadiene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Isopropyl acetate	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Isopropylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Methyl tert-butyl ether	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Methylene chloride	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Naphthalene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
n-Butyl acetate	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
n-Butylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
n-Propyl acetate	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
n-Propylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
o-Xylene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
p-Diethylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
p-Ethyltoluene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
sec-Butylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Styrene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
t-Butyl alcohol	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
tert-Butylbenzene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Tetrachloroethene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Toluene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
trans-1,2-Dichloroethene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
trans-1,3-Dichloropropene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Trichloroethene	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Trichlorofluoromethane	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10A

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM
Vinyl chloride	U	5.5		µg/Kg-dry	1	11/5/2003 7:05:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10B

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>		<b>SW7471B</b>				<b>Analyst: JP</b>
Mercury	0.0932	0.0110		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3550)</b>		<b>Analyst: KB</b>
Aroclor 1016	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1221	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1232	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1242	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1248	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1254	60	88	J	µg/Kg-dry	1	11/5/2003 5:32:00 AM
Aroclor 1260	U	88		µg/Kg-dry	1	11/5/2003 5:32:00 AM
<b>METALS-RCRA (8)</b>		<b>SW6010B</b>		<b>(SW3050A)</b>		<b>Analyst: JP</b>
Arsenic	1.67	0.500		mg/Kg-dry	1	10/30/2003 1:35:52 PM
Barium	53.8	0.400		mg/Kg-dry	1	10/30/2003 1:35:52 PM
Cadmium	0.12	0.200	J	mg/Kg-dry	1	10/30/2003 1:35:52 PM
Chromium	64.5	0.400		mg/Kg-dry	1	10/30/2003 1:35:52 PM
Lead	242	0.300		mg/Kg-dry	1	10/30/2003 1:35:52 PM
Selenium	U	0.500		mg/Kg-dry	1	10/30/2003 1:35:52 PM
Silver	U	0.400		mg/Kg-dry	1	10/30/2003 1:35:52 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
1,2,4-Trichlorobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
1,2-Dichlorobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
1,3-Dichlorobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
1,4-Dichlorobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4,5-Trichlorophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4,6-Trichlorophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4-Dichlorophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4-Dimethylphenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4-Dinitrophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,4-Dinitrotoluene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2,6-Dinitrotoluene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Chloronaphthalene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Chlorophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Methylnaphthalene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Methylphenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Nitroaniline	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
2-Nitrophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
3,3'-Dichlorobenzidine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
3+4-Methylphenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
3-Nitroaniline	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4,6-Dinitro-2-methylphenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10B

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4-Chloro-3-methylphenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4-Chloroaniline	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4-Chlorophenyl phenyl ether	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4-Nitroaniline	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
4-Nitrophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Acenaphthene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Acenaphthylene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Aniline	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Anthracene	85	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Azobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzidine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzo(a)anthracene	360	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzo(a)pyrene	350	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzo(b)fluoranthene	440	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzo(g,h,i)perylene	250	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzo(k)fluoranthene	190	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzoic acid	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Benzyl alcohol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Bis(2-chloroethoxy)methane	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Bis(2-chloroethyl)ether	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Bis(2-chloroisopropyl)ether	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Bis(2-ethylhexyl)phthalate	67	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Butyl benzyl phthalate	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Carbazole	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Chrysene	350	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Dibenzo(a,h)anthracene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Dibenzofuran	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Diethyl phthalate	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Dimethyl phthalate	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Di-n-butyl phthalate	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Di-n-octyl phthalate	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Fluoranthene	780	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Fluorene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Hexachlorobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Hexachlorobutadiene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Hexachlorocyclopentadiene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Hexachloroethane	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Indeno(1,2,3-c,d)pyrene	260	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Isophorone	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-10B

**Client Sample ID:** GSB-15  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Nitrobenzene	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
N-Nitrosodimethylamine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
N-Nitrosodi-n-propylamine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
N-Nitrosodiphenylamine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Pentachlorophenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Phenanthrene	360	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Phenol	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Pyrene	720	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
Pyridine	U	44		µg/Kg-dry	1	11/9/2003 9:09:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	8.80	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-11A

Client Sample ID: GSB-16  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1,1-Trichloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1,2,2-Tetrachloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1,2-Trichloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1-Dichloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1-Dichloroethene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,1-Dichloropropene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2,3-Trichlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2,3-Trichloropropane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2,4,5-Tetramethylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2,4-Trichlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2,4-Trimethylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2-Dibromo-3-chloropropane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2-Dibromoethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2-Dichlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2-Dichloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,2-Dichloropropane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,3,5-Trimethylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,3-Dichlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,3-dichloropropane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
1,4-Dichlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
2,2-Dichloropropane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
2-Butanone	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
2-Chloroethyl vinyl ether	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
2-Chlorotoluene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
2-Hexanone	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
4-Chlorotoluene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
4-Isopropyltoluene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
4-Methyl-2-pentanone	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Acetone	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Acrolein	U	31		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Acrylonitrile	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Benzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Bromobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Bromochloromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Bromodichloromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Bromoform	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Bromomethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Carbon disulfide	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-11A

Client Sample ID: GSB-16  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Chlorobenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Chlorodifluoromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Chloroethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Chloroform	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Chloromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
cis-1,2-Dichloroethene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
cis-1,3-Dichloropropene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Dibromochloromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Dibromomethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Dichlorodifluoromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Diisopropyl ether	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Ethanol	U	31		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Ethyl acetate	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Ethylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Freon-114	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Hexachlorobutadiene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Isopropyl acetate	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Isopropylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
m,p-Xylene	U	12		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Methyl tert-butyl ether	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Methylene chloride	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Naphthalene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
n-Butyl acetate	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
n-Butylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
n-Propyl acetate	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
n-Propylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
o-Xylene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
p-Diethylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
p-Ethyltoluene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
sec-Butylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Styrene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
t-Butyl alcohol	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
tert-Butylbenzene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Tetrachloroethene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Toluene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
trans-1,2-Dichloroethene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
trans-1,3-Dichloropropene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Trichloroethene	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Trichlorofluoromethane	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-11A

