DRAFT
REMEDIAL INVESTIGATION
REPORT
OF

FORMER METRO NORTH PROPERTY at
672 CONCOURSE VILLAGE WEST
BRONX, NEW YORK

SCA LLW NO.: 033485
SCA CONTRACT NO.: C000009228
SCHOOL DISTRICT: 78
SCA JOB NO.: 19730

CONSULTANT PROJECT NO.: 114926

November 15, 2005

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

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EXECUTIVE SUMMARY

The New York City School Construction Authority (NYCSCA) requested that Shaw Environmental and Infrastructure (Shaw) conduct a Remedial Investigation (RI) at the former Metro North site located at 672 Concourse Village West, Bronx, New York (hereafter referred to as the "Site"). The Site consists of Block 2443/Lot 78 on the Borough of Bronx tax assessor's map.

Shaw completed site investigative activities between March and September 2005, to investigate the RECs identified by URS in connection with the Site. These investigative activities were completed as two separate phases; a Remedial Investigation was completed between March and August 2005; and a Supplemental Investigation (SI) was completed between August and September, 2005. The RI activities were completed pursuant to the NYSDEC approved Remedial Investigation Work Plan (RIWP) (July 2005), completed as a requirement of the Brownfield Cleanup Program (BCP). The approved RIWP was based on the original RIWP submitted by URS in January 2005 and revised based on NYSDEC's and NYSDOH's correspondence. The SI activities were performed to the northwest of the Site to identify off-site contamination which may be impacting the Mott Haven Site. These SI activities were based on a Statement of Work presented to NYSDEC and New York State Department of Health (NYSDOH) on July 14, 2005.

Soil and groundwater contamination were identified above NYSDEC Recommended Soil Cleanup Objectives (RSCOs) and groundwater quality standards, specifically associated with volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs). The most elevated VOC and SVOC compounds detected include benzene, toluene, ethylbenzene and xylenes (BTEX), and the polynuclear aromatic hydrocarbons or PAHs (e.g. naphthalene, chrysene, benzo(a)anthracene, benzo(a)pyrene, phenanthrene). The highest organic contaminant detected was naphthalene. The majority of the contamination identified was generally confined to the northwestern portion of the Site as well as upgradient, off site at a depth corresponding to the top of the zone of saturation (water table).

The VOC and SVOC contamination identified in the soils and groundwater at the Site is related to historic operations in the vicinity of the Site and off Site. Specifically, the presence of SVOCs in the northwestern portion of the Site is concluded to be associated with historic operation of an MGP, including likely off site dumping of MGP waste upgradient of the Site. SVOCs across the remainder of the Site are attributable to historic rail yard operations at the Site. The presence of VOCs on the Site is concluded to be associated with the historic operation of a filling station/auto repair facility adjacent to and immediately upgradient of the Site.

The groundwater contamination identified 300 ft upgradient and in the northwest corner of the Site is confined to this area of the Site. There has been no significant migration of VOC or SVOC contamination across the Site and there is no indication that VOC and SVOC contamination is migrating off site.

Results of the Public Health Exposure Assessment indicate that any potential exposure routes on-Site will be mitigated by the proposed remedy for the Site. Also, no exposure to workers or residences is anticipated since there is no significant off-site migration of Site related contamination.

The results of this Remedial Investigation are sufficient to support the development of a remedy that will be protective for the end use of the property as a school, and the surrounding community.

1.0 INTRODUCTION

1.1 Purpose

The New York City School Construction Authority (NYCSCA) requested that Shaw Environmental and Infrastructure (Shaw) conduct a Remedial Investigation (RI) at the former Metro North site located at 672 Concourse Village West, Bronx, New York (hereafter referred to as the "Site"). The Site consists of Block 2443/Lot 78 on the Borough of Bronx tax assessor's map (**Figure 1**).

The RI was conducted pursuant to the New York State Department of Environmental Conservation (NYSDEC) approved Remedial Investigation Work Plan (RIWP) dated July 2005. This RI has been completed as a requirement of the NYSDEC Brownfield Cleanup Program. The RI provides information to support a Remedial Action Work Plan (RWP) to clean up contamination at the Site and make the Site suitable for use as a public school.

1.2 Historic Investigations

URS Corporation (URS) prepared a Phase I Environmental Site Assessment (ESA) of the Site for NYCSCA, dated July 20, 2001. Information contained in the ESA indicated the following recognized environmental conditions (RECs) and environmental concerns:

- Historical usage of the Site as rail yard prior to 1891 until approximately 1975. Over the years, the Site housed a machine shop, carpenter shop, a paint area, offices, shops and storage areas. Historical usage of the Site could have the potential to cause an impact to soil or groundwater.
- The Site is currently vacant. Surficial fill material appeared to be at the Site as evidenced by the presence of soil mounds.
- Pipe insulation was found around a pressure valve in the middle of the Site. The insulation was considered asbestos containing material (ACM).
- A concrete pad with a metal plate was observed in the middle of the Site during the inspection which indicated the possibility of a suspected underground storage tank (UST).
- The historical presence of automobile service/filling stations with potential USTs upgradient of the site;
- A former laundry facility (Morgan Steam Laundry) located upgradient of the site which may have used cleaning products that impacted the subsurface;
- The historical presence of a former manufactured gas plant (MGP) located in the vicinity of the Site which operated from approximately 1891 to 1946. It was suspected that the handling,

storage or use of petroleum feedstock and manufacturing by-products could have impacted the Site.

Based on the above, URS proposed that a Phase II Investigation be completed to further characterize the soil and groundwater quality of the Site. During the Phase II Environmental Site Investigation, (ESI) URS performed a geophysical survey, collected 11 surface soil samples, advanced ten soil borings, excavated ten test pits, collected groundwater samples from five boring locations and installed three temporary piezometers. URS prepared a Phase II Environmental Investigation Report of the Site, dated August 24, 2001 for NYCSCA. Information contained in the Phase II Environmental Investigation Report indicated the following:

- Semi-volatile organic compounds (SVOCs) and metals contamination in surface soils across the Site;
- Volatile organic compounds (VOCs) and SVOCs were observed in the subsurface soils in the northwest portion of the Site;
- VOC contamination in groundwater was observed in the northwest portion of the Site;
- The geophysical investigation did not identify any USTs or other potential sources of contamination

A summary of historic soil and groundwater data is located in **Tables 1A** through **1E**. A URS sample location map is included as **Appendix A**.

Shaw completed additional site investigative activities between March and September 2005, to investigate the RECs identified by URS in connection with the Site. These investigative activities were completed as two separate phases; a Remedial Investigation was completed between March and August 2005; and a Supplemental Investigation (SI) was completed between August and September, 2005. The RI activities were completed pursuant to the NYSDEC approved Remedial Investigation Work Plan (RIWP) (July 2005). The approved RIWP was based on the original RIWP submitted by URS in January 2005 and revised based on NYSDEC's and NYSDOH's correspondence. The SI activities were performed to the north and west of the Site to identify off-site contamination which may be impacting the Mott Haven Site. These SI activities were based on a Scope of Work (SOW) presented to NYSDEC and New York State Department of Health (NYSDOH) on July 14, 2005.

2.0 SITE SETTING

The Site is located at 672 Concourse Village West, between 153rd and 156th Avenue in the Borough of Bronx, New York (**Figure 1**). It is bounded to the north by a primary and intermediate school (PS 156 and IS 151, respectively), the New York and Harlem Railroad and Cardinal Hayes High School border the Site to the South and the New York and Harlem Railroads define the Eastern border of the Site. Concourse Village West borders the Site to the west, at the top of a 30-foot high retaining wall. Located further west are Herk Elevators, Grand Concourse Cutglass Enterprise & Candlewood Auto Mall, Live Poultry, Furniture Outlet Warehouse, AAC Auto Repair, and apartment buildings.

The Site was depicted on historical maps as being utilized as a rail yard before 1891 through 1975. A map showing the location of the Site is presented in **Figure 2A**.

2.1 Site Physical Characteristics

The Site is a vacant lot located in a topographic depression, characteristic of an undeveloped urban property. According to the United States Geological Survey (USGS) 7.5-minute Quadrangle Map, *Central Park, NY-NJ*, dated 1995, the approximate elevation of the Site is 20 feet above mean sea level (URS, Phase II ESI Report). The properties to the west and east are approximately 30 feet higher in elevation than the Site. An approximate 30-foot high stone retaining wall borders the site to the west. It is likely that that this wall was constructed at the same time the rail yard was established (Langan Engineering Inc, Retaining Wall Evaluation Report, August 26, 2005).

The properties immediately to the north including PS156 and IS151 are constructed on a concrete deck approximately 30 feet above the Site. The properties to the south are at approximately the same elevation as the Site. The Site topography gently slopes to the east. The site is relatively flat except for 4 debris mounds which range in height from approximately 4-12 feet above ground surface. **Figure 2B** depicts the existing conditions of the Site.

2.1.1 Site Geology

The southern area of the Site formerly used by Metro North is relatively flat and the soil is brown to black sand intermixed with approximate one-inch diameter gravel. This southern area of the Site is clear of brush and weeds. Subsurface soils at the Site were mostly brown silty sand and gravel mixed with typical urban fill and construction and demolition (C & D) type materials such as brick, concrete and wood to approximately 8 to 10 feet below ground surface (bgs). Sand intermixed with layers of organic silt, clay

and silt were observed between approximately 8 and 45 feet bgs. To the west of the Site, beyond the 30 foot high retaining wall, there is approximately 20 to 25 feet of fill materials overlying brown silty sand.

In most locations where bedrock was encountered, weathered or decomposed bedrock was observed above the competent bedrock. The weathered/decomposed rock ranged in thickness from 0.5 to 15 feet thick. Bedrock (comprised of Schist, a metamorphic rock) was encountered at several locations from approximately 4 to 5 feet below the ground surface. Geotechnical borings completed by Langan Engineering in February and March 2005 show bedrock as deep as 70 feet bgs in the northwest corner of the Site. **Figure 3A** shows the boring locations across the site; Cross sections using environmental borings completed by Shaw **(Appendix B)** and geotechnical borings completed by Langan are shown on **Figures 4** and **4A** through **4H**.

As indicated, four debris mounds are present at the Site **(Figure 2B)**. The debris mounds range in height from approximately 4 to 12 feet above ground surface. These mounds have been present at the Site for many years as evidenced by 30-foot tall trees growing from the mounds. Generally, the fill mounds consist of demolition debris (e.g. concrete, brick) and sand and silt fill materials.

2.1.2 Regional Geology

According to Charles Merguerians Stratigraphy, Structural Geology, (Ductile and Brittle Faults of New York City, 1994a) the crystalline bedrock of the New York City area originated as sedimentary and volcanic rocks that formed off eastern North America adjacent to the early Paleozoic (540 to 440 million years ago) shelf edge. The sedimentary apron was deposited across the passive continental margin producing two near parallel belts; the first, adjacent to the shore line with a shallower deposition environment and the second, deeper and further away from the shelf. These sequences were pushed together, highly deformed and metamorphosed in a subduction zone along the eastern coast of North America during the Middle Ordovician (470 to 458 million years ago). This arc-continent collision, the Taconic Orogeny, was the first in a series of plate tectonic events that produced the Appalachian Mountain chain and shaped the east coast.

The Bronx is located on the southern end of the Manhattan Prong, a northeast trending, deeply eroded sequence of metamorphosed Proterozoic (2,500 to 540 million years) to Lower Paleozoic (540 to 490 million years) rocks. The bedrock underlying this portion of the Bronx includes, from base upward, The Fordham Gneiss, Lowerre Quartzite, Inwood Marble and various schistose rocks all classified as Manhattan Schist. The Manhattan Schist (Merguerian, 1996) has been divided into three units. The lowest most unit, originally part of the shallow sequence, Tippecanoe Manhattan (Tippecanoe Sequence) is found interlayered with the Inwood Marble. The remaining middle and upper units, part of the deeper

foreland basin environment, comprise the Taconic Sequence, the Waramaug/Hoosac Formation and the Hartland Terrane, respectively.

According to Merguerian, the Manhattan Prong is bounded by two thrust faults on its eastern and western margins.

The rocks of the Sauk (Inwood Marble), Tippecanoe (Lower Manhattan Schist) and Taconic (Middle and Upper Manhattan Schist) Formations are shown to be overlapping along two major syntectonic ductile faults: Saint Nicholas thrust and Cameron's Line. The Saint Nicholas thrust, a Taconic frontal thrust, cuts the Middle Manhattan Schist near its base (Fuller, Short, Merguerian, 1999). Along Cameron's Line the Hartland Terrane is in contact with the Middle Manhattan Schist.

Bedrock elevation changes across the Manhattan Prong are due to the differing rock types underlying the area and their respective resistance to erosion as well as the structural orientation. Bedrock crops out along the western portion of the Bronx and increases in depth toward the northeast.

Bedrock borings at the Site have encountered both the Manhattan Schist and Inwood Marble. Depths to bedrock have shown a degree in variability ranging from 4 to 70 feet showing the increasing depth to the east and south.

Soils overlying these rocks consists of typically unsorted Pleistocene glacial material (till and moraine deposits) as well as recent stream, swamp and urban-fill materials. In the New York City area, the glacial deposits are the thinnest in the Bronx.

Pleistocene glaciation ended about 10,000 years ago and produced the dominant topographic pattern in the Bronx. Softer rocks like the Inwood Marble and localized area of faults or joints were sculpted by ice to form valleys. Prominent ridges are formed by rocks more resistant to erosion and sculpting; such as the Fordham Gneiss and Manhattan Schist. There are no major fault zones documented in the area of the Site.

2.1.3 Site Hydrogeology

Data collected during this investigation indicated that the depth to groundwater varies from 4.5 to approximately 30 feet bgs. The differences in depth to groundwater are attributable to the topographic elevation changes in the investigation area; the properties immediately to the west of the Site are approximately 30 feet higher in elevation relative to the Site. Overburden groundwater flow direction, based on groundwater level measurements from monitoring wells, is from northwest to southeast across the Site **(Table 6 and Figure 5)**. The first water bearing unit below the Site is the fill material overlying

the Site. The ground surface of the upgradient area (to the west of the Site) is covered principally with buildings and pavement with apparently little to no recharge to the aquifer. The Site area has no pavement or buildings, the infiltration capacity of the overlying fill material is very high, and there is very little slope on the Site with many low lying areas, all of which is conducive for high rates of recharge to the aquifer. The retaining wall foundation appears to penetrate one to four feet into the water table (Langan Engineering, Inc, Retaining Wall Evaluation Report, August 26, 2005), but the RI groundwater elevation data suggest that the retaining wall has no impact on the movement of groundwater beneath the Site area.

The closest surface body of water is the Harlem River which is located approximately 2,500 feet to the west and approximately one mile south of the Site (See **Figure 1**). The topographic map and EDR Radius Report completed by URS during their Phase I ESA did not show tidal or freshwater wetlands at or near the Site. Reportedly the closest wetlands to the Site are located along the Harlem River 2,500-feet to the west.

3.0 DESCRIPTION OF REMEDIAL INVESTIGATION FIELD ACTIVITIES

Shaw completed additional site investigative activities between March and September 2005, to investigate the RECs identified by URS in connection with the Site. These investigative activities were completed as two separate phases; the Remedial Investigation activities were completed between March and August 2005; and the Supplemental Investigation activities were completed between August and September, 2005.

The RI activities (March to August, 2005) were completed pursuant to the NYSDEC approved RIWP (July 2005). The approved RIWP was based on the original RIWP submitted by URS in January 2005 and revised based on NYSDEC's and NYSDOH's correspondence. The revisions include:

- A more flexible work plan to allow for the delineation of the contamination in the northwest corner of the property and to assess any potential historic releases of contaminants based on the site's past use. In addition to the borings in the original URS RIWP, a total of thirteen additional soil borings were advanced to delineate contamination, including two additional soil borings north of the Mott Haven Site under PS156, six additional soil borings in the northwest corner of the SIte, and two additional soil borings in the location of former building foot prints (paint shop and machine shop);
- A soil boring in the vicinity of the unknown underground conduit, and an excavation of a portion of the unknown underground conduit, to identify its purpose/use and to assess any potential discharge from this conduit;
- Photographs of each test pits and all PID readings and observations logged and submitted as part of the final RI report. Excavate three additional test pits at the southern debris pile. Collect at least one soil sample from each test pit located at the fill mounds and two ballast piles to characterize the soils for final disposal;
- Installation of six additional groundwater monitoring wells in the northwest corner of the site, including the area under the existing school PS156;
- Collection of soil gas samples from a depth of one foot above the groundwater table, where the groundwater level is five feet or less below the surface. Use a tracer gas, as described in the NYSDOH document "*Guidance for Evaluating Soil Vapor Intrusion in The State of New York*", 2005, at all soil gas sampling locations, where the depth to groundwater was five feet or less below the surface. Analyze soil gas samples to a detection limit of 1 microgram per cubic meter; and
- Advancement of two Geoprobe® borings in lieu of the previously proposed test pits (TP-17 and TP-18) in the northwest corner of the property. Collect soil samples for laboratory analysis to further characterize and delineate contamination.

The following field activities were completed as part of the RI:

- Implementation of a Community Air Monitoring Program during investigative activities;

- Completion of a geophysical surveys to establish underground utilities in areas where intrusive activities were planned;
- Installed 59 soil gas implants and collected 16 soil gas samples to further assess any impacts to the property;
- Advanced 27 soil borings to a depth of approximately 15 ft bgs, and two soil borings to 40 and 43 ft bgs, in the vicinity of the Site;
- Excavation of nine test pits across the Site in the debris mounds to characterize the material;
- Installed, developed, surveyed and sampled 15 groundwater monitoring wells on-site and off-site; and
- Advanced six soil borings to bedrock to determine the presence or absence of dense non-aqueous phase liquid (DNAPL).

A Supplemental Investigation was performed to the northwest of the Site to identify off-site contamination which may be impacting the Mott Haven Site. These SI activities were based on a Scope of Work (SOW) presented to NYSDEC and New York State Department of Health (NYSDOH) on July 14, 2005.

The following field activities were completed as part of the SI:

- Implementation of a Community Air Monitoring Program during investigative activities;
- Completion of a geophysical surveys to establish underground utilities in areas where intrusive activities were planned;
- Installed 7 soil gas implants and collected soil gas samples to further assess any impacts to the property;
- Advanced 22 soil borings to a depth of approximately 15 ft bgs, and three soil borings to a depth between 25 and 33 ft bgs, in the vicinity of the Site;
- Installed, developed, surveyed and sampled 5 off-site groundwater monitoring wells;
- Advanced two additional soil borings to bedrock to determine the presence or absence of dense non-aqueous phase liquid (DNAPL);
- Performed site reconnaissance on surrounding properties; and,
- Conducted slug tests on selected monitoring wells to assess hydraulic characteristics of the shallow aquifer.

The scope and methods used for the various field activities are documented below.

3.1 Health and Safety Plan/Community Air Monitoring Plan

Prior to the start of any field activities, a Health and Safety Plan (HASP) was developed and included the following:

1. A brief introduction;
2. An identification of key personnel, their responsibilities, and the chain of command;
3. An identification of possible chemical, physical, and environmental hazards, and the safety practices, personal protective equipment (PPE), and any monitoring devices used to deal with these possible hazards;
4. A description of the work zones and support areas;
5. Descriptions of the different safety levels, PPE, medical certifications, and the site specific PPE program;
6. Descriptions of the personnel and equipment decontamination (decon) procedures;
7. Descriptions of the air monitoring program and equipment for the site investigation;
8. Description of the Emergency Response and Contingency Plan;
9. Training requirements for on-site personnel; and
10. A description of the medical surveillance program required for on-site personnel.