**Client Sample ID:** GSB-16  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						
		<b>SW8260B</b>				<b>Analyst: LDS</b>
Vinyl acetate	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM
Vinyl chloride	U	6.2		µg/Kg-dry	1	11/5/2003 7:41:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-11B

Client Sample ID: GSB-16  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>						
		<b>SW7471B</b>				Analyst: JP
Mercury	U	0.0123		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>						
		<b>SW8082A</b>		<b>(SW3550)</b>		Analyst: KB
Aroclor 1016	120	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1221	U	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1232	U	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1242	U	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1248	U	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1254	170	99		µg/Kg-dry	1	11/5/2003 6:35:00 AM
Aroclor 1260	50	99	J	µg/Kg-dry	1	11/5/2003 6:35:00 AM
<b>METALS-RCRA (8)</b>						
		<b>SW6010B</b>		<b>(SW3050A)</b>		Analyst: JP
Arsenic	8.56	0.612		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Barium	355	0.489		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Cadmium	1.27	0.245		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Chromium	19.7	0.489		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Lead	860	0.367		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Selenium	U	0.612		mg/Kg-dry	1	10/30/2003 1:38:08 PM
Silver	0.36	0.489	J	mg/Kg-dry	1	10/30/2003 1:38:08 PM
<b>SEMIVOLATILES SW-846 8270</b>						
		<b>SW8270D</b>		<b>(SW3550A)</b>		Analyst: RN
1,2,4-Trichlorobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
1,2-Dichlorobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
1,3-Dichlorobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
1,4-Dichlorobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4,5-Trichlorophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4,6-Trichlorophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4-Dichlorophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4-Dimethylphenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4-Dinitrophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,4-Dinitrotoluene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2,6-Dinitrotoluene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Chloronaphthalene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Chlorophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Methylnaphthalene	930	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Methylphenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Nitroaniline	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
2-Nitrophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
3,3'-Dichlorobenzidine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
3+4-Methylphenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
3-Nitroaniline	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4,6-Dinitro-2-methylphenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-11B

Client Sample ID: GSB-16  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4-Chloro-3-methylphenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4-Chloroaniline	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4-Chlorophenyl phenyl ether	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4-Nitroaniline	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
4-Nitrophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Acenaphthene	8600	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Acenaphthylene	740	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Aniline	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Anthracene	23000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Azobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Benzidine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Benzo(a)anthracene	55000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Benzo(a)pyrene	48000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Benzo(b)fluoranthene	66000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Benzo(g,h,i)perylene	26000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Benzo(k)fluoranthene	24000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Benzoic acid	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Benzyl alcohol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Bis(2-chloroethoxy)methane	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Bis(2-chloroethyl)ether	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Bis(2-chloroisopropyl)ether	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Bis(2-ethylhexyl)phthalate	3900	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Butyl benzyl phthalate	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Carbazole	6300	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Chrysene	56000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Dibenzo(a,h)anthracene	7200	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Dibenzofuran	4200	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Diethyl phthalate	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Dimethyl phthalate	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Di-n-butyl phthalate	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Di-n-octyl phthalate	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Fluoranthene	120000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Fluorene	9800	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Hexachlorobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Hexachlorobutadiene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Hexachlorocyclopentadiene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Hexachloroethane	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Indeno(1,2,3-c,d)pyrene	28000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Isophorone	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.

**Client Sample ID:** GSB-16

**Lab Order:** 0310178

**Tag Number:**
**Project:** Bronxville

**Collection Date:** 10/28/2003

**Lab ID:** 0310178-11B

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	810	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Nitrobenzene	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
N-Nitrosodimethylamine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
N-Nitrosodi-n-propylamine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
N-Nitrosodiphenylamine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Pentachlorophenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Phenanthrene	81000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Phenol	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
Pyrene	96000	4900		µg/Kg-dry	100	11/10/2003 2:09:00 PM
Pyridine	U	250		µg/Kg-dry	5	11/9/2003 9:44:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	18.9	0		wt%	1	10/30/2003

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-12A

Client Sample ID: GSB-17  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1,1-Trichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1,2,2-Tetrachloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1,2-Trichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1-Dichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,1-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2,3-Trichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2,3-Trichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2,4,5-Tetramethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2,4-Trichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2,4-Trimethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2-Dibromo-3-chloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2-Dibromoethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2-Dichloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,2-Dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,3,5-Trimethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,3-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,3-dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
1,4-Dichlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
2,2-Dichloropropane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
2-Butanone	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
2-Chloroethyl vinyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
2-Chlorotoluene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
2-Hexanone	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
4-Chlorotoluene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
4-Isopropyltoluene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
4-Methyl-2-pentanone	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Acetone	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Acrolein	U	28		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Acrylonitrile	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Benzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Bromobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Bromochloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Bromodichloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Bromoform	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Bromomethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Carbon disulfide	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-12A

**Client Sample ID:** GSB-17  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		<b>Analyst: LDS</b>		
Carbon tetrachloride	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Chlorobenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Chlorodifluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Chloroethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Chloroform	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Chloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
cis-1,2-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
cis-1,3-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Dibromochloromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Dibromomethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Dichlorodifluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Diisopropyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Ethanol	U	28		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Ethyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Ethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Freon-114	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Hexachlorobutadiene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Isopropyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Isopropylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
m,p-Xylene	U	11		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Methyl tert-butyl ether	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Methylene chloride	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Naphthalene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
n-Butyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
n-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
n-Propyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
n-Propylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
o-Xylene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
p-Diethylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
p-Ethyltoluene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
sec-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Styrene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
t-Butyl alcohol	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
tert-Butylbenzene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Tetrachloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Toluene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
trans-1,2-Dichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
trans-1,3-Dichloropropene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Trichloroethene	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Trichlorofluoromethane	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-12A

**Client Sample ID:** GSB-17  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM
Vinyl chloride	U	5.7		µg/Kg-dry	1	11/5/2003 8:18:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-12B