Upon initiation of the field activities, a Community Air Monitoring Program (CAMP) was implemented based on the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (dated June 20, 2005). The CAMP involved continuous air monitoring during all ground intrusive activities and periodic air monitoring during non-intrusive activities (**Appendix C**). Air monitoring parameters included VOCs, lower explosive limit (LEL) (based on methane), landfill gases (methane, hydrogen sulfide, carbon monoxide), and particulates (dust). According to the CAMP if VOC readings (averaged over 15 minute period) exceeded 5 parts per million (ppm) at the downwind perimeter of the immediate work area, work was to be halted and air monitoring continued; if the VOC readings decreased, work was to resume with continued monitoring. If the VOC readings remained above 5 ppm, but below 25 ppm, the source of the vapors was to be identified and corrective actions were to be taken to abate the emissions. If the VOC readings then dropped below 5 ppm, work was to resume. If VOC readings were above 25 ppm, all activities were to be shut down.

VOCs were never detected above 5 ppm and corrective actions were not required during the field investigation activities **(Appendix C)**.

3.2 Geophysical Investigation (Utility Mark Out)

3.2.1 Remedial Investigation Geophysical Investigation

Utilities in areas designated for intrusive activities were cleared through the Underground Facilities Protection Organization (UFPO) as well as through a review of sewer maps from the New York City Department of Environmental Protection. A geophysical investigation was conducted by Hager-Richter of Orange, New Jersey between March 17, 2005 and March 23, 2005 to assure that underground utilities were not present at locations where subsurface investigations were planned. The geophysical investigation included the use of an EM-61 magnetometer and ground penetrating radar (GPR). Hager-Richter identified and marked two potential conduits (buried approximately 3-4 feet deep) toward the center of the Site. Hager-Richter also identified two sewer manholes on site but they were not able to confirm the location of the sewer pipe. This was because the pipe appeared (based on opening the manholes) to be approximately 15 feet deep (the GPR had a maximum penetration of between 5 and 10 feet deep depending on the nature of the subsurface materials).

Three test pits were hand-excavated on August 24, 2005 to identify these geophysical features observed near the center of the Site. The first test pit (furthest south) was excavated to a depth of 4 feet bgs. The other two test pits were excavated to a depth of 2 to 3 feet bgs. Several railroad ties, spikes and rails were unearthed. No underground conduits were observed.

3.2.2 Supplemental Investigation Geophysical Investigation

A geophysical investigation was conducted by Hager-Richter between August 1st and 4th to assure that underground utilities were not present at locations where subsurface investigations were planned. The geophysical investigation included the use of precision utility locator (PUL) and GPR. Hager-Richter identified, and marked, numerous storm and sanitary lines that dropped down along the schools support columns and then fed into the two majNineteenor sanitary lines running beneath the schools. Several boring locations were moved based on the geophysical investigation.

3.3 Drilling and Sampling

3.3.1 Remedial Investigation Drilling and Sampling

<u>Borehole Drilling</u>

Between April 6 and 29, 2005, 27 soil borings were drilled at the locations shown on **Figure 3A**. Generally, the borings were advanced to 15 to 16 feet bgs, unless refusal was encountered at a shallower depth. All but eight of the soil borings were advanced with 4-1/4 inch hollow stem augers (HSAs) and 2-inch diameter, 2-foot long split spoons to collect soil samples. The other eight borings (SB-22, and SB-44 through SB-49) were advanced with a Geoprobe® drill rig using a 2-inch diameter, 5-foot long macrocore sampler to collect soil samples. The completed boring logs are provided in **Appendix B**. Six additional borings (SB-50 through SB-55) were drilled to bedrock with a HSA in August, 2005 to determine if DNAPLs were present. Each boring was continuously sampled and logged for soil type, odors, and other relevant visual observations (**Appendix B**). No evidence of DNAPL was encountered.

Sampling Protocol

A portion of each soil sample was collected and placed in a sealed plastic bag, allowed sufficient time for the samples gases to equilibrate, and screened with a photoionization detector (PID). Soil samples were collected for laboratory analysis from the interval with the highest PID reading. If the PID readings were zero, or insignificant, the soil sample was collected from the interval at the inferred water table interface. If gross contamination was evident (i.e., visual observations or strong odor), three soil samples were collected from the soil boring; one from the vadose zone above the zone of impact, one from the interval with the highest PID reading and one from near the bottom of the boring. All sampling data and information is summarized in **Table 2**.

Select soil samples were analyzed for some or all of the following parameters:

- Target Compound List Volatile Organic Compounds plus the next 10 tentatively identified compounds (TCL VOC+10),
- TCL Semi-Volatile Organic Compounds plus the next 20 tentatively identified compounds (TCL SVOC+20),
- Target Analyte List (TAL) Metals + Cyanide,
- Pesticides and Herbicides,
- Polychlorinated biphenyls (PCBs),
- Toxicity Characteristic Leaching Procedure (TCLP),
- Resource Conservation and Recovery Act (RCRA) Characteristics (ignitibility, reactivity and corrosivity), and,
- Total Petroleum Hydrocarbon (TPH).

Additionally, soil samples collected from one of the soil borings (SB-48) and from the two soil borings (that were advanced in lieu of the two test pits) in the northwest corner of the Site (SB-45 and SB-46)

were analyzed for TCLP and RCRA characteristics and TPH. One field duplicate sample was collected for every twenty field samples and one rinsate blank was collected per each decontamination event (when dedicated disposable sampling equipment was not used) for a total of five field Quality Control (QC) samples (three field duplicate and two rinsate blank samples). The duplicate and rinsate blank samples were analyzed for the suite of parameters listed above. Trip blanks for soils analysis were not required. **Table 2** presents all of the soil samples collected for laboratory analysis and the analyses performed on each sample. Sample results are shown on **Figures 6A-6C** and in **Tables 3A, 4A, and 5**.

3.3.2 Supplemental Investigation Drilling and Sampling

Between August 17, and 25, 2005, 19 proposed soil borings (PSBs) were advanced by ADT (**Figure 3A)** to 15 ft bgs, unless refusal was encountered at a shallower depth. Two of these soil borings (PSB19 and PSB20) were completed as monitoring wells (**Section 3.6**). One proposed soil boring (PSB15) was not drilled because of extensive buried utilities in the area. In addition, two proposed bedrock soil borings (PBSBs) were also advanced to bedrock. These borings were advanced at the request of the NYSDEC to determine the presence or absence of DNAPL at the Site. Based on discussions (regarding existing data showing no DNAPL at the site) three proposed bedrock soil borings (PBSB3, PBSB4, and PBSB5) were only advanced to 15 ft bgs.

Seventeen soil borings (PSB1 through PSB8, PSB10 through PSB12, PSB14, PSB16, PSB17, PSB19, PSB20, and PBSB3) were advanced with a Geoprobe® drill rig using a 2-inch diameter, 5-foot long macrocore sampler to collect soil samples. The remaining seven soil borings (PSB9, PSB13, PSB18, PBSB1, PBSB2, PBSB4 and PBSB5) were advanced with 4.25-inch hollow stem augers and 2-inch diameter, 2-foot long split spoons to collect soil samples. Each boring was continuously sampled and logged for soil type, odors, and other relevant visual observations. The completed boring logs are presented in **Appendix B**.

A portion of each soil sample was collected and placed in a sealed plastic bag, allowed sufficient time for the sample gases to equilibrate and was screened with a PID. Soil samples were collected for laboratory analysis from the interval with the highest PID reading. If the PID readings were zero, or insignificant, the soil sample was collected from the interval at the water table interface. If gross contamination was evident (i.e., visual observations or strong odor), three soil samples were collected from the soil boring; one from the vadose zone above the area of impact, one from the interval with the highest PID readings and one from near the bottom of the boring.

All soil samples were analyzed by Chemtech of Mountainside, NJ (a NYSDOH ELAP certified laboratory) for some or all of the following parameters:

- TCL VOC+10,
- TCL SVOC+20, and,
- TAL Metals.

A soil sample from each of four soil borings (PSB6, PSB8, PSB12 and PSB16) were also analyzed for total organic compounds (TOC). **Table 2** presents all of the soil samples collected for laboratory analysis and the analyses performed on each sample. Sample results are shown on **Figures 6A-6C** and in **Tables 3B** and **4B**.

One field duplicate sample was collected for every twenty field samples and one rinsate blank was collected per each decontamination event (when dedicated disposable sampling equipment was not used) for a total of three field QC samples (two field duplicate and one rinsate blank sample). The duplicate and rinsate blank samples were analyzed for the suite of parameters listed above. Four trip blanks and one field blank was also analyzed for the parameters listed above.

3.4 Soil Gas Survey

3.4.1 Remedial Investigation Soil Gas Survey

Between March 31 and April 6, 2005, 59 soil gas points were installed by Aquifer Drilling and Testing (ADT) of New Hyde Park, New York using a track-mounted Geoprobe® drill rig. A total of 15 additional soil gas points (SG-14 through SG-16, SG-24 through SG-26, SG-64 through SG-66, SG-68 through SG-70, and SG-72 through SG-74) were proposed but were not installed because the locations were not accessible. A total of 16 of the 59 installed soil gas points were sampled between March 31 and April 4, 2005; the remaining soil gas points (SG-2 through SG-8, SG-10, SG-12, SG-13, SG-17, SG-18, SG-22, SG-23, SG-30 through SG-36, SG-39 through SG-44, SG-48, SG-50 through SG-53, SG-55 through SG-62, SG-63, SG-67, and SG-72 through SG-74) were not sampled because of a high water table. The sampled soil gas survey locations are presented on **Figure 3B** and were selected based on discussions with the New York State Department of Environmental Conservation (NYSDEC) and NYSDOH. Each soil gas sampling point consisted of a 1-foot screen with a fitted drive point that was advanced to between 2.0 to 2.5 feet bgs. Polyethylene tubing (1/4 inch) was attached to a stainless steel adaptor and the adaptor was attached to the drive point to make an air-tight seal. The Geoprobe® rods were then removed and the annulus around the drive point was backfilled with #0 Morie sand. The remainder of the annulus was backfilled with bentonite to seal the drive point from the surface. Prior to attaching the sample container, the drive point was purged of 1-3 probe volumes to remove air within the tubing. During this purging, helium was released to the ground surface as a tracer gas (as described in the NYSDOH document "*Guidance for Evaluating Soil Vapor Intrusion in The State of New York*", 2005).

The purged air was monitored for helium to verify that the seal at the ground surface was intact. The flow rate during purging did not exceed 0.2 liters/minute. Following purging, the tubing was attached to a summa canister fitted with a one hour flow regulator. Immediately after opening the summa canister, the initial vacuum (inches of mercury) was noted. After one hour, the summa canister was closed and the final vacuum noted. The flow rate during sampling did not exceed 0.2 liters/minute. The soil gas survey samples were analyzed for VOCs by USEPA Method TO-15 and for methane by USEPA Method TO-3 modified.

One field duplicate sample was collected and one trip blank was analyzed per sample shipment to the laboratory (total of 3 trip blank samples) for a total of 20 analyses.

3.4.2 Supplemental Investigation Soil Gas Survey

Between August 15 and 16, 2005, seven soil gas implants were installed by ADT using a track-mounted Geoprobe® drill rig. The soil gas survey locations are presented on **Figure 3B** and were selected to delineate soil gas concentrations in areas immediately north and west of the Site, beneath and adjacent to Primary School 156 and Intermediate School 151. Attempts were made to install three additional soil gas implants (PSGI-1, PSGI-2, and PSGI-3). However, the installation was not completed because the water table was within one foot of the ground surface, and the implants could not be properly installed to collect a representative soil gas sample.

Each soil gas implant is 12-inches in length, with a drive point at the tip, which was connected at the base of the drillings rods. A polyethylene tube was attached to the top of the implant, providing an air tight seal, and extended to the surface where it was then fitted with a ball valve. Each soil gas implant was completed at grade with a small diameter roadbox. A concrete apron was installed around the roadbox to secure it in place.

A laboratory-certified summa canister fitted with an 8-hour flow control unit and vacuum gauge was assembled at six of the soil gas locations (all but PSGI-10). A disposable polyethylene tube was extended from the summa canister and connected to the ball valve to collect the sample. The valve was opened and the initial vacuum reading recorded (in inches of mercury). The sample was collected over an 8-hour period. Following sampling, the final vacuum of the summa canister was recorded and the valve closed. The sample was labeled and shipped to CAS, a NYSDOH ELAP certified laboratory by overnight courier under proper chain-of-custody. This basic procedure was followed for the collection of the duplicate sample. This basic procedure was followed for the PSGI-10 sample collected on September 21, 2005.

To assure a good installation method and seal, a tracer gas (helium) was released at the ground surface prior to collection of the sample in the summa canister. The flow rate during purging did not exceed 0.2 liters/minute. A detection of tracer gas indicated an insufficient surface seal. The summa canisters were analyzed by CAS for VOCs according to USEPA Method TO-15 and methane by USEPA Method TO-3. One split sample was collected for field duplication and analysis. All laboratory analytical Quality Assurance and Data were completed in accordance with NYSDEC Category A Data Deliverable format.

3.5 Test Pit Excavation and Sampling

Nine test pits were excavated at the locations shown on **Figure 3A** by ADT between April 18 and 19, 2005. Generally, the test pits were excavated into the four debris mounds, in order to characterize the debris mounds for disposal. The backhoe was positioned along the side of the debris mounds and the excavations were dug into the side of the piles. The depths of the test pits ranged between approximately 5-7 feet bgs (in this case the ground surface was considered to be the top of the soil pile at the location of the test pit); the excavations were terminated once the bottom of the test pit reached either native soil or the approximate ground surface elevation. Each test pit was sampled and logged for soil type, odors, and other relevant visual observations. The completed test pit logs are presented in **Appendix B**.

A portion of soil from each bucket removed from the test pit was collected and placed in a sealed plastic bag, allowed sufficient time for the sample gases to equilibrate and screened with a PID. A soil sample was collected for laboratory analysis from the interval with the highest PID reading. If the PID readings were zero, or insignificant, the soil sample was collected from the interval that was most representative of the majority of the soil/debris in the test pit (based on the on-site geologist's observations). No gross contamination (i.e., high PID readings, visual observations, and/or noticeable odor) was evident in any of the test pits.

One soil sample (NWTPGRAB) was collected at approximately 2 to 3 ft bgs (at the water table) from a test pit excavated for Langan Engineering and Environmental Services of New York, New York as part of their geotechnical investigation for the Site on April 6, 2005.

All soil samples collected from the test pits (except sample NWTPGRAB, collected from the Langan test pit) were analyzed for the following parameters:

- TCL VOC+10,
- TCL SVOC+20,
- TAL Metals + Cyanide
- Pesticides and Herbicides,
- PCBs

- TCLP (including RCRA characteristics), and
- TPH.

The soil sample NWTPGRAB collected from the Langan test pit was analyzed for TCL VOC+10, TCL SVOC+20, TAL Metals, and cyanide.

One field duplicate sample was collected for every twenty field samples, and one rinsate blank was collected per each decontamination event (when dedicated disposable sampling equipment was not used) for a total of two field QC samples (one field duplicate and one rinsate blank sample). The duplicate and rinsate blank samples were analyzed for the suite of parameters listed above. Trip blanks for soil analysis were not required. **Table 2** presents all of the soil samples collected for laboratory analysis and the analyses performed on each sample. Test pits TP-17 and TP-18 were not excavated in the northwest corner of the Site but were replaced with soil borings SB-45 and SB-46 as discussed previously. Sample results are shown on **Figures 6A-6C** and in **Tables 3A, 4A and 5**.

3.6 Monitoring Well Installation

3.6.1 Remedial Investigation Monitoring Well Installation

The RI groundwater investigation included the installation of fifteen groundwater monitoring wells (MW-1 through MW-15) between March 31 and April 28, 2005. The eleven on-site and four off-site overburden wells were installed at the locations shown on **Figure 3A** by ADT.

Ten of the monitoring wells (excluding MW-7 and MW-12 through MW-15) were installed to a depth of at least five feet below the water table surface by a truck-mounted drill rig using minimum 6-inch inside diameter hollow stem augers. Bedrock was encountered above the water table at monitoring wells MW-4 and MW-10. At these locations the borehole was advanced into the bedrock with the air rotary rig equipped with a 6-inch nominal tri-cone drill bit. Soil samples were not collected for laboratory analysis from monitoring well/borings MW-1 through MW-15 because soil borings were either previously completed by URS, 2001 (Phase II ESI) or were completed in close proximity to the monitoring wells (as part of this RI).

Construction of these 10 monitoring wells (MW-1 through MW-6 and MW-8 through MW-11) consisted of 4-inch diameter threaded well casing with a minimum of 10 feet of 0.01-inch slot size PVC screen with a fine grain filter pack sand (e.g., Morie #0) to 1-2 feet above the screen (to minimize turbidity during purging and sampling). The screen was set generally five to seven feet below the water table and three to five feet above the water table. Up to three feet of bentonite chips or pellets were placed above the sand

and hydrated with clean water. A bentonite-cement slurry grout was installed from the top of the bentonite seal to approximately five feet below grade in MW-8 and MW-9 (a shallow water table in the remaining eight monitoring wells precluded the use of the slurry grout). The surface completion of each well consists of a flush-to-grade, watertight and lockable well cover set into concrete.

Monitoring wells MW-7 and MW-12 through MW-15 were advanced with a Geoprobe® to a depth of at least five feet below the water table surface using 3 1/4- inch inside diameter rods. Again, soil samples were not collected for laboratory analysis from these monitoring well/borings because soil borings were either previously completed by URS in 2001 (Phase II ESI) or were completed in close proximity to the proposed monitoring wells (as part of this RI).

Construction of MW-7, and MW-12 through MW-15 consisted of 1-inch diameter threaded well casing with a minimum of ten feet of 0.01-inch slot size PVC screen with a fine grain filter pack sand (e.g., Morie #0) to 1-2 feet above the screen (to minimize turbidity during purging and sampling). The screen was set straddling the water table, generally seven feet below and three feet above. Up to three feet of bentonite chips or pellets was placed above the sand and hydrated with clean water. A bentonite-cement slurry grout was not installed above the top of the bentonite seal due to the shallow water table at the location of these five wells. The surface completion of each well consists of a flush-to-grade, watertight and lockable well cover set into concrete.

Monitoring well construction details are presented in **Appendix B**.

3.6.2 Supplemental Investigation Monitoring Well Installation

The groundwater investigation included the installation of five groundwater monitoring wells by ADT between August 19 and August 25, 2005, at the locations shown on **Figure 3A**.

The first 15 feet of MW-16 and MW-17 were advanced using a Geoprobe® drill rig using a 2-inch diameter, 5-foot long macrocore sampler to collect soil samples. Continuous split spoon soil samples were collected from the boreholes for monitoring wells MW-18, MW-20 and MW-21. Soil samples were collected and sent to for laboratory analysis from these soil borings. Results from these samples are discussed in **Section 4.3**. MW-19 was drilled and sampled similar to MW-18, MW-20, and MW-21, however, the boring was terminated prior to penetrating the water table because it encountered bedrock (no soil sample was submitted for laboratory analysis). All five monitoring wells were installed using a drill rig with 4.25-inch inside diameter hollow stem augers. The monitoring wells were installed to a depth of approximately seven feet below the water table surface.

The monitoring wells were constructed of 2-inch diameter threaded well casing with a minimum of 10 feet of 0.01-inch slot size poly vinyl chloride (PVC) screen with a fine grain filter pack sand (e.g., Morie #0) to minimize siltation during purging and sampling. This screen was set straddling the water table, generally seven feet below the water table and three feet above the water table. The well annulus was backfilled with Morie #0 sand to one to two feet above the top of the screen. A minimum of two feet of bentonite chips or pellets were placed above the sand and hydrated with clean water. The surface completion of each well consists of a flush-to-grade, watertight and lockable well cover set into concrete.