Client Sample ID: GSB-17  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7471</b>		<b>SW7471B</b>				Analyst: JP
Mercury	U	0.0113		mg/Kg-dry	1	10/30/2003
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3550)</b>		Analyst: KB
Aroclor 1016	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1221	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1232	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1242	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1248	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1254	120	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
Aroclor 1260	U	91		µg/Kg-dry	1	11/5/2003 7:16:00 AM
<b>METALS-RCRA (8)</b>		<b>SW6010B</b>		<b>(SW3050A)</b>		Analyst: JP
Arsenic	8.13	0.537		mg/Kg-dry	1	10/30/2003 1:40:22 PM
Barium	71.0	0.429		mg/Kg-dry	1	10/30/2003 1:40:22 PM
Cadmium	0.21	0.215	J	mg/Kg-dry	1	10/30/2003 1:40:22 PM
Chromium	14.2	0.429		mg/Kg-dry	1	10/30/2003 1:40:22 PM
Lead	47.1	0.322		mg/Kg-dry	1	10/30/2003 1:40:22 PM
Selenium	U	0.537		mg/Kg-dry	1	10/30/2003 1:40:22 PM
Silver	U	0.429		mg/Kg-dry	1	10/30/2003 1:40:22 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		Analyst: RN
1,2,4-Trichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
1,2-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
1,3-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
1,4-Dichlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4,5-Trichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4,6-Trichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4-Dichlorophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4-Dimethylphenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4-Dinitrophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,4-Dinitrotoluene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2,6-Dinitrotoluene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Chloronaphthalene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Chlorophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Methylnaphthalene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Methylphenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
2-Nitrophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
3,3'-Dichlorobenzidine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
3+4-Methylphenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
3-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4,6-Dinitro-2-methylphenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-12B

**Client Sample ID:** GSB-17  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
4-Bromophenyl phenyl ether	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4-Chloro-3-methylphenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4-Chloroaniline	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4-Chlorophenyl phenyl ether	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4-Nitroaniline	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
4-Nitrophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Acenaphthene	140	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Acenaphthylene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Aniline	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Anthracene	320	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Azobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benidine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzo(a)anthracene	820	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzo(a)pyrene	720	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzo(b)fluoranthene	800	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzo(g,h,i)perylene	400	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzo(k)fluoranthene	340	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzoic acid	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Benzyl alcohol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Bis(2-chloroethoxy)methane	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Bis(2-chloroethyl)ether	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Bis(2-chloroisopropyl)ether	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Bis(2-ethylhexyl)phthalate	170	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Butyl benzyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Carbazole	110	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Chrysene	790	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Dibenzo(a,h)anthracene	120	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Dibenzofuran	65	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Diethyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Dimethyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Di-n-butyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Di-n-octyl phthalate	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Fluoranthene	1700	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Fluorene	140	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Hexachlorobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Hexachlorobutadiene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Hexachlorocyclopentadiene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Hexachloroethane	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Indeno(1,2,3-c,d)pyrene	510	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Isophorone	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-17

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-12B

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3550A)</b>		<b>Analyst: RN</b>
Naphthalene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Nitrobenzene	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
N-Nitrosodimethylamine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
N-Nitrosodi-n-propylamine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
N-Nitrosodiphenylamine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Pentachlorophenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Phenanthrene	1100	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Phenol	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Pyrene	1500	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
Pyridine	U	45		µg/Kg-dry	1	11/9/2003 10:19:00 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>				<b>Analyst: BK</b>
Percent Moisture	11.8	0		wt%	1	10/30/2003

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-13A

Client Sample ID: MW-1  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1,1-Trichloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1,2,2-Tetrachloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1,2-Trichloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1-Dichloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,1-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2,3-Trichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2,3-Trichloropropane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2,4,5-Tetramethylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2,4-Trichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2,4-Trimethylbenzene	2.9	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2-Dibromo-3-chloropropane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2-Dibromoethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2-Dichloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,2-Dichloropropane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,3,5-Trimethylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,3-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,3-dichloropropane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
1,4-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
2,2-Dichloropropane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
2-Butanone	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
2-Chloroethyl vinyl ether	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
2-Chlorotoluene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
2-Hexanone	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
4-Chlorotoluene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
4-Isopropyltoluene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
4-Methyl-2-pentanone	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Acetone	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Acrolein	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Acrylonitrile	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Benzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Bromobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Bromochloromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Bromodichloromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Bromoform	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Bromomethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Carbon disulfide	U	1.0		µg/L	1	11/6/2003 4:12:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: MW-1

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-13A

Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Chlorobenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Chlorodifluoromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Chloroethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Chloroform	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Chloromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
cis-1,2-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
cis-1,3-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Dibromochloromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Dibromomethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Dichlorodifluoromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Diisopropyl ether	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Ethanol	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Ethyl acetate	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Ethylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Freon-114	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Hexachlorobutadiene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Isopropyl acetate	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Isopropylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
m,p-Xylene	U	2.0		µg/L	1	11/6/2003 4:12:00 AM
Methyl tert-butyl ether	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Methylene chloride	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Naphthalene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
n-Butyl acetate	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
n-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
n-Propyl acetate	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
n-Propylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
o-Xylene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
p-Diethylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
p-Ethyltoluene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
sec-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Styrene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
t-Butyl alcohol	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
tert-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Tetrachloroethene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Toluene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
trans-1,2-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
trans-1,3-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Trichloroethene	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Trichlorofluoromethane	U	1.0		µg/L	1	11/6/2003 4:12:00 AM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-13A

**Client Sample ID:** MW-1  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	1.0		µg/L	1	11/6/2003 4:12:00 AM
Vinyl chloride	U	1.0		µg/L	1	11/6/2003 4:12:00 AM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-13B