Monitoring well construction details for the monitoring wells are presented in **Appendix B**.

3.7 Monitoring Well Development

3.7.1 Remedial Investigation Monitoring Well Development

Monitoring well development was initiated no sooner than 24 hours after the completed installation of a monitoring well (or 48 hours for MW-8 and MW-9 to allow the slurry grout to properly set). Prior to well development, the depth to water and depth to bottom in the monitoring well was measured and recorded. A 2-inch Grundfos Redi-flo® submersible pump was used to pump the 4-inch and 2-inch PVC wells during the well development. A variable-rate peristaltic pump was used to pump the 1-inch PVC wells. The Grundfos Redi-flo® submersible pump (or the polyethylene suction tubing for the variable-speed peristaltic pump) was lowered to the center of the well screen below the water table. The pump discharge tubing was connected to a YSI flow-through cell. Discharge from the flow-through cell was collected in a five-gallon bucket that was emptied into a 55-gallon drum when nearly full. The monitoring well discharge was monitored for pH, temperature, conductivity, and turbidity. Pumping of the monitoring well continued until the pH, temperature, and conductivity stabilized (i.e., less than 0.1 change in pH, less than 1°C change in temperature, and less than 10% change in the conductivity measurements). A reasonable effort was made to get the turbidity sediment free and the turbidity measurements below 10 Nephrolometric Turbidity Units (NTUs). In some cases the turbidity measurements stabilized above 10 NTUs, but in all monitoring wells, the final well development turbidity measurement was less than 50 NTUs. The stabilization and turbidity measurements were recorded periodically on a well development log; copies of the well development logs are presented in **Appendix D**.

3.7.2 Supplemental Investigation Monitoring Well Development

Monitoring well development occurred between September 1 and 3, 2005 and was initiated no sooner than 24 hours after the completed installation of a monitoring well. Well development generally consisted of pumping the well until the discharge water was relatively sediment free and the indicator parameters (pH,

conductivity, and temperature stabilized. The development process was closely monitored to minimize the volume of discharge water. A portable turbidity meter was used to monitor the effectiveness of development; a turbidity reading of less than 50 NTUs and stabilized indicator readings was used as a guide for discontinuing well development. A 2-inch nominal Grundfos Redi-flo® submersible pump was used to pump the 2-inch PVC wells during the well development.

Prior to well development, the depth to water and depth to bottom in the monitoring well was measured and recorded. The Grundfos Redi-flo® submersible pump was lowered to the center of the saturated well screen (a portion of the well screen was above the water table), and the pump discharge tubing was connected to a YSI flow-through cell. Discharge from the flow-through cell was collected in a five-gallon bucket (which was periodically switched) that was emptied into a 55-gallon drum when nearly full. The monitoring well discharge was monitored for pH, temperature, conductivity, and turbidity. Pumping of the monitoring well continued until the pH, temperature, and conductivity stabilized (i.e., less than 0.1 change in pH, less than 1°F change in temperature, and less than 10% change in the conductivity measurements). A reasonable effort was made to get the turbidity sediment free; however, final well development turbidity measurements were less than 50 NTUs. The stabilization and turbidity measurements were recorded periodically on a well development log; copies of the well development logs are presented in **Appendix D**.

3.8 Monitoring Well Sampling

3.8.1 Remedial Investigation Groundwater Sampling

Between May 16 and 19, 2005, monitoring wells MW-1 through MW-15 were sampled following the USEPA low-flow sampling technique. This technique is similar to the well development procedure described above. Prior to well sampling, the depth to water and depth to bottom in the monitoring well was measured and recorded.

A Grundfos Redi-flo® submersible pump (or the polyethylene suction tubing for the variable-speed peristaltic pump) was lowered to approximately one foot below the water level in the well. The pump (or bottom of the suction tubing) was lowered into the well as the water level dropped due to the sample purging process. The pump discharge tubing (all tubing used with either the Grundfos or peristaltic pumps were discarded after one use, and new tubing was connected to the pumps before sampling the next well) was connected to a YSI flow-through cell which was decontaminated between wells. Discharge from the flow-through cell was collected in a five-gallon bucket that was emptied into a 55-gallon drum when nearly full. The monitoring wells were purged at a relatively slow, constant discharge rate and the discharge water monitored for pH, temperature, conductivity, and turbidity. Purging of the monitoring well continued until the pH, temperature, and conductivity stabilized (see **Section 3.7** for details). Once the parameters and turbidity measurements had stabilized, the pumping rate was reduced to about 200 milliliters per minute (if that rate had not already

been used to purge the monitoring well) and groundwater samples were collected directly from the discharge tube. In the 1-inch PVC monitoring wells (MW-7, MW-12 through MW-15) all of the parameters (except VOCs) were collected directly from the discharge tube. A ½-inch disposable polyethylene bailer was slowly lowered into the well (after all the other parameters had been collected, and the suction tube had been slowly removed so as not to disturb the top of the water column) to collect a sample for VOC analysis.

Monitoring well MW-11 went dry during the purging process. In this case, the well was allowed to sufficiently recover for the collection of the groundwater sample. The well was sampled approximately two hours after the well was purged dry.

Groundwater samples for all monitoring wells were analyzed for the following:

- TCL VOC+10
- TCL SVOC+20
- Pesticides/Herbicides
- PCBs
- TAL Metals + Cyanide

In addition to the groundwater samples that were collected from the groundwater monitoring wells, two groundwater "grab" samples were collected from soil borings in the northwest corner of the Site in an attempt to further delineate the extent of the previously identified groundwater impact in this area. These samples were not collected as described above. Temporary wells (2-inch diameter PVC) were installed in soil borings SB-37 and SB-42 and a groundwater "grab" sample was collected (without any purging or monitoring of parameters) using a 1.5-inch disposable polyethylene bailer.

One field duplicate sample was collected for every twenty field samples and one rinsate blank was collected per each decontamination event (if dedicated disposable sampling equipment was not used) for a total of two field QC samples (1 field duplicate and one rinsate blank). These samples were analyzed for the parameter list presented above. One trip blank per sample shipment was collected; four trip blanks were generated. Trip blanks were analyzed for TCL VOC +10. Two of the groundwater samples (MW-1GW and MW-7GW) were also analyzed for New York City Sewer Discharge Parameters. Results from this sampling event are shown on **Figures 7A-7C** and in **Tables 7A** and **8A**.

A complete round of water level measurements was obtained from the monitoring wells on September 13, 2005 (**Table 6**). Measurements were used to develop a groundwater contour map (**Figure 5**).

3.8.2 Supplemental Investigation Groundwater Sampling

Monitoring wells MW-18, MW-20, and MW-21 were sampled on September 15, 2005 and MW-16 and MW-17 were sampled on September 16, 2005, using the USEPA low-flow sampling technique. This technique is similar to the well development procedure described above. Prior to well sampling, the depth to water and depth to bottom in the monitoring well was measured and recorded.

A Grundfos Redi-flo® submersible pump (or the polyethylene suction tubing for the variable-speed peristaltic pump) was lowered to approximately one foot below the water level in the well. The pump (or bottom of the suction tubing) was lowered into the well as the water level dropped due to the sample purging process. The pump discharge tubing was connected to a YSI flow-through cell. All tubing used was discarded after one use and new tubing was connected to the pumps before sampling the next well. Also, the YSI flow-through cell was decontaminated between wells. Discharge from the flow-through cell was collected in a five-gallon bucket (which was periodically switched) that was emptied into a 55-gallon drum when nearly full. The monitoring well was purged at a relatively slow, constant discharge rate and the discharge water monitored for pH, temperature, conductivity, and turbidity. Purging of the monitoring well continued until the pH, temperature, and conductivity stabilized (see **Section 3.7** for details). Once the parameters and turbidity measurements had stabilized, the pumping rate was reduced to about 200 milliliters per minute (if that rate had not already been used to purge the monitoring well) and groundwater samples were collected directly from the discharge tube.

MW-19 was not sampled because the boring was terminated at the top of bedrock (30 ft bgs), and had not penetrated the water table. A monitoring well was installed in the event that the water table was penetrated or rose above the bedrock. There was no water in the well on either September 15 or 16, 2005.

Groundwater samples sent to Chemtech and were analyzed for the following:

- TCL VOC+10
- TCL SVOC+20
- TAL Metals

One field duplicate sample and one rinsate blank were collected for a total of two field quality control (QC) samples. These samples were analyzed for the parameter list presented above. One trip blank per sample shipment was collected; four trip blanks were generated. Trip blanks were analyzed for TCL VOC +10. Results from this sampling event are shown on **Figures 7A-7C** and in **Tables 7B** and **8B**.

3.9 Slug Test

On September 21, 2005, Shaw conducted slug withdrawal tests (e.g. "slug out") in five on-site monitoring wells (MW-1, MW-3, MW-7, MW-12, and MW-13) and two off-site monitoring wells (MW-8 and MW-14) to assess the range of hydraulic conductivity of the shallow aquifer beneath the Site. In Situ MiniTROLLs (pressure transducer and datalogger) were placed in each of the above listed wells along with a 5-foot long "slug" constructed of PVC (0.5-inch for monitoring wells MW-7, MW-12, MW-13, and MW-14, and 3.0-inch for monitoring wells MW-1, MW-3 and MW-8) weighted with sand sealed inside of the PVC. The miniTROLLs and Slugs were installed the day before the test to allow the miniTROLL to equilibrate to the temperature of the aquifer and allow the water displaced by the slug when it was initially placed into the well (raising the water level above the static water level) to equilibrate.

Water level measurements during each test were recorded logarithmically by the miniTROLL. Approximately one second after the miniTROLL was programmed to collect the water levels, the slug in the well was removed from the water as quickly as possible, resulting in a lowering of the water level. The miniTROLL recorded the water level rise as it returned to equilibrium conditions.

The water level measurements were downloaded in the field onto a hand held computer and transferred onto a desktop computer for analysis. The water level recovery data were analyzed using AQTESOLV Version 3.5 software (**Appendix E**). The hydraulic conductivity values from the slug withdrawal tests ranged from $3.72x10^{-4}$ centimeters/second (cm/sec) to $2.09x10^{-5}$ cm/sec. Based on the slug test results, the average hydraulic conductivity of the aquifer is $1.44x10^{-4}$ cm/sec or 0.41 feet per day (ft/day).

The hydraulic conductivity value for each monitoring well is presented below:

Well ID	Hydraulic Conductivity (cm/sec)
MW-1	5.37x10-5
MW-3	$2.09x10^{-5}$
MW-7	$1.30x10^{-4}$
MW-8	$2.10x10^{-4}$
MW-12	$3.72x10^{-4}$
MW-13	$2.50x10^{-5}$
MW-14	$1.96x10^{-4}$

The water table contours in **Figure 5** show that the horizontal direction of groundwater flow is from the northwest to the southeast with a horizontal hydraulic gradient of 0.02 feet per foot (ft/ft) across the Site. The rate of groundwater flow can be estimated based on the following equation (USEPA, 1992):

$$V = \frac{Ki}{n_e}$$

where:

V = the average linear velocity of groundwater flow (ft/day),

K = the hydraulic conductivity (ft/day),

i = the horizontal hydraulic gradient (ft/ft), and

n_e = the effective porosity (expressed as a decimal) (dimensionless).

Assuming an effective porosity of 30%, the average linear velocity of the groundwater at the Site is 0.03 ft/day, or about 10 feet per year. The seepage velocity could be higher or lower depending on localized variations of hydraulic conductivity, hydraulic gradient and/or porosity. However, the low hydraulic gradient supports a low seepage velocity and resulting long travel time for groundwater to migrate from northwest to southeast across the Site.

3.10 Sample Location Survey

3.10.1 Remedial Investigation Sample Location Survey

Upon completion of the RI, the 18 monitoring wells were surveyed for horizontal and vertical coordinates by a licensed NYS surveyor. Soil boring and test pit locations were determined by manual (e.g. tape and land wheel) measurements from the Site grid system developed for the soil gas survey. The surveyed and measured locations were plotted on the existing base map (see **Figure 3A**).

3.10.2 Supplemental Investigation Sample Location Survey

Upon completion of the SI, the five monitoring wells and seven soil gas implants were surveyed on September 26, 2005 for horizontal and vertical coordinates by a licensed New York State surveyor. Soil boring locations were determined by manual measurements (i.e measuring tape). The surveyed and measured locations were plotted on the existing base map (see **Figures 3A** and **3B**).

3.11 Data Validation

All environmental samples collected as part of the RI and SI were analyzed by Chemtech of Mountainside, NJ. Chemtech is a certified NYSDOH ELAP CLP-laboratory. Pursuant to the RIWP, twenty percent of all laboratory analytical Quality Assurance and Data (excluding TCLP and TPH soil samples) were completed in accordance with NYSDEC Category B Data Deliverable format and eighty percent of all laboratory analytical Quality Assurance and Data were completed in accordance with NYSDEC Category A Data Deliverable format. All TCLP and TPH laboratory analytical Quality Assurance and data were completed in accordance with NYSDEC Category A Data Deliverable format.

Shaw validated all of the RI Category B data received from Chemtech and a Data Usability Summary Report (DUSR) was prepared. The results of the DUSR are presented in **Appendix F** (the DUSR was developed from a full NYSDEC ASP Category B package). All data in the DUSR was considered usable for decision-making purposes.

4.0 DISCUSSION OF REMEDIAL INVESTIGATION FINDINGS

This section presents all Remedial Investigation analytical data and findings. Analytical data for soils is provided in **Tables 3A, 3B, 4A, 4B,** and **5**. Soil boring logs are provided in **Appendix A**. Analytical data for groundwater is provided in **Tables 7A, 7B, 8A,** and **8B**. Analytical data for soil gas is provided in **Tables 9A**, **9B**, **10A**, and **10B**. The following sections discuss the soil, groundwater, and soil gas data obtained for each of the areas of concern for this investigation. **Figures 3A and 3B** contains the locations of all samples collected for the investigations. Analytical data for soil and groundwater were compared to the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (1994, as updated) and Technical and Operations Guidance Series (TOGS) 1.1.1, respectively. The Data Usability Summary Report (DUSR) is included in **Appendix F**.

4.1 Applicable Regulatory Standards and Guidelines

4.1.1 Soil Guidance Values (SGVs)

Soils analytical results were compared to one or both sets of the SGVs as promulgated by the NYSDEC. The Recommended Soil Cleanup Objectives (RSCOs) published in the NYSDEC TAGM HWR-4046, "Determination of Soil Cleanup Objectives and Cleanup Levels", January 1994, were used for assessment of soils. Eastern USA background concentrations of Metals (also from TAGM HWR-94-4046) were used to assess the metals concentrations in soils.

4.1.2 Ambient Groundwater Quality Standards and Guidance Values

Groundwater data were compared to New York State Ambient Water Quality Standards and Guidance Values, as set forth in the NYSDEC Division of Water Technical Operational Guidance Series (TOGS) number 1.1.1, "Ambient Water Quality Standards and Guidance Values", June 1998. Ambient water quality standards are enforceable standards as set forth in the regulations. Where ambient water quality standards do not exist, ambient water quality guidance values were used for comparison to the groundwater results.

4.2 Subsurface Soil Sample Findings

VOCs were detected in soil samples collected across the Site as well as off site to the west, northwest, and north of the Site (**Figure 6A**). Many of these soil samples collected had detections for naphthalene, acetone, methylene chloride and for one or more of BTEX compounds. Acetone and methylene chloride are common laboratory artifacts. BTEX compounds are usually associated with lighter petroleum products similar to gasoline. Several of the VOCs detected in the soil samples exceeded RSCOs. All of these exceedences were observed at on-Site soil boring locations (sometimes at more than one depth) SB22, SB44, SB45, SB47, SB-48, SB49 and NWSB located in the northwest corner of the Site, and at off-Site soil boring locations MW-18, PSB1, PSB2, PSB3, PSB7, PSB10, and PBSB1. The soil grab, NWTPGRAB, collected from a test pit located in the northwest corner of the Site, also had VOC concentrations in excess of the RSCOs. Compounds that exceeded their applicable RSCOs include: BTEX, naphthalene, isopropylbezene, acetone, and methylene chloride. The highest concentrations of the VOCs were detected in zone of saturation corresponding to the top of water table.

A total of 32 soil boring locations had one or more SVOC detections that exceeded the applicable RSCO at one or more depths (**Figure 6B**). Compounds that exceeded the RSCOs include: benzo(a)anthracene, chrysene, benzo(a)pyrene, dibenzofuran, phenanthrene, fluoranthene, pyrene, benzo(b)fluoranthene, benzo(k)fluroanthene, indeno (1,2,3-cd)pyrene, dibenzo(a,h)anthracene, butylbenzylphthalate, naphthalene, 2-methylnaphthalene, and phenanthrene. Most of these compounds are associated with heavier petroleum products similar to Number 2, Number 4 or Number 6 fuel oil and/or MGP wastes (i.e., coal tar). Similar to the VOCs, the highest concentrations of SVOCs were detected in the zone of saturation corresponding to the top of the water table. Naphthalene was the organic compound with the highest detected concentrations (220,000 ppb in two separate soil samples). Concentrations of SVOCs in the unsaturated zone and deeper within the zone of saturation were much lower. Thirteen soil borings (SB23, SB24, SB26, SB28, SB37, PSB4, PSB5, PSB6, PSB14, PSB16, PSB17, PSB19, and PSBS3) had no SVOC detections. Nine soil borings (MW-20, SB27, SB21, PSB3, PSB9, PSB11, PSB12, PSB13, and PBSB5) had SVOC detections above laboratory or method detection limits but none of the detections exceeded their applicable RSCO.

Metals above RSCOs were encountered in all of the soil borings; most metal concentrations exceeded Eastern Background Standards (**Figure 6C**). This Site is located in an urban setting and the concentrations observed may be indicative of background and/or historic site conditions and not related to Site contamination. Elevated sodium and calcium concentrations are mostly likely attributed to runoff (especially during the winter months) from Concourse Village West and East 156th Street which are located immediately adjacent to the Site and at a higher elevation. Contrary to the distribution of VOCs and SVOCs, there is no evident trend of higher metal detections in the zone of saturation (i.e., there is no apparent relationship between the metal concentrations in the subsurface soil and the VOC and SVOC

concentrations in the subsurface soil). This confirms that the detected metal concentrations are related to urban background conditions.

There were no herbicides detected in any of the soil borings. Aroclor-1260 and Arcolor-1254 were the only PCBs detected in soil. Aroclor-1260 was detected at locations Ballast-1, Ballast-2, SB25, SB29, SB30, SB33, SB35, SB43, SB45, TP11, TP12, TP14, TP15, and TP16. Aroclor-1254 was detected at one location SB44. All detections were below the RSCOs.

Cyanide was analyzed for in all samples except MW-18, MW-20 and MW-21. It was only detected in SB45 (5-7') at 3.730 milligrams per kilogram (mg/kg) and in the TP-19 (5-6') duplicate sample (2.240 mg/kg). Cyanide was not detected in the TP-19 (5-6') sample. There is no RSCO for cyanide.

Two locations, SB22 and SB45, had detections for pesticides in soil. 4,4-DDD was detected at both locations. 4,4-DDE, alpha-chlordane and gamma chlordane were also detected at SB22. None of the detected pesticides exceeded any RSCOs.

4.3 Groundwater Sample Findings

Several VOCs were detected in excess of the applicable groundwater quality standards, particularly in monitoring wells MW-7, MW-12, and MW-13 in the northwest corner of the Site (**Figure 7A**) and off-site in MW-8, MW-9, MW-14 and MW-15 and MW-18. VOCs exceeding the applicable GW standards include: naphthalene, acetone, cis-1,2-dichloroethene, benzene, toluene, ethylbenzene, xylenes, isopropylbenzene, N-propylbenzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, p-isopropylbezene, n-butylbezene, tetrachloroethene and vinyl chloride. Of the VOC compounds detected in these monitoring wells, only MTBE (detected in three samples) did not exceed the applicable GW standard.