Client Sample ID: MW-1  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>PCB'S AS AROCLORS SW-846 8082</b>		<b>SW8082A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Aroclor 1016	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1221	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1232	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1242	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1248	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1254	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
Aroclor 1260	U	1.0		µg/L	1	11/3/2003 3:19:00 PM
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
1,2,4-Trichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
1,2-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
1,3-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
1,4-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4,5-Trichlorophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4,6-Trichlorophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4-Dichlorophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4-Dimethylphenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4-Dinitrophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,4-Dinitrotoluene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2,6-Dinitrotoluene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Chloronaphthalene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Chlorophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Methylnaphthalene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Methylphenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
2-Nitrophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
3,3'-Dichlorobenzidine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
3+4-Methylphenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
3-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4,6-Dinitro-2-methylphenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Bromophenyl phenyl ether	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Chloro-3-methylphenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Chloroaniline	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Chlorophenyl phenyl ether	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
4-Nitrophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Acenaphthene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Acenaphthylene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Aniline	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Anthracene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Azobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-13B

Client Sample ID: MW-1  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
Benzidine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzo(a)anthracene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzo(a)pyrene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzo(b)fluoranthene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzo(g,h,i)perylene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzo(k)fluoranthene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzoic acid	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Benzyl alcohol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Bis(2-chloroethoxy)methane	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Bis(2-chloroethyl)ether	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Bis(2-chloroisopropyl)ether	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Bis(2-ethylhexyl)phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Butyl benzyl phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Carbazole	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Chrysene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Dibenzo(a,h)anthracene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Dibenzofuran	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Diethyl phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Dimethyl phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Di-n-butyl phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Di-n-octyl phthalate	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Fluoranthene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Fluorene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Hexachlorobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Hexachlorobutadiene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Hexachlorocyclopentadiene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Hexachloroethane	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Indeno(1,2,3-c,d)pyrene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Isophorone	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Naphthalene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Nitrobenzene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
N-Nitrosodimethylamine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
N-Nitrosodi-n-propylamine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
N-Nitrosodiphenylamine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Pentachlorophenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Phenanthrene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Phenol	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Pyrene	U	5.0		µg/L	1	11/4/2003 7:19:00 PM
Pyridine	U	5.0		µg/L	1	11/4/2003 7:19:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: MW-1

Lab Order: 0310178

Tag Number:

Project: Bronxville

Collection Date: 10/28/2003

Lab ID: 0310178-13C

Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7470</b>						
		<b>SW7470A</b>				Analyst: JP
Mercury	0.002	0.000200		mg/L	1	10/30/2003
<b>METALS RCRA (8)</b>						
		<b>SW6010B</b>				Analyst: JP
				<b>(SW3010A)</b>		
Arsenic	0.019	0.0250	J	mg/L	1	10/30/2003 12:35:31 PM
Barium	0.829	0.0200		mg/L	1	10/30/2003 12:35:31 PM
Cadmium	U	0.0100		mg/L	1	10/30/2003 12:35:31 PM
Chromium	0.0228	0.0200		mg/L	1	10/30/2003 12:35:31 PM
Lead	0.0692	0.0150		mg/L	1	10/30/2003 12:35:31 PM
Selenium	U	0.0250		mg/L	1	10/30/2003 12:35:31 PM
Silver	U	0.0200		mg/L	1	10/30/2003 12:35:31 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-14A

Client Sample ID: MW-2  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
1,1,1,2-Tetrachloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1,1-Trichloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1,2,2-Tetrachloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1,2-Trichloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1-Dichloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,1-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2,3-Trichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2,3-Trichloropropane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2,4,5-Tetramethylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2,4-Trichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2,4-Trimethylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2-Dibromo-3-chloropropane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2-Dibromoethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2-Dichloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,2-Dichloropropane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,3,5-Trimethylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,3-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,3-dichloropropane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
1,4-Dichlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
2,2-Dichloropropane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
2-Butanone	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
2-Chloroethyl vinyl ether	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
2-Chlorotoluene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
2-Hexanone	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
4-Chlorotoluene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
4-Isopropyltoluene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
4-Methyl-2-pentanone	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Acetone	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Acrolein	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Acrylonitrile	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Benzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Bromobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Bromochloromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Bromodichloromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Bromoform	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Bromomethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Carbon disulfide	U	1.0		µg/L	1	11/6/2003 4:48:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-14A

Client Sample ID: MW-2  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>		<b>SW8260B</b>		Analyst: LDS		
Carbon tetrachloride	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Chlorobenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Chlorodifluoromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Chloroethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Chloroform	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Chloromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
cis-1,2-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
cis-1,3-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Dibromochloromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Dibromomethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Dichlorodifluoromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Diisopropyl ether	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Ethanol	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Ethyl acetate	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Ethylbenzene	1.6	1.0		µg/L	1	11/6/2003 4:48:00 AM
Freon-114	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Hexachlorobutadiene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Isopropyl acetate	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Isopropylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
m,p-Xylene	8.0	2.0		µg/L	1	11/6/2003 4:48:00 AM
Methyl tert-butyl ether	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Methylene chloride	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Naphthalene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
n-Butyl acetate	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
n-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
n-Propyl acetate	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
n-Propylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
o-Xylene	0.7	1.0	J	µg/L	1	11/6/2003 4:48:00 AM
p-Diethylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
p-Ethyltoluene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
sec-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Styrene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
t-Butyl alcohol	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
tert-Butylbenzene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Tetrachloroethene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Toluene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
trans-1,2-Dichloroethene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
trans-1,3-Dichloropropene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Trichloroethene	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Trichlorofluoromethane	U	1.0		µg/L	1	11/6/2003 4:48:00 AM

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-14A

**Client Sample ID:** MW-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILES SW-846 METHOD 8260</b>						Analyst: LDS
Vinyl acetate	U	1.0		µg/L	1	11/6/2003 4:48:00 AM
Vinyl chloride	U	1.0		µg/L	1	11/6/2003 4:48:00 AM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-14B