In the monitoring wells with the higher contaminant concentrations (the northwest corner and further upgradient), total BTEX is generally the largest portion of the contaminants. Monitoring well MW-8, located upgradient and off site, has the highest total BTEX concentration (30,270 microgram per liter [µg/L]) with lesser total BTEX concentrations in MW12 (11,360 µg/L), MW-7 (9,960 µg/L), and MW-9 (7,793 µg/L). Tetrachloroethene was only detected in one well (MW-1) located in the southwest portion of the Site. As previously mentioned, there was a laundry operation off Site to the west northwest of MW-1, and many dry cleaning laundries have used tetrachloroethene as part of their process. It is very possible that the tetrachloroethene detected in MW-1 may be originating from an off-site source. Similarly, vinyl chloride (only detected in MW-10) and cis-1,2-dichloroethene (detected in MW-10 and MW13, MW14, and MW15 in the northwest corner) were detected in MW-10 which is south of MW-1.

Vinyl chloride and cis-1,2-dichloroethene are breakdown products of tetrachloroethene, suggesting that these contaminants detected in MW-10 are also originating from an off-site source.

It is readily evident that the VOC contamination in groundwater is confined to the northwestern portion of the Site. There are minimal or no VOC detections in groundwater monitoring wells in the downgradient direction of groundwater flow along the eastern portion of the Site (MW-2, MW-3, MW-5, and MW-6) indicating attenuation of VOCs in the downgradient direction of groundwater flow. In this regard, low groundwater seepage velocities (10 feet/year) translates to significant travel time in the downgradient direction of groundwater flow across the Site. Long travel time allows for attenuation mechanisms including dilution, retardation and biodegradation to reduce contaminant concentrations.

Following a similar trend to the VOC contamination, the highest (SVOCs) impact to groundwater was observed in the northwest corner of the Site in monitoring wells MW-7, MW-8,and MW-12 and off-site in MW-14, MW-15, and MW-18 (**Figure 7B**). Exceedences include naphthalene, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, phenol and acenaphthene. Only bis(2-ethylhexyl)phthalate and butylbenzylphthalate were detected in areas outside the northwest corner of the Site. These two compounds were detected is similar concentrations (respectively) in all of the 4-inch wells sampled in May 2005. The only things in common with these wells are the sampling pump and the disposable tubing used as part of the sampling. These two compounds were not detected in the rinse blank (collected during the groundwater sampling event by pouring organic-free water over the decontaminated pump). However, these compounds are commonly referred to as “plasticizers” and often found in plastic tubing. It is likely that these constituents were leached out of the sample tubing during the sample collection process.

Significant SVOC contamination in the groundwater was only observed where there was significant SVOC soil contamination. SVOC concentrations in groundwater samples from monitoring wells (MW-13 and MW-16) approximately 100 feet downgradient of significant soil contamination (SB-44 and PSB-3, respectively) were minimal or non detect. These results strongly suggest that the SVOCs are not readily mobile in the groundwater, and therefore, are not likely to migrate off site. This is to be anticipated since SVOCs have low solubilities and are relatively immobile in groundwater systems.

A number of metal constituents were detected above the groundwater quality standards in the samples collected (**Figure 7C**). These included antimony, arsenic, barium, beryllium, cadmium, chromium, iron, lead, magnesium, manganese, and nickel. Monitoring well MW-2, located toward the southern part of the Site had the highest metal detections. Metal constituents are readily adsorbed by soils and metal detections are not related to migration in groundwater, but rather, are associated with localized variations in soil quality associated with urban fill. Additionally, due to the fine-grained aquifer materials, and despite following the proper protocol, there was some sediment in the groundwater samples. When the

samples were preserved with nitric acid, some metals are leached out of the sediment into the water resulting in a higher detected concentration.

There was one detection for cyanide in MW-14 (0.015 milligrams per liter or mg/L) which was below the groundwater quality standards. All other samples were non-detect for cyanide.

There were no detections for PCBs or pesticides in the groundwater during this investigation. There were four detections for 2,4-dichlorophenoxyacetic acid (2,4-D). These detections were in monitoring wells MW-15, MW-13, MW-2 and MW-14. There were no other herbicides detected. All detections were below the GW standard.

4.4 Soil Gas Findings

VOCs were detected in all of the soil gas samples collected (**Figure 8A**). **Tables 10A** and **10B** provide a summary of the detected VOCs. The highest total VOC concentrations were observed in the northwest corner of the Site in samples SG-1 and SG-9. N-hexane, n-heptane and cyclohexane had the highest concentrations of all the detected VOCs (53,000 micrograms per cubic meter ($\mu g/m^3$), 7,700 $\mu g/m^3$ and 4,000 $\mu g/m^3$, respectively, in SG-1 and 84,000 $\mu g/m^3$, 22,000 $\mu g/m^3$ and 9,300 $\mu g/m^3$, respectively, in SG-9). BTEX compounds were detected in most of the 23 samples collected. Benzene was detected in 20 samples at concentrations ranging from 0.73 $\mu g/m^3$ (SG-47) to 1,000 $\mu g/m^3$ (SG-1). Toluene was detected in all 23 samples collected at concentrations ranging from 8.5 $\mu g/m^3$ (SG-21) to 700 $\mu g/m^3$ (SG-9). Ethylbenzene was detected in 19 of the 23 samples at concentrations from 1.5 $\mu g/m^3$ (sg-21) to 35 $\mu g/m^3$ (SG-28). The highest concentration of xylenes was in SG-38 for both m,p-xylene (34 $\mu g/m^3$) and o-xylene (19 $\mu g/m^3$). Total xylenes (m,p-xylenes and o-xylenes) were not detected in SG-1, SG-9 or SG-28. O-xylene was also not detected in SG-11 and SG-19. Most analytes in samples PSGI-9 and PSGI-10 (off-site to the west) were detected at concentrations less than 100 $\mu g/m^3$ with the exception of chloroform in PSGI-9 (510 $\mu g/m^3$) and ethanol in PSGI-10 (120 $\mu g/m^3$).

Methane was detected in all of the soil gas samples collected except PSGI-4 and PSGI-7; no methane sample was collected at PSGI-10 (**Figure 8B**). Elevated methane readings were observed in samples SG-1 (4,400 parts per million by volume [ppmV]) and SG-9 (9,400 ppmV) in the northwest corner of the Site. Organic silt with root fibers were observed in soil borings in close proximity to SG-1 and SG-9 indicating that the elevated methane results may be attributable to decomposition of the organic matter or the adsorbed/hydrocarbon impacts observed in this area (See **Section 4.3**). All other methane results were less than 10 ppmV suggesting that there is very little, if any, lateral migration of the methane detected in the northwest corner of the Site.

4.5 Sources of Contamination – Contaminant Distribution

There are two major fractions of contamination identified at the Site- SVOCs and VOCs. The presence of this contamination can be evaluated within the context of the historical uses of the Site and surrounding area as discussed below.

MGP Contamination

A historic manufactured gas plant (MGP) was identified in the general vicinity (northwestern area) of the Site. Based on a review of historical records (**Appendix G**, Sanborn Fire Insurance Maps), the exact location of the plant relative to the Site cannot be specifically determined. The Sanborn maps show the MGP to be near the northwestern corner of the Site, or in fact, north of the Site boundary. Review of the Sanborn maps indicate that this MGP operated from prior to 1891 to 1946.

Two types of waste were generally produced by MGPs, purifier waste and coal tar. The purifier waste was generated from removal of contaminants from the gas prior to storage and distribution. This waste usually contains high levels of cyanide compounds. Insignificant detections of cyanide at the Site indicate that only small quantities of purifier waste were produced during plant operations. Coal tar waste was a dark-colored liquid with a viscosity similar to light oil, which was often sold off to be used in other products. The coal tar contained high levels of SVOCs (in particular PAHs) including naphthalene, which is considered to be a "signature compound" of coal tar. While VOCs such as BTEX are also present in MGP waste, these constituents are a minor component compared to the SVOC fraction. In addition, VOCs tend to dissipate/degrade quickly, leaving heavier SVOCs behind, naphthalene in particular.

The locations and descriptive summary of the coal tar-related field observations made during the RI and SI are presented on **Figure 9**. While field descriptions of coal tar (globules; tar-like gravel) and coal tar odor are considered subjective, the presence of these observations is consistent with the overall analytical results. **Figure 10** depicts the distribution of naphthalene detected in the soil, showing concentrations generally an order of magnitude higher than the RSCO of 13,000 ppb. Naphthalene is often considered to be a "signature compound" of MGP operations. Evidence of coal tar was observed principally in the northwest area both off site (SB-47, SB-48), and on the Site (SB-45) and extended more than 300 feet upgradient to the northwest and off the Site in the area of MW-18. Soil samples from MW-18 exhibited a concentration of naphthalene (220,000 ppb) which besides SB-45 (on Site) was the highest naphthalene detection noted during these investigations.

In review of the historical Sanborn maps it is noted that areas adjacent to the MGP plant to the south and east were occupied by railroad tracks. As such, it is reasonable to assume that any purposeful and significant dumping of coal tar wastes would not have occurred near or on the tracks (which would have

interfered with rail operations) but would most likely have taken place off site, as evidenced by the high concentrations of naphthalene (and other SVOCs) detected in MW-18; the coal tar related contamination was observed approximately 25 ft bgs with fill material above it. The Langan Engineering Retaining Wall Evaluation Report states that the retaining wall was likely constructed at the same time that the rail yard was established. However, the coal tar related contamination observed in the MW-18 soil boring suggests that the retaining wall was constructed sometime after the MGP was in operation (the MGP was built prior to 1891). Since MW-18 is located upgradient of the retaining wall, this waste disposal could have occurred prior to construction of the retaining wall when the area northwest of the Site and in the vicinity of MW-18 was presumably at a much lower and more comparable elevation to that of the Site, and therefore, more accessible. Assuming the retaining wall was constructed sometime after the MGP was in operation, deliberate off site dumping of coal tar wastes may have occurred upgradient, as supported by the high detection of naphthalene in MW-18. It is also noted that the Langan Engineering Retaining Wall Evaluation Report (Langan, 2005) shows that there is a coarse gravel material laid along the west side of the retaining wall. This material could be a preferred pathway for groundwater (and contamination) migration in a southerly direction adjacent to the wall.

Incidental spills and releases intrinsic in MGP operations and/or surface water transport of coal tar contaminated sediments from adjacent off site dumping (in the area around MW-18, for example) are the likely causes of the coal tar contamination seen in the northwest corner of the Site.

In addition to the MGP in the vicinity of the Site, the Site operated as a rail yard from prior to 1891 to approximately 1975. Review of the Sanborn maps (**Appendix G**) shows the Site contained many rail road tracks with a machine shop, carpenter shop, paint area, offices and storage areas. The tracks extended at least 1000 feet beyond the northern boundary of the Site. Contaminants typically associated with rail road tracks include SVOCs that come from the lubricating greases used on the locomotives and rail cars and from the creosote-soaked (often used to retard degradation) rail road ties. Several of the SVOCs associated with lubricating greases and creosote-soaked rail road ties are the same as those associated with MGP waste.

It should be noted that concentrations of naphthalene and PAHs are much lower across the remainder of the site in comparison to the northwest corner. In fact, there are no exceedances of the RSCO for naphthalene on the Site except in the northwest corner. SVOCs encountered in isolated patches across the remainder of the Site are therefore attributable to historic rail yard operations.

Gasoline Contamination

A site reconnaissance identified properties in the vicinity of the Site and adjacent to the Site that are potential sources of contamination to the Site. Of particular significance relative to the contamination identified on the Site, was the historical presence of a gasoline service station adjacent to the western, upgradient, portion of the Site. Gasoline spills are identified by the presence of certain VOCs, principally

BTEX, and other VOCs such as trimethylbenzenes and MTBE. MTBE has been a common additive to premium unleaded gasoline since the late 1970's.

The Phase I ESA report indicates that an auto repair shop and gasoline filling station was historically located at the southwestern corner of East 156th Street and Concourse Village West, adjacent to and immediately west of the Site (**Figure 12**). The auto repair shop and filling station was reportedly visible on the 1951 Sanborn map. By 1977 the filling station was no longer on the map, but the auto repair shop remained. During its operational history, this service station/auto repair facility could have released gasoline into the subsurface through either leaking storage tanks or spills from filling tanks.

Figure 11 depicts the concentration of BTEX detected in the groundwater and confirms the likely source of the VOCs as the off-site historic service station. The highest BTEX concentration was found in MW-8, located off site, and to the west.

To summarize, the presence of significant SVOCs in the northwestern portion of the Site is concluded to be associated with historic operation of an MGP (in the vicinity of the Site), including likely dumping upgradient of the Site in the area of MW-18. SVOCs across the remainder of the Site are attributable to historic rail yard operations at the Site. The presence of VOCs on the Site is concluded to be associated with the historic operation of a filling station immediately adjacent to and upgradient of the Site.

4.6 Public Health Exposure Assessment

A Public Health Exposure Assessment based on data from the URS Phase II Investigation and data collected during this RI has been prepared. The Exposure Assessment includes a discussion of fate and transport of the contamination identified at the Site within the context of potential exposure pathways to on site workers, occupants of the new school and off site residents and workers. Potential exposure routes on site will be mitigated by the remedy that will be implemented for the Site as described in the Remedial Action Work Plan (RAWP) which is the companion document to this Remedial Investigation Report. Off site migration of site related contaminants is not significant. Accordingly, no exposure to off-site residents and workers is documented.

In addition to the Exposure Assessment an evaluation was completed to determine whether a Fish and Wildlife Resource Impact Analysis (FWIA) was required for the Site. Since there is no significant migration of contamination off site and no potential for contamination to enter surface water, a FWIA was determined not to be required.

The Public Health and Exposure Assessment and the evaluation of the need for a FWIA are provided in **Appendix H**.

5.0 SUMMARY AND CONCLUSIONS

Shaw prepared a RI for the Site, which is located at 672 Concourse Village West, Bronx, New York. The Site consists of Block 2443/Lot 78 on the Borough of Bronx tax assessor's map. The Site was historically used as a rail yard by Metro North.

The investigation included the completion of a drilling program and the sampling and analysis of soil, groundwater and soil gas. In addition, a Public Health Exposure Assessment and a DUSR were completed.

The findings of this investigation are summarized as follows:

- Groundwater ranges in depth from approximately 4.5 to 30 bgs across the Site area and flows in a southeasterly direction. Groundwater seepage velocity is estimated to be approximately 10 feet/year across the Site.
- VOCs were detected in soil samples collected across the Site and off-site. Several of these VOCs exceed their RSCOs. Compounds that exceeded their applicable RSCOs include: BTEX, naphthalene, isopropylbenzene, acetone, and methylene chloride. BTEX compounds are usually associated with lighter petroleum products similar to gasoline.
- A total of 32 soil boring locations (both on and off-site) had at least one SVOC that exceeded the applicable RSCO. These compounds include: naphthalene, benzo(a)anthracene, chrysene, benzo(a)pyrene, dibenzofuran, phenanthrene, fluoranthene, pyrene, benzo(b)fluoranthene, benzo(k)fluroanthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, butylbenzylphthalate, 2-methylnaphthalene, and phenanthrene. Most of these compounds are associated with heavier petroleum products similar to Number 2, Number 4 or Number 6 fuel oil or MGP waste
- Metals above RSCO were encountered in all of the soil borings, tests pits and debris piles; most metal concentrations exceeded USA Eastern Background Standards. This Site is located in an urban setting and the concentrations observed are considered to be indicative of background conditions and not related to Site contamination.
- There were no herbicides detected in any of the soil borings. Aroclor-1260 and Arcolor-1254 were the only PCBs detected in soil. Only two locations, SB22 and SB45, had detections for pesticides. All detections were below pertinent RSCOs.
- Several VOCs (naphthalene, acetone, cis-1,2-dichloroethene, benzene, toluene, ethylbenzene, xylenes, isopropylbenzene, N-propylbenzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, p-isopropylbenzene, n-butylbenzene, tetrachloroethene and vinyl chloride) were detected in excess of applicable the groundwater quality standards. The presence of VOCs on the Site is concluded to be associated with the historic operation of a filling station immediately adjacent to and upgradient of the Site. Low groundwater seepage velocities and long travel time for contamination to move across the Site, allow for natural attenuation of the VOCs.

- The highest detections of SVOC in groundwater were observed in the northwest corner of the Site and off-site in MW-18. The SVOCs detected above the applicable groundwater standards include: naphthalene, butylbenzylphthalate, bis(2-ethylhexyl)phthalate, phenol and acenaphthene. Because of their inherent low solubilities, SVOCs are not anticipated to migrate significantly in groundwater.
- A number of metal constituents were detected above the groundwater quality standards in the samples collected. These included antimony, arsenic, barium, beryllium, cadmium, chromium, iron, lead, magnesium, manganese, and nickel. These detections are likely associated with background conditions typical of urban settings.
- There were no detections of PCBs or pesticides in groundwater during this investigation. There were four detections of herbicide 2,4-dichlorophenoxyacetic acid (2,4-D). There were no other herbicides detected. All detections were below groundwater quality standards.
- Methane was detected in all of the soil gas samples collected. Elevated methane levels were observed in samples collected from the northwest corner of the Site. Organic silt with root fibers was observed in soil borings in close proximity to the northwest corner indicating that the elevated methane results may be attributable to decomposition of the organic matter and/or the adsorbed hydrocarbon impacts observed in this area.
- VOCs were detected in all of the soil gas samples collected. The most elevated VOC levels were observed in samples collected from the northwest corner of the Site.
- Results of the DUSR indicated that the data are usable for decision-making purposes and assessing contaminant distribution in the subsurface.

The VOC and SVOC contamination identified in the soils and groundwater at the Site is related to historic operations in the vicinity of the Site and off Site. Specifically, the presence of SVOCs in the northwestern portion of the Site is concluded to be associated with historic operation of an MGP, including likely off site dumping of MGP waste upgradient of the Site. SVOCs across the remainder of the Site are attributable to historic rail yard operations at the Site. The presence of VOCs on the Site is concluded to be associated with the historic operation of a filling station/auto repair facility adjacent to and immediately upgradient of the Site. The groundwater contamination identified at the Site is confined to the northwest corner of the property and there has been no significant migration of VOC and SVOC contamination across the Site. There is no indication that VOC and SVOC contamination is migrating off site.

Results of the Public Health Exposure Assessment indicate that any potential exposure routes on-site will be mitigated by the proposed remedy for the Site. Also, no exposure to off-site individuals and residences is anticipated since off-site migration of Site related contamination is not significant.

To conclude, results of this investigation are sufficient to support the development of a site remedy that will be protective for the end use of the property and surrounding community.

6.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Shaw has performed a Remedial Investigation of the 672 Concourse Village West Site in Bronx, New York based on the approved Remedial Investigation Work Plan and Supplemental Investigation Scope of Work.