Client Sample ID: MW-2  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>PCB'S AS AROCLORS SW-846 8082</b>						
		<b>SW8082A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Aroclor 1016	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1221	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1232	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1242	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1248	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1254	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
Aroclor 1260	U	1.0		µg/L	1	11/3/2003 4:01:00 PM
<b>SEMIVOLATILES SW-846 8270</b>						
		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
1,2,4-Trichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
1,2-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
1,3-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
1,4-Dichlorobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4,5-Trichlorophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4,6-Trichlorophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4-Dichlorophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4-Dimethylphenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4-Dinitrophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,4-Dinitrotoluene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2,6-Dinitrotoluene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Chloronaphthalene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Chlorophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Methylnaphthalene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Methylphenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
2-Nitrophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
3,3'-Dichlorobenzidine	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
3+4-Methylphenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
3-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4,6-Dinitro-2-methylphenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Bromophenyl phenyl ether	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Chloro-3-methylphenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Chloroaniline	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Chlorophenyl phenyl ether	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Nitroaniline	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
4-Nitrophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Acenaphthene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Acenaphthylene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Aniline	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Anthracene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Azobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 11-Nov-03

CLIENT: Galli Engineering, P.C.  
Lab Order: 0310178  
Project: Bronxville  
Lab ID: 0310178-14B

Client Sample ID: MW-2  
Tag Number:  
Collection Date: 10/28/2003  
Matrix: LIQUID

## Analyses

	Result	Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES SW-846 8270</b>						
Benzidine	U	5.0		µg/L	1	Analyst: RN
Benzo(a)anthracene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzo(a)pyrene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzo(b)fluoranthene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzo(g,h,i)perylene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzo(k)fluoranthene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzoic acid	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Benzyl alcohol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Bis(2-chloroethoxy)methane	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Bis(2-chloroethyl)ether	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Bis(2-chloroisopropyl)ether	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Bis(2-ethylhexyl)phthalate	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Butyl benzyl phthalate	21	5.0		µg/L	1	11/4/2003 7:55:00 PM
Carbazole	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Chrysene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Dibenzo(a,h)anthracene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Dibenzofuran	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Diethyl phthalate	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Dimethyl phthalate	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Di-n-butyl phthalate	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Di-n-octyl phthalate	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Fluoranthene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Fluorene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Hexachlorobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Hexachlorobutadiene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Hexachlorocyclopentadiene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Hexachloroethane	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Indeno(1,2,3-c,d)pyrene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Isophorone	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Naphthalene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Nitrobenzene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
N-Nitrosodimethylamine	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
N-Nitrosodi-n-propylamine	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
N-Nitrosodiphenylamine	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Pentachlorophenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Phenanthrene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Phenol	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Pyrene	U	5.0		µg/L	1	11/4/2003 7:55:00 PM
Pyridine	U	5.0		µg/L	1	11/4/2003 7:55:00 PM

## Qualifiers:

ND - Not Detected at the Reporting Limit

I - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 11-Nov-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0310178  
**Project:** Bronxville  
**Lab ID:** 0310178-14C

**Client Sample ID:** MW-2  
**Tag Number:**  
**Collection Date:** 10/28/2003  
**Matrix:** LIQUID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>MERCURY SW-846 7470</b>						
		<b>SW7470A</b>				<b>Analyst: JP</b>
Mercury	0.001	0.000200		mg/L	1	10/30/2003
<b>METALS RCRA (8)</b>		<b>SW6010B</b>				<b>Analyst: JP</b>
				<b>(SW3010A)</b>		
Arsenic	0.221	0.0250		mg/L	1	10/30/2003 12:41:37 PM
Barium	2.58	0.0200		mg/L	1	10/30/2003 12:41:37 PM
Cadmium	0.145	0.0100		mg/L	1	10/30/2003 12:41:37 PM
Chromium	2.01	0.0200		mg/L	1	10/30/2003 12:41:37 PM
Lead	7.21	0.0150		mg/L	1	10/30/2003 12:41:37 PM
Selenium	U	0.0250		mg/L	1	10/30/2003 12:41:37 PM
Silver	0.792	0.0200		mg/L	1	10/30/2003 12:41:37 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



AMERICAN  
ANALYTICAL  
LABORATORIES, INC.

56 TOLEDO STREET • FARMINGDALE, NEW YORK 11735  
(631) 454-6100 • FAX (631) 454-8027 • email: lbeyer@american-analytical.com

NYSDOH ELAP 11418  
CTDOH PH-0205  
NJDEP NY050  
PADEP 68-573

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS GALLI ENGINEERING, P.C. 734 Walt Whitman Rd., Suite 402A Melville, NY 11747	CONTACT: Jolie de la Fuente	SAMPLER (SIGNATURE) <i>Andrew D. Stuart</i>	DATE 10/20/03	TIME 16:45	SAMPLE(S) SEALED YES/NO <b>YES</b>
PROJECT LOCATION: Bronxville		SAMPLER NAME (PRINT) Andrew D. Stuart	CORRECT CONTAINER(S) YES/NO <b>YES</b>		

LABORATORY ID #	MATRIX	TYPE	PRES.	SAMPLE # - LOCATION	ANALYSIS REQUIRED	FOR METHANOL PRESERVED SAMPLES [VOLATILE VIAL #]
0310178-01A	S	G	-	SB-1 (2 jars)	624	
0310178-02A	S	G	-	SBM-3 (2 jars)	625	
0310178-03A	S	G	-	G5B-2 (2 jars)	8 R689 M446	
0310178-04A	S	G	-	G5B-3 (2 jars)		
0310178-05A	S	G	-	G5B-9 (2 jars)		
0310178-06A	S	G	-	G5B-11 (2 jars)		
0310178-07A	S	G	-	G5B-12 (2 jars)		
0310178-08A	S	G	-	G5B-13 (2 jars)		
0310178-09A	S	G	-	G5B-14 (2 jars)		
0310178-10A	S	G	-	G5B-15 (2 jars)		
0310178-11A	S	G	-	G5B-16 (2 jars)		
0310178-12A	S	G	-	G5B-17 (2 jars)		

MATRIX S=SOIL; L=LIQUID; SL=SLUDGE; A-AIR; W=WIFE; P=PAINT CHIPS; B=BULK MATERIAL TYPE G=GRAB; C=COMPOSITE, SS=SPLIT SPOON		TURNAROUND REQUIRED: NORMAL <input checked="" type="checkbox"/> STAT <input type="checkbox"/> BY / /		COOLER TEMPERATURE:	
RELINQUISHED BY (SIGNATURE) <i>Andrew D. Stuart</i>	DATE 10/20/03 TIME 4:30 PM	PRINTED NAME Andrew D. Stuart	RECEIVED BY LAB (SIGNATURE) <i>For Beyer</i>	DATE 10/29/03 TIME 14:20	PRINTED NAME Lori Beyer
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE TIME	PRINTED NAME

**CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT**

[illegible]

**AMERICAN ANALYTICAL LABORATORIES, INC.**

**56 TOLEDO STREET**

**FARMINGDALE, NEW YORK 11735**

**TELEPHONE: (631) 454-6100**

**FAX: (631) 454-8027**

**DATA REPORTING QUALIFIERS**

For reporting results, the following "Results Qualifiers" are used:

<b>Value</b>	If the result is greater than or equal to the detection limit, report the value
<b>U</b>	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
<b>J</b>	Indicates an estimated value. The flag is used: <ol style="list-style-type: none"><li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li><li>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3ug/L was calculated report as 3J. This flag is used when similar situations arise on any organic parameter i.e. Pesticide, PCBs and others.</li></ol>
<b>B</b>	Indicates the analyte was found in the blank as well as the sample report "10B".
<b>E</b>	Indicates the analytes concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>D</b>	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
<b>P</b>	This flag is used for Pesticide / PCB target analyte when there is >25% difference for detected concentrations between the two GC Columns. The higher of the two values is reported on Form I and flagged with a "P".
<b>N</b>	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

## **APPENDIX E**

### **TCLP LABORATORY ANALYTICAL REPORTS**

December 09, 2003

Juliana Delafuente  
Galli Engineering, P.C.  
734 Walt Whitman Road  
Suite 402A  
Melville, NY 11747

TEL: (631) 271-9292

FAX (631) 271-9345

RE: Bronxville, N.Y.

Order No.: 0312006

Dear Juliana Delafuente:

American Analytical Laboratories, Inc. received 10 samples on 12/2/2003 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Lori Beyer  
Lab Director



**American Analytical Laboratories, Inc.****Date:** 09-Dec-03

---

**CLIENT:** Galli Engineering, P.C.  
**Project:** Bronxville, N.Y.  
**Lab Order:** 0312006

---

**Work Order Sample Summary**

---

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
0312006-01A	GSB-18		12/1/2003	12/2/2003
0312006-02A	GSB-19		12/1/2003	12/2/2003
0312006-03A	GSB-20		12/1/2003	12/2/2003
0312006-04A	GSB-21		12/1/2003	12/2/2003
0312006-05A	GSB-22		12/1/2003	12/2/2003
0312006-06A	GSB-23		12/1/2003	12/2/2003
0312006-07A	GSB-24		12/1/2003	12/2/2003
0312006-08A	GSB-25		12/1/2003	12/2/2003
0312006-09A	GSB-26		12/1/2003	12/2/2003
0312006-10A	GSB-18a		12/1/2003	12/2/2003

---



AMERICAN ANALYTICAL LABORATORIES, INC.

56 TOLEDO STREET • FARMINGDALE, NEW YORK 11735  
(631) 454-6100 • FAX (631) 454-8027 • email: lbeyer@american-analytical.com

NYSDOH ELAP 11418  
CTDOH PH-0205  
NJDEP NY050  
PADEP 68-573

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS Galli Engineering 734 West Whitman Rd Melville, NY 11777		CONTACT: Julie dela Fuente		SAMPLER (SIGNATURE) <i>Julie dela Fuente</i>	DATE 12/1/03	TIME	SAMPLE(S) SEALED	YES / NO	
PROJECT LOCATION: Bronxville, NY				SAMPLER NAME (PRINT) Juliana dela Fuente			CORRECT CONTAINER(S)	YES / NO	
				ANALYSIS REQUIRED FULL TCLP					FOR METHANOL PRESERVED SAMPLES [ VOLATILE VIAL # ]
LABORATORY ID #	MATRIX	TYPE	PRES.	SAMPLE # - LOCATION					
0312006-01A	S	G		GSB-18	X				
0312006-02A				GSB-19					
0312006-03A				GSB-20					
0312006-04A				GSB-21					
0312006-05A				GSB-22					
0312006-06A				GSB-23					
0312006-07A				GSB-24					
0312006-08A				GSB-25					
0312006-09A				GSB-26					
0312006-10A				GSB-28a	X				
COOLER TEMPERATURE:									
COMMENTS / INSTRUCTIONS									
TURNAROUND REQUIRED: NORMAL <input checked="" type="checkbox"/> STAT <input type="checkbox"/> BY / /									
RELINQUISHED BY (SIGNATURE) <i>Andrew D. Stuart</i>		DATE 12/1/03 TIME 11:05AM		RECEIVED BY LAB (SIGNATURE) <i>Juliana dela Fuente</i>		DATE 12-02-03 TIME 11:05		PRINTED NAME J. Gray	
RELINQUISHED BY (SIGNATURE)		DATE TIME		RECEIVED BY LAB (SIGNATURE)		DATE TIME		PRINTED NAME	

WHITE-OFFICE / CANARY-LAB / PINK-SAMPLE CUSTODIAN / GOLDENROD-CLIENT

**AMERICAN ANALYTICAL LABORATORIES, INC.**

**56 TOLEDO STREET**

**FARMINGDALE, NEW YORK 11735**

**TELEPHONE: (631) 454-6100      FAX: (631) 454-8027**

**DATA REPORTING QUALIFIERS**

For reporting results, the following "Results Qualifiers" are used:

<b>Value</b>	If the result is greater than or equal to the detection limit, report the value
<b>U</b>	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
<b>J</b>	Indicates an estimated value. The flag is used: <ul style="list-style-type: none"><li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li><li>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3ug/L was calculated report as 3J. This flag is used when similar situations arise on any organic parameter i.e. Pesticide, PCBs and others.</li></ul>
<b>B</b>	Indicates the analyte was found in the blank as well as the sample report "10B".
<b>E</b>	Indicates the analytes concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>D</b>	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
<b>P</b>	This flag is used for Pesticide / PCB target analyte when there is >25% difference for detected concentrations between the two GC Columns. The higher of the two values is reported on Form I and flagged with a "P".
<b>N</b>	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.