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TABLES

Table 1A
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC	PZ1-1	PZ1-2	PZ2-1	PZ2-1DL1	PZ2-1DL2	PZ2-2	PZ3-1	PZ3-2	SB3-1	SB3-2	SB4-1	SB5-1	SB6-1
Sample Collection Date	TAGM	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001
Sample Receipt Date	Rec. Cleanup Objective	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001
Volatile Organic Compounds (ug/kg)														
Chloromethane	NC	3.2 U	3.2 U	34 U	4900 U	9700 U	3.4 U	3.3 U	3.3 U	3.2 U	3.5 U	3.5 U	3.5 U	3.6 U
Vinyl Chloride	200	2.1 U	2.1 U	22 U	6100 U	12000 U	2.2 U	2.1 U	2.2 U	2.1 U	2.3 U	2.3 U	2.3 U	2.4 U
Bromomethane	NC	2.2 U	2.2 U	23 U	3300 U	6600 U	2.3 U	2.3 U	2.3 U	2.2 U	2.4 U	2.4 U	2.4 U	2.5 U
Chloroethane	1900	2.6 U	2.6 U	27 U	4100 U	8300 U	2.7 U	2.6 U	2.6 U	2.6 U	2.8 U	2.8 U	2.8 U	2.9 U
1,1-Dichloroethene	400	1.8 U	1.8 U	19 U	2200 U	4500 U	1.9 U	1.9 U	1.9 U	1.8 U	2 U	2 U	2 U	2.1 U
Acetone	200	6.5 U	6.5 U	70 U	9700 U	19000 U	**15 B**	**16 B**	**13 B**	6.5 U	7.1 U	**17 B**	7.2 U	7.4 U
Carbon Disulfide	2700	1.1 U	1.1 U	12 U	2600 U	5200 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
Methylene Chloride	100	**21 B**	1.3 U	14 U	**11000 D**	**7300 D**	**22 B**	**3.6**	**3.7**	1.3 U	1.4 U	1.4 U	1.4 U	1.5 U
trans-1,2-Dichloroethene	300	2 U	2 U	21 U	3500 U	6900 U	2.1 U	2 U	2 U	1.9 U	2.1 U	2.1 U	2.1 U	2.2 U
1,1-Dichloroethane	200	1.1 U	1.1 U	12 U	2500 U	5000 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
2-Butanone	300	6.4 U	6.4 U	68 U	4700 U	9400 U	6.7 U	6.6 U	6.6 U	6.4 U	7 U	7 U	7 U	7.3 U
cis-1,2-Dichloroethene	NC	2.1 U	2.1 U	22 U	2100 U	4200 U	2.2 U	2.1 U	2.1 U	2.1 U	2.3 U	2.3 U	2.3 U	2.4 U
Chloroform	300	1.1 U	1.1 U	12 U	2700 U	5400 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
1,1,1-Trichloroethane	800	1.7 U	1.7 U	18 U	2800 U	5700 U	1.7 U	1.7 U	1.7 U	1.6 U	1.8 U	1.8 U	1.8 U	1.9 U
Carbon Tetrachloride	600	1.2 U	1.2 U	12 U	3000 U	6000 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U
Benzene	60	1.1 U	1.1 U	**5200 E**	1500 U	3000 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	**7.2**	1.2 U	1.3 U
1,2-Dichloroethane	100	2.8 U	2.8 U	30 U	2700 U	5400 U	2.9 U	2.8 U	2.9 U	2.8 U	3 U	3 U	3 U	3.2 U
Trichloroethene	700	3.1 U	3.1 U	34 U	1500 U	3000 U	3.3 U	3.2 U	3.2 U	3.1 U	3.4 U	3.5 U	3.5 U	3.6 U
1,2-Dichloropropane	NC	4.1 U	4.1 U	44 U	1500 U	3100 U	4.3 U	4.2 U	4.2 U	4.1 U	4.5 U	4.5 U	4.5 U	4.7 U
Bromodichloromethane	NC	1.1 U	1.1 U	12 U	2500 U	4900 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
4-Methyl-2-Pentanone	1000	3.4 U	3.4 U	37 U	3100 U	6200 U	3.6 U	3.5 U	3.6 U	3.4 U	3.8 U	3.8 U	3.8 U	3.9 U
Toluene	1500	1.4 U	1.4 U	**35000 E**	**110000 D**	**130000 D**	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.6 U	1.6 U	1.6 U
t-1,3-Dichloropropene	NC	1.9 U	1.9 U	20 U	2600 U	5300 U	2 U	1.9 U	1.9 U	1.9 U	2.1 U	2.1 U	2.1 U	2.1 U
cis-1,3-Dichloropropene	NC	1.1 U	1.1 U	12 U	2100 U	4200 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
1,1,2-Trichloroethane	NC	1.2 U	1.2 U	13 U	2900 U	5800 U	1.3 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U
2-Hexanone	NC	14 U	14 U	150 U	3000 U	5900 U	15 U	14 U	14 U	14 U	15 U	15 U	15 U	16 U
Dibromochloromethane	NC	1.1 U	1.1 U	12 U	2400 U	4800 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
Tetrachloroethene	1400	1.8 U	1.8 U	20 U	1600 U	3200 U	1.9 U	1.9 U	1.9 U	1.8 U	2 U	2 U	2 U	2.1 U
Chlorobenzene	1700	1.1 U	1.1 U	12 U	2400 U	4800 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
Ethyl Benzene	5500	1.7 U	1.7 U	**26000 E**	**170000 D**	**190000 D**	1.8 U	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.8 U	1.9 U
m/p-Xylenes	1200	1.7 U	1.7 U	**140000 E**	**1100000 E**	**1100000 D**	1.8 U	1.8 U	1.8 U	1.7 U	1.9 U	1.9 U	1.9 U	2 U
o-Xylene	1200	1.9 U	1.9 U	**79000 E**	**420000 E**	**400000 D**	2 U	1.9 U	1.9 U	1.9 U	2 U	2.1 U	2.1 U	2.1 U
Styrene	NC	1.1 U	1.1 U	12 U	2400 U	4700 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
Bromoform	NC	1.1 U	1.1 U	12 U	2300 U	4700 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U
1,1,2,2-Tetrachloroethane	600	2.5 U	2.5 U	27 U	2600 U	5200 U	2.7 U	2.6 U	2.6 U	2.5 U	2.8 U	2.8 U	2.8 U	2.9 U

Notes:

bold = Analyte exceedence of RSCO standard

BGS = Below Ground Surface

MDL = Method Detection Limit

CONC = Concentration

NA = Not Analyzed

U = Not Detected

J or E = Estimated value

B = Analyte found in blank as well as the sample

D = Sample diluted for analysis

As per TAGM #4046, total VOCs <10 ppm,., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1A
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC	SB8-1	SB11-1	SB17-1	SB17-2	SB17-2RE	TP-1	TP-2	TP-3	TP-4	TP-8	TP-5	TP-6	TP-7
Sample Collection Date	TAGM	8/3/2001	8/6/2001	8/6/2001	8/6/2001	8/6/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/6/2001	8/6/2001
Sample Receipt Date	Rec.	8/3/2001	8/7/2001	8/7/2001	8/7/2001	8/7/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/7/2001	8/7/2001
	Cleanup Objective	DUP of SB-6-1									DUP of TP-4			
Volatile Organic Compounds (ug/kg)														
Chloromethane	NC	3.6 U	3.4 U	3 U	3.3 U	3.3 U	3.5 U	3.1 U	3.3 U	3.3 U	3.3 U	3.7 U	3 U	3.3 U
Vinyl Chloride	200	2.4 U	2.2 U	1.9 U	2.2 U	2.2 U	2.3 U	2 U	2.2 U	2.1 U	2.1 U	2.4 U	2 U	2.1 U
Bromomethane	NC	2.5 U	2.3 U	2 U	2.3 U	2.3 U	2.4 U	2.1 U	2.3 U	2.2 U	2.2 U	2.5 U	2.1 U	2.3 U
Chloroethane	1900	2.9 U	2.7 U	2.4 U	2.7 U	2.7 U	2.8 U	2.5 U	2.7 U	2.6 U	2.6 U	2.9 U	2.4 U	2.6 U
1,1-Dichloroethene	400	2.1 U	1.9 U	1.7 U	1.9 U	1.9 U	2 U	1.8 U	1.9 U	1.9 U	1.9 U	2.1 U	1.7 U	1.9 U
Acetone	200	7.4 U	6.9 U	6.1 U	**16 B**	6.8 U	**8.3 B**	**8.6 B**	**14 B**	6.7 U	6.7 U	**6.3 JB**	**23**	**7**
Carbon Disulfide	2700	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Methylene Chloride	100	**7**	1.4 U	1.2 U	**2.6**	**5.9**	**3.2**	1.3 U	**8 B**	**8.2 B**	1.3 U	**7.4 B**	**4.9**	**5.4**
trans-1,2-Dichloroethene	300	2.2 U	2.1 U	1.8 U	2 U	2 U	2.1 U	1.9 U	2 U	2 U	2 U	2.2 U	1.8 U	2 U
1,1-Dichloroethane	200	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
2-Butanone	300	7.3 U	6.8 U	5.9 U	6.7 U	6.7 U	6.9 U	6.2 U	6.6 U	6.5 U	6.5 U	7.3 U	6 U	6.6 U
cis-1,2-Dichloroethene	NC	2.4 U	2.2 U	1.9 U	2.2 U	2.2 U	2.2 U	2 U	2.1 U	2.1 U	2.1 U	2.4 U	2 U	2.1 U
Chloroform	300	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
1,1,1-Trichloroethane	800	1.9 U	1.8 U	1.5 U	1.7 U	1.7 U	1.8 U	1.6 U	1.7 U	1.7 U	1.7 U	1.9 U	1.6 U	1.7 U
Carbon Tetrachloride	600	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Benzene	60	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
1,2-Dichloroethane	100	3.2 U	2.9 U	2.6 U	2.9 U	2.9 U	3 U	2.7 U	2.9 U	2.8 U	2.8 U	3.2 U	2.6 U	2.9 U
Trichloroethene	700	3.6 U	3.3 U	2.9 U	3.3 U	3.3 U	3.4 U	3.1 U	3.3 U	3.2 U	3.2 U	3.6 U	3 U	3.2 U
1,2-Dichloropropane	NC	4.7 U	4.3 U	3.8 U	4.3 U	4.3 U	4.4 U	4 U	4.2 U	4.2 U	4.2 U	4.7 U	3.9 U	4.2 U
Bromodichloromethane	NC	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
4-Methyl-2-Pentanone	1000	3.9 U	3.7 U	3.2 U	3.6 U	3.6 U	3.7 U	3.3 U	3.6 U	3.5 U	3.5 U	3.9 U	3.3 U	3.5 U
Toluene	1500	1.6 U	**1.6** U	1.3 U	1.5 U	1.5 U	1.5 U	1.4 U	1.5 U	1.4 U	1.4 U	1.6 U	1.3 U	1.5 U
t-1,3-Dichloropropene	NC	2.1 U	2 U	1.7 U	2 U	2 U	2 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U	1.8 U	1.9 U
cis-1,3-Dichloropropene	NC	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
1,1,2-Trichloroethane	NC	1.4 U	1.3 U	1.1 U	1.3 U	1.3 U	1.3 U	1.2 U	1.3 U	1.2 U	1.2 U	1.4 U	1.1 U	1.3 U
2-Hexanone	NC	16 U	15 U	13 U	14 U	14 U	15 U	13 U	14 U	14 U	14 U	16 U	13 U	14 U
Dibromochloromethane	NC	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Tetrachloroethene	1400	2.1 U	2 U	1.7 U	1.9 U	1.9 U	2 U	1.8 U	1.9 U	1.9 U	1.9 U	2.1 U	1.7 U	1.9 U
Chlorobenzene	1700	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Ethyl Benzene	5500	1.9 U	1.8 U	1.5 U	1.7 U	1.7 U	1.8 U	1.6 U	1.7 U	1.7 U	1.7 U	1.9 U	1.6 U	1.7 U
m/p-Xylenes	1200	2 U	**6.7**	1.6 U	1.8 U	1.8 U	1.9 U	1.7 U	1.8 U	1.8 U	1.8 U	2 U	1.6 U	1.8 U
o-Xylene	1200	2.1 U	**2.4**	1.7 U	2 U	2 U	2 U	1.8 U	1.9 U	1.9 U	1.9 U	2.1 U	1.8 U	1.9 U
Styrene	NC	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Bromoform	NC	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
1,1,2,2-Tetrachloroethane	600	2.9 U	2.7 U	2.3 U	2.6 U	2.6 U	2.7 U	2.5 U	2.6 U	2.6 U	2.6 U	2.9 U	2.4 U	2.6 U

Notes:

bold = Analyte exceedence of RSCO standard

BGS = Below Ground Surface

MDL = Method Detection Limit

CONC = Concentration

NA = Not Analyzed

U = Not Detected

J or E = Estimated value

B = Analyte found in blank as well as the sample

D = Sample diluted for analysis

As per TAGM #4046, total VOCs <10 ppm,., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1B
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Semi-Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC TAGM Rec. Cleanup Objective	PZ1-1	PZ1-2	PZ2-1	PZ2-2	PZ3-1	PZ3-2	SB3-1	SB3-2	SB4-1	SB5-1	SB6-1
Sample Collection Date		8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001
Sample Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Semi-Volatile Organic Compounds (µg/kg)												
Phenol	30 or MDL	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
bis(2-Chloroethyl)ether	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
2-Chlorophenol	800	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
1,2-Dichlorobenzene	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
1,3-Dichlorobenzene	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
1,4-Dichlorobenzene	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2-Methylphenol	100 or MDL	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2,2'-oxybis(1-Chloropropane)	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
3+4-Methylphenols	NC	67 U	72 U	720 U	71 U	70 U	70 U	67 U	74 U	75 U	74 U	78 U
n-Nitroso-di-n-propylamine	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
Hexachloroethane	NC	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
Nitrobenzene	200 or MDL	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
Isophorone	4400	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2-Nitrophenol	330 or MDL	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
2,4-Dimethylphenol	NC	86 U	92 U	920 U	91 U	89 U	89 U	86 U	95 U	96 U	95 U	100 U
bis(2-Chloroethoxy)methane	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2,4-Dichlorophenol	400	49 U	52 U	520 U	52 U	50 U	50 U	49 U	53 U	54 U	53 U	56 U
1,2,4-Trichlorobenzene	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
Naphthalene	13000	45 U	48 U	**72000 D**	48 U	**240**	47 U	**38 J**	**120**	**93**	**45 J**	**270**
4-Chloroaniline	220 or MDL	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
Hexachlorobutadiene	NC	56 U	60 U	600 U	60 U	58 U	58 U	56 U	62 U	63 U	62 U	65 U
4-Chloro-3-methylphenol	240 or MDL	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
2-Methylnaphthalene	36400	45 U	48 U	**57000 D**	48 U	**77**	47 U	45 U	49 U	50 U	49 U	**87**
Hexachlorocyclopentadiene	NC	140 U	150 U	1500 U	150 U	150 U	150 U	140 U	160 U	160 U	160 U	160 U
2,4,6-Trichlorophenol	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2,4,5-Trichlorophenol	1000	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
2-Chloronaphthalene	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
2-Nitroaniline	430 or MDL	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
Dimethylphthalate	2000	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
Acenaphthylene	41000	**160**	48 U	**2100**	48 U	**280**	47 U	45 U	49 U	50 U	49 U	**1200**
2,6-Dinitrotoluene	1000	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
3-Nitroaniline	500 or MDL	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
Acenaphthene	50,000***	45 U	48 U	**4500**	48 U	**92**	47 U	45 U	**60**	50 U	49 U	**200**
2,4-Dinitrophenol	200 or MDL	75 U	80 U	800 U	79 U	78 U	78 U	75 U	82 U	83 U	82 U	87 U
4-Nitrophenol	100 or MDL	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
Dibenzofuran	6200	37 U	40 U	**510**	40 U	**140**	39 U	37 U	41 U	42 U	41 U	**180**
2,4-Dinitrotoluene	NC	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
Diethylphthalate	7100	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
4-Chlorophenyl-phenylether	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
Fluorene	50,000***	41 U	44 U	**4000**	44 U	**190**	43 U	41 U	**47**	46 U	46 U	**210**
4-Nitroaniline	NC	90 U	96 U	960 U	95 U	93 U	93 U	90 U	99 U	100 U	99 U	100 U
4,6-Dinitro-2-methylphenol	NC	45 U	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
n-Nitrosodiphenylamine	NC	75 U	80 U	800 U	79 U	78 U	78 U	75 U	82 U	83 U	82 U	87 U
4-Bromophenyl-phenylether	NC	49 U	52 U	520 U	52 U	50 U	50 U	49 U	53 U	54 U	53 U	56 U
Hexachlorobenzene	410	41 U	44 U	440 U	44 U	43 U	43 U	41 U	45 U	46 U	45 U	48 U
Pentachlorophenol	1,000 or MDL	71 U	76 U	760 U	75 U	74 U	74 U	71 U	78 U	79 U	78 U	82 U
Phenanthrene	50,000***	**240**	40 U	**14000**	**100**	**1500**	43 U	**62**	**320**	**45**	40 U	**1300**
Anthracene	50,000***	**99**	52 U	**4400**	**52**	**380**	50 U	49 U	**66**	54 U	52 U	**850**
Carbazole	NC	**51**	40 U	400 U	40 U	**200**	39 U	37 U	41 U	42 U	41 U	**450**
Di-n-butylphthalate	8100	**40 J**	48 U	480 U	48 U	47 U	47 U	45 U	49 U	50 U	49 U	52 U
Fluoranthene	50,000***	**570**	40 U	**7700**	**91**	**1800**	39 U	**55**	**350**	**45**	40 U	**6100 D**
Pyrene	50,000***	**560**	40 U	**13000**	**110**	**2000**	39 U	**72**	**290**	42 U	40 U	**7200 D**
Butylbenzylphthalate	50,000***	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
3,3'-Dichlorobenzidine	NC	37 U	40 U	400 U	40 U	39 U	39 U	37 U	41 U	42 U	41 U	43 U
Benzo(a)anthracene	224 or MDL	**330**	40 U	**4300**	**43**	**920**	39 U	**46**	**140**	42 U	40 U	**2800**
Chrysene	400	**440**	64 U	**4600**	**56 J**	**1000**	59 U	**96**	**180**	67 U	40 U	**3300**
Bis(2-Ethylhexyl)phthalate	50,000***	**930**	40 U	400 U	40 U	**120**	39 U	**82**	41 U	42 U	41 U	43 U
Di-n-octyl phthalate	50,000***	56 U	60 U	600 U	60 U	58 U	58 U	56 U	62 U	63 U	62 U	65 U
Benzo(b)fluoranthene	1100	**380**	40 U	**2700**	**44**	**680**	39 U	**43**	**91**	42 U	40 U	**4000 D**
Benzo(k)fluoranthene	1100	**340**	100 U	**2400**	**48 J**	**1300**	101 U	**51 J**	**110**	110 U	103 U	**3500**
Benzo(a)pyrene	61 or MDL	**370**	60 U	**4300**	**50 J**	**900**	58 U	**40 J**	**100**	63 U	60 U	**3500**
Indeno(1,2,3-cd)pyrene	3200	**210**	64 U	**2200**	**48 J**	**200**	62 U	60 U	**53 J**	67 U	64	69 U
Dibenzo(a,h)anthracene	14 or MDL	56 U	60 U	600 U	60 U	**59**	58 U	56 U	62 U	63 U	62 U	**170**
Benzo(g,h,i)perylene	50,000***	**200**	52 U	**3200**	**65**	**310**	50 U	49 U	**59**	54 U	52 U	56 U