**Client Sample ID:** GSB-18

**Lab Order:** 0312006

**Tag Number:**

**Project:** Bronxville, N.Y.

**Collection Date:** 12/1/2003

**Lab ID:** 0312006-01A

**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 7:13:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 7:13:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 7:43:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 7:43:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:07:17 PM
Barium	0.416	1.00	J	mg/L	1	12/3/2003 1:07:17 PM
Cadmium	0.005	0.0500	J	mg/L	1	12/3/2003 1:07:17 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:07:17 PM
Lead	0.326	0.0500		mg/L	1	12/3/2003 1:07:17 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:07:17 PM
Silver	0.014	0.0500	J	mg/L	1	12/3/2003 1:07:17 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
Pyridine	U	0.0050		mg/L	1	12/5/2003 5:02:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-01A

**Client Sample ID:** GSB-18  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: <b>LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 12:25:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-02A

**Client Sample ID:** GSB-19  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 7:55:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 7:55:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 8:25:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 8:25:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:09:36 PM
Barium	0.558	1.00	J	mg/L	1	12/3/2003 1:09:36 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:09:36 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:09:36 PM
Lead	0.040	0.0500	J	mg/L	1	12/3/2003 1:09:36 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:09:36 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:09:36 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
Pyridine	U	0.0050		mg/L	1	12/5/2003 5:37:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-02A

**Client Sample ID:** GSB-19  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: <b>LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 1:07:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-03A

**Client Sample ID:** GSB-20  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 8:38:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 8:38:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 9:08:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 9:08:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
Barium	0.526	1.00	J	mg/L	1	12/3/2003 1:12:09 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
Lead	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:12:09 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
Pyridine	U	0.0050		mg/L	1	12/5/2003 6:12:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-03A

**Client Sample ID:** GSB-20  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 1:48:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-04A

**Client Sample ID:** GSB-21  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 9:21:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 9:21:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 9:51:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 9:51:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:16:51 PM
Barium	0.710	1.00	J	mg/L	1	12/3/2003 1:16:51 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:16:51 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:16:51 PM
Lead	0.024	0.0500	J	mg/L	1	12/3/2003 1:16:51 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:16:51 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:16:51 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
Pyridine	U	0.0050		mg/L	1	12/5/2003 6:46:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-04A

**Client Sample ID:** GSB-21  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 5:53:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-05A

**Client Sample ID:** GSB-22  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 11:09:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 11:09:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 10:33:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 10:33:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	0.012	0.0500	J	mg/L	1	12/3/2003 1:31:33 PM
Barium	0.761	1.00	J	mg/L	1	12/3/2003 1:31:33 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:31:33 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:31:33 PM
Lead	U	0.0500		mg/L	1	12/3/2003 1:31:33 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:31:33 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:31:33 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
Pyridine	U	0.0050		mg/L	1	12/5/2003 7:21:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-22**Lab Order:** 0312006**Tag Number:****Project:** Bronxville, N.Y.**Collection Date:** 12/1/2003**Lab ID:** 0312006-05A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: <b>LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 6:33:00 PM

**Qualifiers:**

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-06A

**Client Sample ID:** GSB-23  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/5/2003 11:51:00 PM
2,4-D	U	0.0050		mg/L	1	12/5/2003 11:51:00 PM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 11:16:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 11:16:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	0.038	0.0500	J	mg/L	1	12/3/2003 1:35:50 PM
Barium	0.527	1.00	J	mg/L	1	12/3/2003 1:35:50 PM
Cadmium	0.009	0.0500	J	mg/L	1	12/3/2003 1:35:50 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:35:50 PM
Lead	U	0.0500		mg/L	1	12/3/2003 1:35:50 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:35:50 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:35:50 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
Pyridine	U	0.0050		mg/L	1	12/8/2003 2:22:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-06A

**Client Sample ID:** GSB-23  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 7:13:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-07A

**Client Sample ID:** GSB-24  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/6/2003 12:34:00 AM
2,4-D	U	0.0050		mg/L	1	12/6/2003 12:34:00 AM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
Endrin	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 11:58:00 AM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 11:58:00 AM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:38:32 PM
Barium	0.507	1.00	J	mg/L	1	12/3/2003 1:38:32 PM
Cadmium	0.006	0.0500	J	mg/L	1	12/3/2003 1:38:32 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:38:32 PM
Lead	0.010	0.0500	J	mg/L	1	12/3/2003 1:38:32 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:38:32 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:38:32 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
Pyridine	U	0.0050		mg/L	1	12/8/2003 2:59:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range



**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-07A

**Client Sample ID:** GSB-24  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 7:59:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-08A

**Client Sample ID:** GSB-25  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/6/2003 1:17:00 AM
2,4-D	U	0.0050		mg/L	1	12/6/2003 1:17:00 AM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
Endrin	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 12:41:00 PM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 12:41:00 PM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	0.046	0.0500	J	mg/L	1	12/3/2003 1:40:53 PM
Barium	0.590	1.00	J	mg/L	1	12/3/2003 1:40:53 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:40:53 PM
Chromium	0.010	0.0500	J	mg/L	1	12/3/2003 1:40:53 PM
Lead	0.170	0.0500		mg/L	1	12/3/2003 1:40:53 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:40:53 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:40:53 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
Pyridine	U	0.0050		mg/L	1	12/8/2003 3:36:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.  
**Lab Order:** 0312006  
**Project:** Bronxville, N.Y.  
**Lab ID:** 0312006-08A

**Client Sample ID:** GSB-25  
**Tag Number:**  
**Collection Date:** 12/1/2003  
**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: <b>LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 8:39:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-26

Lab Order: 0312006

Tag Number:

Project: Bronxville, N.Y.

Collection Date: 12/1/2003

Lab ID: 0312006-09A

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		Analyst: JP
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		Analyst: KB
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/6/2003 1:59:00 AM
2,4-D	U	0.0050		mg/L	1	12/6/2003 1:59:00 AM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		Analyst: KB
Chlordane	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
Endrin	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 1:24:00 PM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 1:24:00 PM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		Analyst: JP
Arsenic	0.121	0.0500		mg/L	1	12/3/2003 1:43:18 PM
Barium	0.805	1.00	J	mg/L	1	12/3/2003 1:43:18 PM
Cadmium	U	0.0500		mg/L	1	12/3/2003 1:43:18 PM
Chromium	U	0.0500		mg/L	1	12/3/2003 1:43:18 PM
Lead	0.028	0.0500	J	mg/L	1	12/3/2003 1:43:18 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:43:18 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:43:18 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		Analyst: RN
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
Pyridine	U	0.0050		mg/L	1	12/8/2003 4:13:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: LDS
1,1-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-26**Lab Order:** 0312006**Tag Number:****Project:** Bronxville, N.Y.**Collection Date:** 12/1/2003**Lab ID:** 0312006-09A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		Analyst: <b>LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 9:19:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# American Analytical Laboratories, Inc.

Date: 09-Dec-03

CLIENT: Galli Engineering, P.C.

Client Sample ID: GSB-18a

Lab Order: 0312006

Tag Number:

Project: Bronxville, N.Y.

Collection Date: 12/1/2003

Lab ID: 0312006-10A

Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP MERCURY</b>		<b>SW1311/7471B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Mercury	U	0.0200		mg/L	1	12/4/2003
<b>TCLP HERBICIDES SW-846 8151</b>		<b>SW8151A</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
2,4,5-TP (Silvex)	U	0.0050		mg/L	1	12/6/2003 2:42:00 AM
2,4-D	U	0.0050		mg/L	1	12/6/2003 2:42:00 AM
<b>TCLP PESTICIDES SW-846 8081</b>		<b>SW8081B</b>		<b>(SW3510B)</b>		<b>Analyst: KB</b>
Chlordane	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
Endrin	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
gamma-BHC	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
Heptachlor	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
Heptachlor epoxide	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
Methoxychlor	U	0.00050		mg/L	1	12/6/2003 2:07:00 PM
Toxaphene	U	0.00010		mg/L	1	12/6/2003 2:07:00 PM
<b>TCLP METALS</b>		<b>SW1311/6010B</b>		<b>(SW1311)</b>		<b>Analyst: JP</b>
Arsenic	U	0.0500		mg/L	1	12/3/2003 1:45:19 PM
Barium	0.490	1.00	J	mg/L	1	12/3/2003 1:45:19 PM
Cadmium	0.005	0.0500	J	mg/L	1	12/3/2003 1:45:19 PM
Chromium	0.013	0.0500	J	mg/L	1	12/3/2003 1:45:19 PM
Lead	2.164	0.0500		mg/L	1	12/3/2003 1:45:19 PM
Selenium	U	0.0500		mg/L	1	12/3/2003 1:45:19 PM
Silver	U	0.0500		mg/L	1	12/3/2003 1:45:19 PM
<b>TCLP SEMIVOLATILES SW-846 8270</b>		<b>SW8270D</b>		<b>(SW3510)</b>		<b>Analyst: RN</b>
2,4,5-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
2,4,6-Trichlorophenol	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
2,4-Dinitrotoluene	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
2-Methylphenol	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
3+4-Methylphenol	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Hexachlorobenzene	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Hexachlorobutadiene	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Hexachloroethane	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Nitrobenzene	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Pentachlorophenol	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
Pyridine	U	0.0050		mg/L	1	12/8/2003 4:49:00 PM
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
1,1-Dichloroethene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
1,2-Dichloroethane	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
1,4-Dichlorobenzene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
2-Butanone	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Benzene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

\* - Value exceeds Maximum Contaminant Level

**American Analytical Laboratories, Inc.**

Date: 09-Dec-03

**CLIENT:** Galli Engineering, P.C.**Client Sample ID:** GSB-18a**Lab Order:** 0312006**Tag Number:****Project:** Bronxville, N.Y.**Collection Date:** 12/1/2003**Lab ID:** 0312006-10A**Matrix:** SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
<b>TCLP VOLATILE ANALYSIS</b>		<b>SW8260B</b>		<b>(SW1311)</b>		<b>Analyst: LDS</b>
Carbon tetrachloride	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Chlorobenzene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Chloroform	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Tetrachloroethene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Trichloroethene	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM
Vinyl chloride	U	0.0010		mg/L	1	12/4/2003 10:05:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

## **APPENDIX N**

### **COMMUNITY AIR MONITORING PLAN**



# **COMMUNITY AIR MONITORING PLAN**

---

**5-27 Kensington Road  
Bronxville, NY 10708**

**BCP Site # TBD**

**JANUARY, 2014**

*Prepared for:*

**Gateway Kensington LLC  
Kevin McManus  
c/o McManus & Associates  
35 Main Street  
Newtown, CT 06470  
(914) 769-6500 ext. 216**

*Prepared by:*

**Galli Engineering, P.C.  
734 Walt Whitman Rd., Suite 402A  
Melville, NY 11747**

## **TABLE OF CONTENTS**

**1.0 Community Air Monitoring Plan**.....Page 1

**2.0 VOC Monitoring, Response Levels, and Actions**.....Page 2

**3.0 Particulate Monitoring, Response Levels, and Actions**.....Page 3

---

---

### **1.0 Community Air Monitoring Plan**

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

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the DEC Project Manager and included in the Daily Report.

## **2.0 VOC Monitoring, Response Levels, and Actions**

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using a Rae Systems MiniRae 2000 Photoionization Detector or equivalent equipment appropriate to measure the types of Volatile Organic Contaminants known or suspected to be present. The equipment will be calibrated at least daily with an appropriate surrogate, per the manufactures manual. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

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

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

### **3.0 Particulate Monitoring, Response Levels, and Actions**

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

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

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