Notes:

bold = Analyte exceedence of RSCO standard

BGS = Below Ground Surface

MDL = Method Detection Limit

CONC = Concentration

NA = Not Analyzed

U = Not Detected

J = Estimated value

B = Analyte found in blank as well as the sample

D = Sample diluted for analysis

As per TAGM #4046, total VOCs <10 ppm,., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1B
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Semi-Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC	SB8-1	SB11-1	SB17-1	SB17-2	TP-1	TP-2	TP-3	TP-4	TP-8	TP-5	TP-6
Sample Collection Date	TAGM	8/3/2001	8/6/2001	8/6/2001	8/6/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/6/2001
Sample Matrix	Rec.	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Cleanup Objective	DUP of SB-6-1								DUP of TP-4		
Semi-Volatile Organic Compounds (µg/kg)												
Phenol	30 or MDL	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
bis(2-Chloroethyl)ether	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
2-Chlorophenol	800	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
1,2-Dichlorobenzene	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
1,3-Dichlorobenzene	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
1,4-Dichlorobenzene	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2-Methylphenol	100 or MDL	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2,2'-oxybis(1-Chloropropane)	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
3+4-Methylphenols	NC	78 U	72 U	63 U	71 U	74 U	66 U	70 U	70 U	69 U	78 U	64 U
n-Nitroso-di-n-propylamine	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
Hexachloroethane	NC	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
Nitrobenzene	200 or MDL	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
Isophorone	4400	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2-Nitrophenol	330 or MDL	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
2,4-Dimethylphenol	NC	100 U	92 U	81 U	90 U	95 U	84 U	89 U	89 U	88 U	100 U	82 U
bis(2-Chloroethoxy)methane	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2,4-Dichlorophenol	400	56 U	52 U	46 U	51 U	53 U	48 U	50 U	50 U	50 U	56 U	46 U
1,2,4-Trichlorobenzene	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
Naphthalene	13000	**110**	**120**	**200**	**480**	**490**	**160**	**97**	**300**	**390**	52 U	**110**
4-Chloroaniline	220 or MDL	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
Hexachlorobutadiene	NC	65 U	60 U	53 U	59 U	62 U	55 U	58 U	58 U	57 U	65 U	53 U
4-Chloro-3-methylphenol	240 or MDL	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
2-Methylnaphthalene	36400	**44 J**	48 U	**74**	**140**	**200**	**75**	**43 J**	**110**	**140**	52 U	43 U
Hexachlorocyclopentadiene	NC	160 U	150 U	130 U	150 U	160 U	140 U	150 U	150 U	150 U	160 U	130 U
2,4,6-Trichlorophenol	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2,4,5-Trichlorophenol	1000	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
2-Chloronaphthalene	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
2-Nitroaniline	430 or MDL	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
Dimethylphthalate	2000	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
Acenaphthylene	41000	**730**	**260**	**840**	**130**	**1200**	**260**	**400**	**330**	**390**	52 U	43 U
2,6-Dinitrotoluene	1000	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
3-Nitroaniline	500 or MDL	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
Acenaphthene	50,000***	**80**	**65**	**210**	**750**	**470**	**180**	**55**	**280**	**250**	52 U	**86**
2,4-Dinitrophenol	200 or MDL	87 U	80 U	70 U	78 U	82 U	73 U	78 U	78 U	77 U	87 U	71 U
4-Nitrophenol	100 or MDL	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
Dibenzofuran	6200	**76** U	**65**	**200**	**310**	**500**	**160**	**100**	**240**	**220**	43 U	**45**
2,4-Dinitrotoluene	NC	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
Diethylphthalate	7100	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
4-Chlorophenyl-phenylether	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
Fluorene	50,000***	**160**	**98**	**240**	**480**	**860**	**220**	**110**	**310**	**340** U	48 U	**66**
4-Nitroaniline	NC	100 U	96 U	84 U	94 U	99 U	88 U	93 U	93 U	92 U	100 U	85 U
4,6-Dinitro-2-methylphenol	NC	52 U	48 U	42 U	47 U	49 U	44 U	47 U	47 U	46 U	52 U	43 U
n-Nitrosodiphenylamine	NC	87 U	80 U	70 U	78 U	82 U	73 U	78 U	78 U	77 U	87 U	71 U
4-Bromophenyl-phenylether	NC	56 U	52 U	46 U	51 U	53 U	48 U	50 U	50 U	50 U	56 U	46 U
Hexachlorobenzene	410	48 U	44 U	39 U	43 U	45 U	40 U	43 U	43 U	42 U	48 U	39 U
Pentachlorophenol	1,000 or MDL	82 U	76 U	67 U	75 U	78 U	70 U	74 U	74 U	73 U	82 U	67 U
Phenanthrene	50,000***	**1400**	**680**	**2400**	**1200**	**7400 D**	**1600**	**1400**	**2200**	**1600**	**54**	**400**
Anthracene	50,000***	**510**	**280**	**1000**	**390**	**1800**	**540**	**300**	**730**	**570**	56 U	**100**
Carbazole	NC	**310**	**90**	**460**	**120**	**700**	**230**	**180**	**290**	**150**	43 U	**43**
Di-n-butylphthalate	8100	52 U	48 U	42 U	50 U	49 U	44 U	**58**	46 U	46 U	**54**	43 U
Fluoranthene	50,000***	**3400**	**1400**	**4900 D**	**1400**	**9400 D**	**2300**	**2000**	**2700**	**2200**	**82**	**370**
Pyrene	50,000***	**3000**	**1600**	**8800 D**	**1100**	**11000 D**	**2700**	**2400**	**3800 D**	**2900**	**76**	**310**
Butylbenzylphthalate	50,000***	43 U	40 U	35 U	39 U	41 U	37 U	**370**	38 U	38 U	43 U	35 U
3,3'-Dichlorobenzidine	NC	43 U	40 U	35 U	39 U	41 U	37 U	39 U	39 U	38 U	43 U	35 U
Benzo(a)anthracene	224 or MDL	**1700**	**800**	**2500**	**380**	**4800 D**	**1200**	**950**	**1400**	**1400**	**45**	**150**
Chrysene	400	**2100**	**890**	**3300 D**	**440**	**5100 D**	**1400**	**1100**	**1600**	**1400**	**56 J**	**190**
Bis(2-Ethylhexyl)phthalate	50,000***	**110**	**130**	**160**	39 U	**2000**	**180**	**220**	62 U	**160**	43 U	35 U
Di-n-octyl phthalate	50,000***	65 U	60 U	53 U	59 U	62	55 U	58 U	58 U	57 U	65 U	53 U
Benzo(b)fluoranthene	1100	**1900**	**880**	**2900 D**	**310**	**4100 D**	**810**	**830**	**1100**	**940**	43 U	**110**
Benzo(k)fluoranthene	1100	**2000**	**870**	**4000 D**	**340**	**3100**	**1900**	**1700**	**1800**	**1800**	110 U	**110**
Benzo(a)pyrene	61 or MDL	**1600**	**760**	**2500**	**300**	**4500 D**	**1200**	**1000**	**1500**	**1500**	65 U	**120**
Indeno(1,2,3-cd)pyrene	3200	**310**	**140**	**360**	**110**	**880**	**160**	**160**	**3800 D**	**260**	69 U	**59**
Dibenzo(a,h)anthracene	14 or MDL	**89**	**55 J**	**110**	60 U	**260**	**56**	**46** J	**68**	**66**	65 U	53 U
Benzo(g,h,i)perylene	50,000***	**400**	**270**	**790**	**120**	**1800**	**370**	**340**	**3800 D**	**540**	56 U	**65**

Notes:

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MDL = Method Detection Limit

CONC = Concentration

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D = Sample diluted for analysis

As per TAGM #4046, total VOCs <10 ppm.., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1B
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Semi-Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC TAGM Rec. Cleanup Objective	TP-7	SURFICIAL-1	SURFICIAL-2	SURFICIAL-3	SURFICIAL-4	SURFICIAL-5	SURFICIAL-6	SURFICIAL-12	SURFICIAL-7
Sample Collection Date		8/6/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001
Sample Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL DUP of SURFICIAL-6	SOIL
Semi-Volatile Organic Compounds (µg/kg)										
Phenol	30 or MDL	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
bis(2-Chloroethyl)ether	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
2-Chlorophenol	800	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
1,2-Dichlorobenzene	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
1,3-Dichlorobenzene	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
1,4-Dichlorobenzene	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2-Methylphenol	100 or MDL	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2,2'-oxybis(1-Chloropropane)	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
3+4-Methylphenols	NC	70 U	63 U	640 U	65 U	63 U	61 U	64 U	65 U	65 U
n-Nitroso-di-n-propylamine	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
Hexachloroethane	NC	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
Nitrobenzene	200 or MDL	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
Isophorone	4400	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2-Nitrophenol	330 or MDL	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
2,4-Dimethylphenol	NC	89 U	80 U	820 U	82 U	80 U	77 U	82 U	82 U	83 U
bis(2-Chloroethoxy)methane	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2,4-Dichlorophenol	400	50 U	45 U	460 U	47 U	45 U	44 U	46 U	47 U	47 U
1,2,4-Trichlorobenzene	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
Naphthalene	13000	47 U	**250**	430 U	**120**	**180**	**140**	**61**	42 U	**61**
4-Chloroaniline	220 or MDL	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
Hexachlorobutadiene	NC	58 U	52 U	530 U	54 U	52 U	51 U	53 U	54 U	54 U
4-Chloro-3-methylphenol	240 or MDL	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
2-Methylnaphthalene	36400	47 U	**96**	430 U	**36 J**	**150**	**71**	43 U	43 U	43 U
Hexachlorocyclopentadiene	NC	150 U	130 U	1300 U	140 U	130 U	130 U	130 U	140 U	140 U
2,4,6-Trichlorophenol	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2,4,5-Trichlorophenol	1000	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
2-Chloronaphthalene	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
2-Nitroaniline	430 or MDL	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
Dimethylphthalate	2000	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
Acenaphthylene	41000	**42 J**	**320**	**460**	**800**	**1800**	**530**	**340**	**200**	**880**
2,6-Dinitrotoluene	1000	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
3-Nitroaniline	500 or MDL	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
Acenaphthene	50,000***	47 U	**1200**	430 U	**190**	**53**	40 U	43 U	**63**	**96**
2,4-Dinitrophenol	200 or MDL	78 U	69 U	710 U	72 U	69 U	67 U	71 U	72 U	72 U
4-Nitrophenol	100 or MDL	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
Dibenzofuran	6200	39 U	**690**	350 U	**150**	**130**	**94**	**52**	35 U	**82**
2,4-Dinitrotoluene	NC	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
Diethylphthalate	7100	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
4-Chlorophenyl-phenylether	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
Fluorene	50,000***	43 U	**900**	390 U	**230**	**160**	37 U	39 U	**56**	**150**
4-Nitroaniline	NC	93 U	83 U	850 U	86 U	83 U	81 U	85 U	86 U	87 U
4,6-Dinitro-2-methylphenol	NC	47 U	42 U	430 U	43 U	42 U	40 U	43 U	43 U	43 U
n-Nitrosodiphenylamine	NC	78 U	69 U	710 U	72 U	69 U	67 U	71 U	72 U	72 U
4-Bromophenyl-phenylether	NC	50 U	45 U	460 U	47 U	45 U	44 U	46 U	47 U	47 U
Hexachlorobenzene	410	43 U	38 U	390 U	39 U	38 U	37 U	39 U	39 U	40 U
Pentachlorophenol	1,000 or MDL	74 U	66 U	670 U	68 U	66 U	64 U	67 U	68 U	69 U
Phenanthrene	50,000***	**86**	**9000 D**	**1400**	**2400**	**1100**	**440**	**360**	**560**	**1400**
Anthracene	50,000***	50 U	44 U	**440 J**	**720**	**1000**	**270**	**210**	**200**	**660**
Carbazole	NC	39 U	34 U	350 U	**410**	**490**	**110**	**80**	**66**	**180**
Di-n-butylphthalate	8100	47 U	41 U	430 U	**230**	**58**	40 U	**43**	43 U	**53**
Fluoranthene	50,000***	**190**	**9500 D**	**2000**	**5000 D**	**4500 D**	**1200**	**830**	**890**	**2700**
Pyrene	50,000***	**170**	**9200 D**	**3000**	**6300 D**	**4600 D**	**1300**	**1300**	**980**	**4300 D**
Butylbenzylphthalate	50,000***	39 U	**320**	**9100**	**21000 D**	33 U	34 U	**43**	35 U	**76**
3,3'-Dichlorobenzidine	NC	39 U	35 U	350 U	36 U	35 U	34 U	35 U	36 U	36 U
Benzo(a)anthracene	224 or MDL	**100**	**3500 D**	**1100**	**2500**	**3500 D**	**830**	**640**	**570**	**2200**
Chrysene	400	**120**	**4100 D**	**2000**	**2800**	**4100 D**	**1100**	**780**	**700**	**2400**
Bis(2-Ethylhexyl)phthalate	50,000***	39 U	**740**	**3800**	**2000**	**35**	34 U	**350**	**73**	**340**
Di-n-octyl phthalate	50,000***	58 U	52 U	530 U	58 U	52 U	51 U	53 U	58 U	54 U
Benzo(b)fluoranthene	1100	**120**	**3800 D**	**1500**	**2700**	**5900 D**	**1100**	**1000**	**480**	**3000 D**
Benzo(k)fluoranthene	1100	**92 J**	**2200**	**1700**	**2400**	**3400 D**	**1200**	**840**	**830**	**1500**
Benzo(a)pyrene	61 or MDL	**120**	**3700 D**	**1800**	**2500**	**3800 D**	**970**	**840**	**680**	**2000**
Indeno(1,2,3-cd)pyrene	3200	**64**	**560**	**940**	**500**	**670**	**340**	**150**	**260**	**380**
Dibenzo(a,h)anthracene	14 or MDL	53 U	**110**	530 U	**180**	**220**	**79**	**58**	**44 J**	**160**
Benzo(g,h,i)perylene	50,000***	**67**	**1300**	**930**	**1100**	**1200**	**400**	**350**	**310**	**820**

Notes:

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NA = Not Analyzed

U = Not Detected

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As per TAGM #4046, total VOCs <10 ppm,., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

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Table 1B
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Semi-Volatile Organic Compound Soil Analytical Data

Client Sample ID	NYSDEC	SURFICIAL-8	SURFICIAL-9	SURFICIAL-10	SURFICIAL-11	SURFICIAL	FB2	FB3
Sample Collection Date	TAGM	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/2/2001	8/3/2001
Sample Matrix	Rec. Cleanup Objective	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Semi-Volatile Organic Compounds (µg/kg)								
Phenol	30 or MDL	34 U	34 U	34 U	35 U	1 U	1 U	1 U
bis(2-Chloroethyl)ether	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
2-Chlorophenol	800	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
1,2-Dichlorobenzene	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
1,3-Dichlorobenzene	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
1,4-Dichlorobenzene	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2-Methylphenol	100 or MDL	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2,2'-oxybis(1-Chloropropane)	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
3+4-Methylphenols	NC	62 U	61 U	61 U	63 U	1.8 U	1.8 U	1.8 U
n-Nitroso-di-n-propylamine	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
Hexachloroethane	NC	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
Nitrobenzene	200 or MDL	34 U	34 U	34 U	35 U	1 U	1 U	1 U
Isophorone	4400	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2-Nitrophenol	330 or MDL	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
2,4-Dimethylphenol	NC	79 U	78 U	78 U	81 U	2.3 U	2.3 U	2.3 U
bis(2-Chloroethoxy)methane	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2,4-Dichlorophenol	400	45 U	44 U	44 U	46 U	1.3 U	1.3 U	1.3 U
1,2,4-Trichlorobenzene	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
Naphthalene	13000	**38 J**	41 U	**96**	**220**	1.2 U	1.2 U	1.2 U
4-Chloroaniline	220 or MDL	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
Hexachlorobutadiene	NC	52 U	51 U	51 U	53 U	1.5 U	1.5 U	1.5 U
4-Chloro-3-methylphenol	240 or MDL	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
2-Methylnaphthalene	36400	41 U	41 U	**88**	**130**	1.2 U	1.2 U	1.2 U
Hexachlorocyclopentadiene	NC	130 U	130 U	130 U	130 U	3.8 U	3.8 U	3.8 U
2,4,6-Trichlorophenol	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2,4,5-Trichlorophenol	1000	34 U	34 U	34 U	35 U	1 U	1 U	1 U
2-Chloronaphthalene	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
2-Nitroaniline	430 or MDL	34 U	34 U	34 U	35 U	1 U	1 U	1 U
Dimethylphthalate	2000	34 U	34 U	34 U	35 U	1 U	1 U	1 U
Acenaphthylene	41000	**530**	**120**	**600**	**1300**	1.2 U	1.2 U	1.2 U
2,6-Dinitrotoluene	1000	34 U	34 U	34 U	35 U	1 U	1 U	1 U
3-Nitroaniline	500 or MDL	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
Acenaphthene	50,000***	**40 J**	**47**	**380**	**520**	1.2 U	1.2 U	1.2 U
2,4-Dinitrophenol	200 or MDL	69 U	68 U	68 U	70 U	2 U	2 U	2 U
4-Nitrophenol	100 or MDL	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
Dibenzofuran	6200	33 U	**36**	**230**	**350**	1 U	1 U	1 U
2,4-Dinitrotoluene	NC	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
Diethylphthalate	7100	34 U	34 U	34 U	35 U	1 U	1 U	1 U
4-Chlorophenyl-phenylether	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
Fluorene	50,000***	**62**	**55**	**330**	**630**	1.1 U	1.1 U	1.1 U
4-Nitroaniline	NC	82 U	82 U	82 U	84 U	2.4 U	2.4 U	2.4 U
4,6-Dinitro-2-methylphenol	NC	41 U	41 U	41 U	42 U	1.2 U	1.2 U	1.2 U
n-Nitrosodiphenylamine	NC	69 U	68 U	68 U	70 U	2 U	2 U	2 U
4-Bromophenyl-phenylether	NC	45 U	44 U	44 U	46 U	1.3 U	1.3 U	1.3 U
Hexachlorobenzene	410	38 U	37 U	37 U	39 U	1.1 U	1.1 U	1.1 U
Pentachlorophenol	1,000 or MDL	65 U	65 U	65 U	67 U	1.9 U	1.9 U	1.9 U
Phenanthrene	50,000***	**690**	**580**	**7600 D**	**6500 D**	1 U	1 U	1 U
Anthracene	50,000***	**370**	**240**	**1500**	**2000**	1.3 U	1.3 U	1.3 U
Carbazole	NC	**94**	**73**	**1100**	**700**	1 U	1 U	1 U
Di-n-butylphthalate	8100	41 U	41 U	**39 J**	**40 J**	**1.1 J**	1.2 U	1.2 U
Fluoranthene	50,000***	**1500**	**1200**	**26000 D**	**12000 D**	1 U	1 U	1 U
Pyrene	50,000***	**2400 D**	**1800**	**24000 D**	**12000 D**	1 U	1 U	1 U
Butylbenzylphthalate	50,000***	**82**	34 U	**300**	35 U	1 U	1 U	1 U
3,3'-Dichlorobenzidine	NC	34 U	34 U	34 U	35 U	1 U	1 U	1 U
Benzo(a)anthracene	224 or MDL	**1200**	**640**	**15000 D**	**7100 D**	1 U	1 U	1 U
Chrysene	400	**1400**	**860**	**17000 D**	**7900 D**	1.6 U	1.6 U	1.6 U
Bis(2-Ethylhexyl)phthalate	50,000***	**290**	**81**	**2600**	**210**	1 U	1 U	1 U
Di-n-octyl phthalate	50,000***	52 U	51 U	**1600**	56 U	1.5 U	1.5 U	1.5 U
Benzo(b)fluoranthene	1100	**1200**	**760**	**13000 D**	**6700 D**	1 U	1 U	1 U
Benzo(k)fluoranthene	1100	**1400**	**750**	**13000 D**	**6000 D**	2.6 U	2.6 U	2.6 U
Benzo(a)pyrene	61 or MDL	**1200**	**670**	**15000 D**	**6500 D**	1.5 U	1.5 U	1.5 U
Indeno(1,2,3-cd)pyrene	3200	**240**	**110**	2500	**1000**	1.6 U	1.6 U	1.6 U
Dibenzo(a,h)anthracene	14 or MDL	**81**	**48 J**	**400**	310	1.5 U	1.5 U	1.5 U
Benzo(g,h,i)perylene	50,000***	**480**	**290**	**4300 D**	**1900**	1.3 U	1.3 U	1.3 U

Notes:
bold = Analyte exceedence of RSCO standard
BGS = Below Ground Surface
MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis
As per TAGM #4046, total VOCs <10 ppm,., Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.
ug/kg = micrograms per kilogram or parts per billion

Table 1C
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Inorganic Soil Analytical Data

Client Sample ID	NYSDEC	NYSDEC	PZ1-1	PZ1-2	PZ2-1	PZ2-2	PZ3-1	PZ3-2	SB3-1	SB3-2	SB4-1	SB5-1
Sample Collection Date	Eastern USA	Rec.	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001
Sample Matrix	Background	Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units		Objective	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
METALS (mg/kg)												
Aluminum	33,000	SB	**3020**	**5690**	**6860**	**4800**	**6930**	**7960**	**4330**	**10200**	**6300**	**11200**
Antimony	NC	SB	**4.2 B**	**0.79 B**	**7.1 B**	0.44 U	**2.3 B**	**0.43 B**	**4.2 B**	**0.87 B**	ND	0.45 U
Arsenic	3-12**	7.5 or SB	**9.4**	**3.2**	**7.1**	**2.7**	**12.5**	**2.2**	**5.6**	**3.5**	**3.2**	**3.4**
Barium	15-600	300 or SB	**81.9**	**45.9**	**176**	**12.9 B**	**270**	**59.5**	**85.4**	**73.5**	**50.1**	**39.7**
Beryllium	0-1.750	.16 (heast) or SB	**0.46 B**	**0.5 B**	**0.36 B**	**0.19 B**	**0.41 B**	**0.39 B**	**0.43 B**	**0.46 B**	**0.34 B**	**0.44 B**
Cadmium	.1-1	1 or SB	**0.84**	0.36 U	**1.6**	0.36 U	**0.91**	0.35 U	**0.88**	0.37 U	0.37 U	0.37 U
Calcium	130-35,000**	SB	**7910 E**	**33700 E**	**20400 E**	**2240 E**	**22500 E**	**1440 E**	**2150 E**	**1730 E**	**56400 E**	**12100 E**
Chromium	1.5-40**	10 or SB	**16.1**	**11.8**	**14**	**8.6**	**21.4**	**20.2**	**9.2**	**22.3**	**11.3**	**16.4**
Cobalt	2.5-60**	30 or SB	**8.7**	**7.4**	**4.5 B**	**4 B**	**8.3**	**11.6**	**7.1**	**10.4**	**4.2 B**	**8.7**
Copper	1-50	25 or SB	**136**	**20.8**	**734**	**12.1**	**125**	**14.3**	**334**	**75.3**	**8.3**	**17.5**
Iron	2,000-550,000	2,000 or SB	**21500**	**18900**	**12200**	**8610**	**31100**	**14700**	**13300 E**	**18100 E**	**12300 E**	**20100 E**
Lead	200-500****	SB	**446 E**	**21.5 E**	**2600 E**	**14.4 E**	**440 E**	**6.8 E**	**1520 E**	**142 E**	**19.1 E**	**12.9 E**
Magnesium	100-5,000	SB	**3890 E**	**21600 E**	**5590 E**	**2010 E**	**7330 E**	**5110 E**	**1210**	**3430**	**22300**	**5080**
Manganese	50-5,000	SB	**224**	**152**	**297**	**124**	**293**	260	**199**	**275**	**292**	**281**
Mercury	.001-.2	0.1	**0.75 N**	**0.05 N**	**2.9 N**	0.04 U	**0.33 N**	0.04 U	**0.58**	**0.6**	**0.07**	**0.07**
Nickel	.5-25	13 or SB	**17.9**	**9.1**	**12.7**	**7.5**	**17.2**	**15.3**	**9.8**	**17.8**	**8.3**	**12.5**
Potassium	8,500-43,000**	SB	**411 BE**	**1050 E**	**831 E**	**467 BE**	**1550 E**	**2020 E**	**613**	**1860**	**954**	**1010**
Selenium	.1-3.9	2 or SB	0.56 U	0.6 U	0.6 U	0.6 U	0.58 U	0.58 U	**0.75**	0.62 U	0.62 U	0.61 U
Silver	NC	SB	0.56 U	0.6 U	**0.67 B**	0.6 U	0.58 U	0.58 U	0.56 U	0.62 U	0.62 U	0.61 U
Sodium	6,000-8,000	SB	**123 B**	**183 B**	**647**	**97.5 B**	**125 B**	57.3 U	55.3 U	60.5 U	**113 B**	59.8 U
Thallium	NC	SB	0.64 U	0.68 U	0.69 U	0.68 U	0.66 U	0.67 U	0.06 U	0.07 U	0.07 U	0.07 U
Vanadium	1-300	150 or SB	**22.8**	**21.7**	**22.8**	**7.9**	**34**	**25.8**	**14.9**	**28.1**	**13**	**23.2**
Zinc	9-50	20 or SB	**408**	**99.1**	**475**	**117**	**346**	**39.1**	**112 E**	**70.4 E**	**63.7 E**	**45.3 E**

Notes:
bold = Analyte exceedence of Recommended Soil Cleanup Objectives (RSCO) and Eastern Background Concentrations
BGS = Below Ground Surface
MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
U = Not Detected
J or E = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis
ug/kg = micrograms per kilogram or parts per billion
Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.
HEAST = Health Effects Assessments Summary Table
SB = Site Background

Table 1C
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Inorganic Soil Analytical Data

Client Sample ID	NYSDEC	NYSDEC	SB6-1	SB8-1	SB11-1	SB17-1	SB17-2	TP-1	TP-2	TP-3	TP-4	TP-8	TP-5
Sample Collection Date	Eastern USA	Rec.	8/3/2001	8/3/2001	8/6/2001	8/6/2001	8/6/2001	8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001
Sample Matrix	Background	Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units		Objective	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
METALS (mg/kg)													
Aluminum	33,000	SB	**4630**	**4090**	**6310**	**5990**	**7500**	**4950**	**7680**	**6730**	**8740**	**8110**	**15900**
Antimony	NC	SB	**13.9**	**15.9**	**3.6 B**	**15.1**	**0.82 B**	**2.4 B**	**6 B**	**3.5 B**	**3.1 B**	**3.2 B**	**0.6 B**
Arsenic	3-12**	7.5 or SB	**13.7**	**22.3**	**20.2**	**17.5**	**0.96 B**	**9.1**	**8.4**	**7.5**	**5.3**	**4.9**	**3.2**
Barium	15-600	300 or SB	**53.2**	**274**	**253**	**107**	**73.5**	**846**	**117**	**178**	**92.3**	**78.4**	**39.2**
Beryllium	0-1.750	.16 (heast) or SB	**0.32 B**	**0.41 B**	**0.51 B**	**0.41 B**	**0.36 B**	**0.32 B**	**0.4 B**	**0.3 B**	**0.41 B**	**0.39 B**	**0.46 B**
Cadmium	.1-1	1 or SB	**0.83**	**2.6**	**1.6**	**1.8**	0.4 U	**2.1**	**1**	**1.2**	**0.83**	**0.62**	0.39 U
Calcium	130-35,000**	SB	**2920 E**	**7260 E**	**31900**	**11400**	**1620**	**41100 E**	**23700 E**	**21300 E**	**25300 E**	**26800 E**	**32000 E**
Chromium	1.5-40**	10 or SB	**13.7**	**30.2**	**18.9**	**28**	**18.7**	**16.6**	**25.8**	**21.9**	**19**	**22.4**	**17.4**
Cobalt	2.5-60**	30 or SB	**11.5**	**8.8**	**11.2**	**10.5**	**9.1**	**5.7 B**	**8.4**	**6.2**	**9.4**	**9.5**	**7.7**
Copper	1-50	25 or SB	**135**	**238**	**123**	**228**	**23.9**	**57.1**	**121**	**102**	**81.7**	**81.2**	**17.6**
Iron	2,000-550,000	2,000 or SB	**27000 E**	**56100 E**	**25400**	**46100**	**14200**	**15900**	**23000 E**	**19000 E**	**23400 E**	**18100 E**	**16100 E**
Lead	200-500****	SB	**684 E**	**676 E**	**559 N**	**1020 N**	**15.2 N**	**539 E**	**565 E**	**411 E**	**313 E**	**296 E**	**34 E**
Magnesium	100-5,000	SB	**2150**	**2500**	**5720**	**7490**	**3910**	**3980 E**	**12200**	**8960**	**6050**	**8360**	**37800**
Manganese	50-5,000	SB	**161**	**304**	**359**	**453**	**142**	**303**	**262**	**226**	**329**	**246**	**306**
Mercury	.001-.2	0.1	**0.32**	**1.3**	**1.2**	**0.79**	0.04 U	**0.32 N**	**0.61**	**0.56**	**0.84**	**0.62**	**0.11**
Nickel	.5-25	13 or SB	**18**	**28.7**	**30.3**	**22.1**	**14.6**	**10.5**	**16.5**	**13.1**	**16.5**	**18**	**11**
Potassium	8,500-43,000**	SB	**693**	**581 B**	**1360 E**	**669 E**	**2930 E**	**887 E**	**1900**	**778**	**1300**	**1530**	**1200**
Selenium	.1-3.9	2 or SB	0.65 U	0.65 U	0.6 U	0.53 U	0.59 U	0.62 U	0.55 U	0.58 U	0.58 U	0.58 U	0.65 U
Silver	NC	SB	0.65 U	0.65 U	0.6 U	0.53 U	0.59 U	0.62 U	0.55 U	0.58 U	0.58 U	0.58 U	0.65 U
Sodium	6,000-8,000	SB	**75.2 B**	**118 B**	**195 B**	51.5 U	57.7 U	**442 B**	**78.6 B**	**118 B**	**61.3 B**	**88.8 B**	63.6 U
Thallium	NC	SB	0.07 U	0.07 U	0.69 U	0.6 U	0.67 U	0.7 U	0.06 U	0.06 U	0.07 U	0.07 U	0.07 U
Vanadium	1-300	150 or SB	**14.9**	**67.7**	**43.4**	**31.9**	**24.5**	**26.3**	**30.8**	**23.1**	**23.5**	**31**	**24.9**
Zinc	9-50	20 or SB	**160 E**	**638 E**	**443**	**256**	**52**	**458**	**235 E**	**282 E**	**166 E**	**159 E**	**54.7 E**

Notes:
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BGS = Below Ground Surface
MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
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SB = Site Background

Table 1C
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Inorganic Soil Analytical Data

Client Sample ID	NYSDEC	NYSDEC	TP-6	TP-7	SURFICIAL-1	SURFICIAL-2	SURFICIAL-3	SURFICIAL-4	SURFICIAL-5	SURFICIAL-6	SURFICIAL-12
Sample Collection Date	Eastern USA	Rec.	8/6/2001	8/6/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001
Sample Matrix	Background	Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units		Objective	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
METALS (mg/kg)											
Aluminum	33,000	SB	**8020**	**8060**	**6340**	**6130**	**5280**	**4530**	**2770**	**2710**	**3880**
Antimony	NC	SB	**0.91 B**	**0.7 B**	**0.89 B**	**1.5 B**	**1.1 B**	**20.4**	**11.2**	**7**	**7.3**
Arsenic	3-12**	7.5 or SB	**3**	**3.6**	**5.6**	**5**	**3.8**	**22.9**	**16.2**	**12.2**	**13.9**
Barium	15-600	300 or SB	**65.9**	**51.1**	**361**	**779**	**1140**	**131**	**70.6**	**53.7**	**65.5**
Beryllium	0-1.750	.16 (heast) or SB	**0.37 B**	**0.43 B**	**0.29 B**	**0.67**	**0.34 B**	**0.48 B**	**0.5**	**0.34 B**	**0.51 B**
Cadmium	.1-1	1 or SB	0.32 U	0.35 U	**0.84**	**1.1**	**2.5**	**2**	**0.91**	**0.66**	**0.81**
Calcium	130-35,000**	SB	**2010**	**8840**	**42200 E**	**31900 E**	**35600 E**	**9730 E**	**16600 E**	**32200 E**	**33800 E**
Chromium	1.5-40**	10 or SB	**20.8**	**13.1**	**16.4**	**30.4**	**17.3**	**32.8**	**20.3**	**16.9**	**21.6**
Cobalt	2.5-60**	30 or SB	**8.8**	**6.6**	**5.7**	**10.6**	**8.3**	**12.1**	**7.8**	**10.6**	**9.3**
Copper	1-50	25 or SB	**48.9**	**24.7**	**36.5**	**103**	**43.6**	**999**	**168**	**228**	**181**
Iron	2,000-550,000	2,000 or SB	**15300**	**14800**	**12400**	**14000**	**12400**	**60300**	**41800**	**28000**	**35100**
Lead	200-500****	SB	**178 N**	**44.5 N**	**307 E**	**436 E**	**332 E**	**915 E**	**337 E**	**292 E**	**308 E**
Magnesium	100-5,000	SB	**2810**	**7340**	**4310 E**	**7990 E**	**5530 E**	**7130 E**	**8430 E**	**18500 E**	**20200 E**
Manganese	50-5,000	SB	**346**	**273**	**205**	**254**	**257**	**563**	**379**	**300**	**430**
Mercury	.001-.2	0.1	**0.6**	**0.16**	**0.27 N**	**0.21 N**	**0.32 N**	**0.86 N**	**0.27 N**	**0.31 N**	**0.25 N**
Nickel	.5-25	13 or SB	**14.9**	**11.3**	**12.5**	**37.8**	**15**	**36.7**	**21.9**	**18.5**	**19.7**
Potassium	8,500-43,000**	SB	**1430 E**	**883 E**	**1700 E**	**1380 E**	**1470 E**	**404 BE**	**468 BE**	**672 E**	**983 E**
Selenium	.1-3.9	2 or SB	**0.66** *	0.58 U	0.51 U	0.52 U	0.53 U	0.50 U	0.5 U	0.53 U	0.54 U
Silver	NC	SB	0.53 U	0.58 U	0.51 U	0.52 U	0.53 U	**0.7 B**	**0.53 B**	**0.54 B**	**0.53 B**
Sodium	6,000-8,000	SB	52.4 U	57.1 U	**149 B**	**201 B**	**214 B**	**118 B**	**58.1 B**	**1030**	**1220**
Thallium	NC	SB	0.61 U	0.66 U	0.59 U	0.6 U	0.61 U	**0.87 B**	0.57 U	0.6 U	0.61 U
Vanadium	1-300	150 or SB	**21.9**	**16.5**	**27**	**31.6**	**25.7**	**49.5**	**25.3**	**16.3**	**22.3**
Zinc	9-50	20 or SB	**67.9**	**50.1**	**272**	**727**	**855**	**364**	**128**	**180**	**204**

Notes:
bold = Analyte exceedence of Recommended Soil Cleanup Objectives (RSCO) and Eastern Background Concentrations
BGS = Below Ground Surface
MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
U = Not Detected
J or E = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis
ug/kg = micrograms per kilogram or parts per billion
Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.
HEAST = Health Effects Assessments Summary Table
SB = Site Background

Table 1C
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Inorganic Soil Analytical Data

Client Sample ID	NYSDEC	NYSDEC	SURFICIAL-7	SURFICIAL-8	SURFICIAL-9	SURFICIAL-10	SURFICIAL-11	SURFICIAL	FB2	FB3
Sample Collection Date	Eastern USA	Rec.	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/2/2001	8/3/2001
Sample Matrix	Background	Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units		Objective	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	UG/L	UG/L	µg/L
METALS (mg/kg)										
Aluminum	33,000	SB	**4900**	**5950**	**7740**	**3930**	**5290**	ND U	45.7 U	4.57 U
Antimony	NC	SB	**2.7 B**	**2.8 B**	**1.3 B**	**4.2 B**	**5.4 B**	ND U	3.7 U	0.37 U
Arsenic	3-12**	7.5 or SB	**20.6**	**8.3**	**4.6**	**22.7**	**42.7**	ND U	5 U	0.5 U
Barium	15-600	300 or SB	**169**	**249**	**150**	**232**	**238**	ND U	2 U	0.2 U
Beryllium	0-1.750	.16 (heast) or SB	**0.45 B**	**0.5**	**0.31 B**	**0.4 B**	**0.56**	**0.37 B**	**0.32 B**	**0.64 B**
Cadmium	.1-1	1 or SB	**1.1**	**0.64**	**0.38 B**	**1.6**	**1.4**	3 U	3 U	0.3 U
Calcium	130-35,000**	SB	**31500 E**	**36900 E**	**28400 E**	**33400 E**	**26600 E**	10.7 U	10.7 U	**62.1 B**
Chromium	1.5-40**	10 or SB	**21.7**	**20.6**	**24.9**	**22.8**	**31.1**	5 U	5 U	0.5 U
Cobalt	2.5-60**	30 or SB	**8.9**	**7.1**	**9.1**	**7.8**	**8.1**	1.8 U	1.8 U	0.18 U
Copper	1-50	25 or SB	**105**	**85.1**	**40.6**	**129**	**181**	2.2 U	2.2 U	0.22 U
Iron	2,000-550,000	2,000 or SB	**23800**	**19000**	**22500**	**27000**	**39100**	7 U	7 U	**8 B**
Lead	200-500****	SB	**241 E**	**299 E**	**324 E**	**560 E**	**707 E**	3 U	3 U	0.3 U
Magnesium	100-5,000	SB	**14500 E**	**14800 E**	**5570 E**	**12900 E**	**4110 E**	75.9 U	75.9 U	7.59 U
Manganese	50-5,000	SB	**313**	**278**	**276**	**290**	**390**	1.2 U	1.2 U	0.12 U
Mercury	.001-.2	0.1	**0.37 N**	**0.36 N**	**0.13 N**	**0.22 N**	**0.45 N**	0.2 U	0.2 U	0.033 U
Nickel	.5-25	13 or SB	**16.2**	**14.6**	**17.2**	**22.1**	**23.9**	4 U	4 U	0.4 U
Potassium	8,500-43,000**	SB	**1290 E**	**1360 E**	**2670 E**	**1270 E**	**767 E**	21.9 U	21.9 U	2.19 U
Selenium	.1-3.9	2 or SB	0.55 U	0.51 U	0.51 U	0.51 U	0.52 U	5 U	5 U	0.5 U
Silver	NC	SB	0.55 U	0.51 U	0.51 U	0.51 U	0.52 U	5 U	5 U	0.5 U
Sodium	6,000-8,000	SB	**999**	**49 B**	50.2 U	**226 B**	**153 B**	490 U	490 U	49.02 U
Thallium	NC	SB	0.62 U	0.59 U	0.58 U	0.58 U	0.6 U	5.7 U	5.7 U	0.057 U
Vanadium	1-300	150 or SB	**29.4**	**34.5**	**28.8**	**23.1**	**43.9**	3.2 U	3.2 U	0.32 U
Zinc	9-50	20 or SB	**264**	**251**	**119**	**423**	**390**	8.5 U	8.5 U	0.85 U

Notes:
bold = Analyte exceedence of Recommended Soil Cleanup Objectives (RSCO) and Eastern Background Concentrations
BGS = Below Ground Surface
MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
U = Not Detected
J or E = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis
ug/kg = micrograms per kilogram or parts per billion
Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.
HEAST = Health Effects Assessments Summary Table
SB = Site Background

Table 1D
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Pesticide, PCB and Herbicide Soil Analytical Data

Client Sample ID	NYSDEC TAGM Rec. Cleanup Objective	TP-1	TP-2	TP-3	TP-4	TP-8	TP-5
Sample Collection Date		8/2/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001	8/3/2001
Sample Matrix		SOIL	SOIL	SOIL	SOIL	SOIL DUP of TP-4	SOIL
ORGANIC COMPOUNDS							
Polychlorinated Biphenyls (PCBs) (µg/kg)							
AROCLOR 1016	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1221	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1232	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1242	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1248	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1254	1,000/10,000	21 U	18 U	19 U	19 U	19 U	22 U
AROCLOR 1260	1,000/10,000	**18 J**	**19**	**58**	**9 J**	**11 J**	22 U
Pesticides and Herbicides (µg/kg)							
alpha-BHC	110	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
gamma-BHC (Lindane)	60	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Heptachlor	100	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Aldrin	41	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
beta-BHC	200	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
delta-BHC	300	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Heptachlor epoxide	20	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Endosulfan I	900	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
gamma-Chlordane	540	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
alpha-Chlordane	NC	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
4,4'-DDE	2100	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Dieldrin	44	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Endrin	100	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Endosulfan II	900	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
4,4'-DDD	2900	13 U	1.8 U	1.9 U	**5**	**4.8**	2.2 U
4,4'-DDT	2100	13 U	**2.7**	**27**	1.9 U	1.9 U	2.2 U
Endrin aldehyde	NC	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Endosulfan Sulfate	1000	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Methoxychlor	900	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Endrin ketone	NC	2.1 U	1.8 U	1.9 U	1.9 U	1.9 U	2.2 U
Toxaphene	NC	21 U	18 U	19 U	19 U	19 U	22 U
2,4-D	500	4.1 U	3.7 U	3.9 U	3.8 U	3.8 U	4.3 U
2,4,5-TP(Silvex)	700	4.1 U	3.7 U	3.9 U	3.8 U	3.8 U	4.3 U
2,45-T	1,900	4.1 U	3.7 U	3.9 U	3.8 U	3.8 U	4.3 U

Notes:

bold = Analyte exceedence of Residential Direct Contact (RDC) Criteria

BGS = Below Ground Surface
MDL = Method Detection Limit
NC = No cleanup objective
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis

*** As per TAGM #4046, total VOCs <10 ppm. Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1D
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Pesticide, PCB and Herbicide Soil Analytical Data

Client Sample ID	NYSDEC	TP-6	TP-7	SB11-1	SB17-1	SB17-2	SURFICIAL-1
Sample Collection Date	TAGM	8/6/2001	8/6/2001	8/6/2001	8/6/2001	8/6/2001	8/1/2001
Sample Matrix	Rec. Cleanup Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
ORGANIC COMPOUNDS							
Polychlorinated Biphenyls (PCBs) (µg/kg)							
AROCLOR 1016	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1221	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1232	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1242	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1248	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1254	1,000/10,000	18 U	19 U	20 U	18 U	20 U	17 U
AROCLOR 1260	1,000/10,000	18 U	19 U	**56**	**34**	20 U	17 U
Pesticides and Herbicides (µg/kg)							
alpha-BHC	110	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
gamma-BHC (Lindane)	60	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Heptachlor	100	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Aldrin	41	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
beta-BHC	200	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
delta-BHC	300	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Heptachlor epoxide	20	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Endosulfan I	900	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
gamma-Chlordane	540	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
alpha-Chlordane	NC	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
4,4'-DDE	2100	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Dieldrin	44	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Endrin	100	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Endosulfan II	900	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
4,4'-DDD	2900	1.8 U	1.9 U	**23**	1.8 U	2.0 U	8.7 U
4,4'-DDT	2100	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	**69**
Endrin aldehyde	NC	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Endosulfan Sulfate	1000	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Methoxychlor	900	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Endrin ketone	NC	1.8 U	1.9 U	2.0 U	1.8 U	2.0 U	8.7 U
Toxaphene	NC	18 U	19 U	20 U	18 U	20 U	87 U
2,4-D	500	3.5 U	3.9 U	4.0 U	3.5 U	3.9 U	3.5 U
2,4,5-TP(Silvex)	700	3.5 U	3.9 U	4.0 U	3.5 U	3.9 U	3.5 U
2,45-T	1,900	3.5 U	3.9 U	4.0 U	3.5 U	3.9 U	3.5 U

Notes:

bold = Analyte exceedence of Residential Direct Contact (RDC) Criteria

BGS = Below Ground Surface
MDL = Method Detection Limit
NC = No cleanup objective
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis

*** As per TAGM #4046, total VOCs <10 ppm. Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1D
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Pesticide, PCB and Herbicide Soil Analytical Data

Client Sample ID	NYSDEC	SURFICIAL-2	SURFICIAL-3	SURFICIAL-4	SURFICIAL-5	SURFICIAL-6
Sample Collection Date	TAGM	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001
Sample Matrix	Rec. Cleanup Objective	SOIL	SOIL	SOIL	SOIL	SOIL
ORGANIC COMPOUNDS						
Polychlorinated Biphenyls (PCBs) (µg/kg)						
AROCLOR 1016	1,000/10,000	18 U	18 U	17 U	17 U	18 U
AROCLOR 1221	1,000/10,000	18 U	18 U	17 U	17 U	18 U
AROCLOR 1232	1,000/10,000	18 U	18 U	17 U	17 U	18 U
AROCLOR 1242	1,000/10,000	18 U	18 U	17 U	17 U	18 U
AROCLOR 1248	1,000/10,000	18 U	18 U	17 U	17 U	18 U
AROCLOR 1254	1,000/10,000	**83**	18 U	17 U	17 U	18 U
AROCLOR 1260	1,000/10,000	18 U	18 U	17 U	**15 J**	**24**
Pesticides and Herbicides (µg/kg)						
alpha-BHC	110	1.8 U	18 U	8.7 U	1.7 U	1.8 U
gamma-BHC (Lindane)	60	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Heptachlor	100	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Aldrin	41	1.8 U	18 U	8.7 U	1.7 U	1.8 U
beta-BHC	200	1.8 U	18 U	8.7 U	1.7 U	1.8 U
delta-BHC	300	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Heptachlor epoxide	20	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Endosulfan I	900	1.8 U	18 U	8.7 U	1.7 U	1.8 U
gamma-Chlordane	540	1.8 U	18 U	8.7 U	1.7 U	1.8 U
alpha-Chlordane	NC	1.8 U	18 U	8.7 U	1.7 U	1.8 U
4,4'-DDE	2100	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Dieldrin	44	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Endrin	100	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Endosulfan II	900	1.8 U	18 U	8.7 U	1.7 U	1.8 U
4,4'-DDD	2900	1.8 U	18 U	8.7 U	1.7 U	1.8 U
4,4'-DDT	2100	**23**	**120 D**	8.7 U	1.7 U	1.8 U
Endrin aldehyde	NC	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Endosulfan Sulfate	1000	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Methoxychlor	900	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Endrin ketone	NC	1.8 U	18 U	8.7 U	1.7 U	1.8 U
Toxaphene	NC	18 U	180 U	87 U	17 U	18 U
2,4-D	500	3.5 U	3.6 U	3.5 U	3.4 U	3.5 U
2,4,5-TP(Silvex)	700	3.5 U	3.6 U	3.5 U	3.4 U	3.5 U
2,45-T	1,900	3.5 U	3.6 U	3.5 U	3.4 U	3.5 U

Notes:

bold = Analyte exceedence of Residential Direct Contact (RDC) Criteria

BGS = Below Ground Surface
MDL = Method Detection Limit
NC = No cleanup objective
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis

*** As per TAGM #4046, total VOCs <10 ppm. Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1D
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Pesticide, PCB and Herbicide Soil Analytical Data

Client Sample ID	NYSDEC	SURFICIAL-12	SURFICIAL-7	SURFICIAL-8	SURFICIAL-9	SURFICIAL-10
Sample Collection Date	TAGM	8/1/2001	8/1/2001	8/1/2001	8/1/2001	8/1/2001
Sample Matrix	Rec. Cleanup Objective	SOIL DUP of SURFICIAL-6	SOIL	SOIL	SOIL	SOIL
ORGANIC COMPOUNDS						
Polychlorinated Biphenyls (PCBs) (µg/kg)						
AROCLOR 1016	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1221	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1232	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1242	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1248	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1254	1,000/10,000	18 U	18 U	17 U	17 U	17 U
AROCLOR 1260	1,000/10,000	**21**	**30**	**41**	**17**	**130**
Pesticides and Herbicides (µg/kg)						
alpha-BHC	110	3.6 U	1.8 U	1.7 U	1.7 U	17 U
gamma-BHC (Lindane)	60	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Heptachlor	100	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Aldrin	41	3.6 U	1.8 U	1.7 U	1.7 U	17 U
beta-BHC	200	3.6 U	1.8 U	1.7 U	1.7 U	17 U
delta-BHC	300	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Heptachlor epoxide	20	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Endosulfan I	900	3.6 U	1.8 U	1.7 U	1.7 U	17 U
gamma-Chlordane	540	3.6 U	1.8 U	1.7 U	1.7 U	17 U
alpha-Chlordane	NC	3.6 U	1.8 U	1.7 U	1.7 U	17 U
4,4'-DDE	2100	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Dieldrin	44	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Endrin	100	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Endosulfan II	900	3.6 U	1.8 U	1.7 U	1.7 U	17 U
4,4'-DDD	2900	3.6 U	1.8 U	1.7 U	1.7 U	17 U
4,4'-DDT	2100	3.6 U	1.8 U	**7.9**	1.7 U	17 U
Endrin aldehyde	NC	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Endosulfan Sulfate	1000	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Methoxychlor	900	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Endrin ketone	NC	3.6 U	1.8 U	1.7 U	1.7 U	17 U
Toxaphene	NC	36 U	18 U	17 U	17 U	170 U
2,4-D	500	3.6 U	3.6 U	3.4 U	3.4 U	3.4 U
2,4,5-TP(Silvex)	700	3.6 U	3.6 U	3.4 U	3.4 U	3.4 U
2,45-T	1,900	3.6 U	3.6 U	3.4 U	3.4 U	3.4 U

Notes:

bold = Analyte exceedence of Residential Direct Contact (RDC) Criteria

BGS = Below Ground Surface
MDL = Method Detection Limit
NC = No cleanup objective
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis

*** As per TAGM #4046, total VOCs <10 ppm. Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1D
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Pesticide, PCB and Herbicide Soil Analytical Data

Client Sample ID	NYSDEC	SURFICIAL-11	FB2	SURFICIAL
Sample Collection Date	TAGM	8/1/2001	8/2/2001	8/1/2001
Sample Matrix	Rec.	SOIL	WATER	WATER
	Cleanup		UG/L	UG/L
	Objective			
ORGANIC COMPOUNDS				
Polychlorinated Biphenyls (PCBs) (µg/kg)				
AROCLOR 1016	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1221	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1232	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1242	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1248	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1254	1,000/10,000	18 U	0.5 U	0.5 U
AROCLOR 1260	1,000/10,000	**340**	0.5 U	0.5 U
Pesticides and Herbicides (µg/kg)				
alpha-BHC	110	18 U	0.05 U	0.05 U
gamma-BHC (Lindane)	60	18 U	0.05 U	0.05 U
Heptachlor	100	18 U	0.05 U	0.05 U
Aldrin	41	18 U	0.05 U	0.05 U
beta-BHC	200	18 U	0.05 U	0.05 U
delta-BHC	300	18 U	0.05 U	0.05 U
Heptachlor epoxide	20	18 U	0.05 U	0.05 U
Endosulfan I	900	18 U	0.05 U	0.05 U
gamma-Chlordane	540	18 U	0.05 U	0.05 U
alpha-Chlordane	NC	18 U	0.05 U	0.05 U
4,4'-DDE	2100	18 U	0.05 U	0.05 U
Dieldrin	44	18 U	0.05 U	0.05 U
Endrin	100	18 U	0.05 U	0.05 U
Endosulfan II	900	18 U	0.05 U	0.05 U
4,4'-DDD	2900	**23**	0.05 U	0.05 U
4,4'-DDT	2100	**130**	0.05 U	0.05 U
Endrin aldehyde	NC	18 U	0.05 U	0.05 U
Endosulfan Sulfate	1000	18 U	0.05 U	0.05 U
Methoxychlor	900	18 U	0.05 U	0.05 U
Endrin ketone	NC	18 U	0.05 U	0.05 U
Toxaphene	NC	180 U	0.5 U	0.5 U
2,4-D	500	3.5 U	0.1 U	0.1 U
2,4,5-TP(Silvex)	700	3.5 U	0.1 U	0.1 U
2,45-T	1,900	3.5 U	0.1 U	0.1 U

Notes:

bold = Analyte exceedence of Residential Direct Contact (RDC) Criteria

BGS = Below Ground Surface
MDL = Method Detection Limit
NC = No cleanup objective
NA = Not Analyzed
U = Not Detected
J = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis

*** As per TAGM #4046, total VOCs <10 ppm. Total Semi VOCs< 500ppm. Individual Semi-VOCs <50 ppm. Total pesticides <10 ppm.

ug/kg = micrograms per kilogram or parts per billion

Table 1E
New York City School Construction Authority - Metro-North/Mott Haven Site
Bronx, New York
Summary of Historic Volatile Organic Compound Groundwater Analytical Data

Client Sample ID Sample Collection Date	New York State GA Groundwater Standard [1]	NYSDEC TAGM Groundwater Standards[2]	PZ-1 8/2/2001 WATER	PZ-2 8/2/2001 WATER	PZ-2 8/2/2001 WATER	PZ-3 8/2/2001 WATER	SB-3 8/3/2001 WATER	SB17 8/7/2001 WATER	FB2 8/2/2001 WATER	FB3 8/3/2001 WATER	TRIPBLANK 1/19/2001 WATER
Volatile Organic Compounds (ug/L)											
Chloromethane	NC	NC	2.8 U	2.8 U	280 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Vinyl Chloride	2	2	**7.7**	1.8 U	180 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Bromomethane	5	NC	1.9 U	1.9 U	190 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Chloroethane	5	50	2.3 U	2.3 U	230 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
1,1-Dichloroethene	5	5	1.6 U	1.6 U	160 U	1.6 U	1.6 U	**2.2**	1.6 U	1.6 U	1.6 U
Acetone	NC	50	5.8 U	5.8 U	580 U	5.8 U	**9.8**	5.8 U	**3.7 J**	5.8 U	5.8 U
Carbon Disulfide	NC	50	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	5	1.1 U	1.1 U	**370 BD**	**3.1 B**	1.1 U	1.1 U	1.1 U	**3 B**	**3 B**
trans-1,2-Dichloroethene	5	5	1.7 U	1.7 U	170 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,1-Dichloroethane	5	5	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	NC	50	5.6 U	5.6 U	560 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U
cis-1,2-Dichloroethene	5	NC	**25**	1.8 U	180 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Chloroform	7	7	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	5	5	1.5 U	1.5 U	150 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Carbon Tetrachloride	5	5	1 U	1 U	100 U	1	1 U	1 U	1 U	1 U	1 U
Benzene	1	1	1 U	**2500 E**	**17000 D**	**5.5**	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	5	2.5 U	2.5 U	250 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Trichloroethene	5	5	**3.7**	2.8 U	280 U	2.8 U	2.8 U	**2.2 J**	2.8 U	2.8 U	2.8 U
1,2-Dichloropropane	1	NC	3.6 U	3.6 U	360 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
Bromodichloromethane	50	NC	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-Pentanone	NC	50	3 U	3 U	300 U	3 U	3 U	3 U	3 U	3 U	3 U
Toluene	5	5	1.2 U	**180**	**210 D**	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
t-1,3-Dichloropropene	0.4****	NC	1.7 U	1.7 U	170 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
cis-1,3-Dichloropropene	0.4****	NC	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	NC	1.1 U	**12**	110 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
2-Hexanone	NC	NC	12 U	12 U	1200 U	12 U	12 U	12 U	12 U	12 U	12 U
Dibromochloromethane	50	50	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	5	1.6 U	1.6 U	160 U	1.6 U	1.6 U	**4.1**	1.6 U	1.6 U	1.6 U
Chlorobenzene	5	5	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethyl Benzene	5	5	1.5 U	**590 E**	**370 D**	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
m/p-Xylenes	NC	5*	1.5 U	**2000 E**	**1400 D**	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
o-Xylene	NC	5*	1.7 U	**180**	170 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Styrene	5	NC	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	50	NC	1 U	1 U	100 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	5	2.2 U	2.2 U	220 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U

NOTES

bold = Analyte exceedence of NYSGA Groundwater Standards and NYSDEC TAGM Groundwater Standards

MDL = Method Detection Limit
CONC = Concentration
NA = Not Analyzed
U = Not Detected
J or E = Estimated value
B = Analyte found in blank as well as the sample
D = Sample diluted for analysis
* = total xylenes

Table 2
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Soil Sample Laboratory Analyses

Sample ID	Sample Depth (ft bgs)	TAL Metals	TPH	Cyanide	VOCs	SVOCs	Pesticides	Herbicides	PCBs	TCLP				
										VOCs	SVOCs	Pesticides	Metals	RCRA Characteristics
SOIL BORING SAMPLES														
SB20	14-16	X		X	X	X	X	X	X					
SB21	4-6	X		X	X	X	X	X	X					
SB22	3-5	X		X	X	X	X	X	X					
SB22	6-8	X		X	X	X	X	X	X					
SB22	10-11	X		X	X	X	X	X	X					
SB23	6-8	X		X	X	X	X	X	X					
SB24	6-8	X		X	X	X	X	X	X					
SB25	2-4	X		X	X	X	X	X	X					
SB25	6-8	X		X	X	X	X	X	X					
SB25	14-16	X		X	X	X	X	X	X					
SB25A	4-6	X		X	X	X	X	X	X					
SB25A	6-8	X		X	X	X	X	X	X					
SB26	10-12	X		X	X	X	X	X	X					
SB27	14-16	X		X	X	X	X	X	X					
SB28	4-6	X		X	X	X	X	X	X					
SB29	4-6	X		X	X	X	X	X	X					
SB30	0-2	X		X	X	X	X	X	X					
SB30	6-8	X		X	X	X	X	X	X					
SB30	12-14	X		X	X	X	X	X	X					
SB33	0-4	X		X	X	X	X	X	X					
SB34	6-8	X		X	X	X	X	X	X					
SB35	0-2	X		X	X	X	X	X	X					
SB36	2-4	X		X	X	X	X	X	X					
SB37	4-6	X		X	X	X	X	X	X					
SB41	4-6	X		X	X	X	X	X	X					
SB42	4-6	X		X	X	X	X	X	X					
SB43	2-4	X		X	X	X	X	X	X					
SB44	3-5	X		X	X	X	X	X	X					
SB44	5-7	X		X	X	X	X	X	X					
SB44	14-15	X		X	X	X	X	X	X					
SB45	2-4	X	X	X	X	X	X	X	X	X	X	X	X	X
SB45	5-7	X	X	X	X	X	X	X	X	X	X	X	X	X
SB45	14-15	X	X	X	X	X	X	X	X	X	X	X	X	X
SB46	3-5	X	X	X	X	X	X	X	X	X	X	X	X	X
SB46	8-10	X	X	X	X	X	X	X	X	X	X	X	X	X
SB46	13-14	X	X	X	X	X	X	X	X	X	X	X	X	X
SB47	2-4	X		X	X	X	X	X	X					
SB47	7-8	X		X	X	X	X	X	X					
SB47	13-15	X		X	X	X	X	X	X					
SB48	2-4	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 2
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Soil Sample Laboratory Analyses

Sample ID	Sample Depth (ft bgs)	TAL Metals	TPH	Cyanide	VOCs	SVOCs	Pesticides	Herbicides	PCBs	TCLP				
										VOCs	SVOCs	Pesticides	Metals	RCRA Characteristics
SOIL BORING SAMPLES														
SB48	8-9	X	X	X	X	X	X	X	X	X	X	X	X	X
SB48	14-15	X	X	X	X	X	X	X	X	X	X	X	X	X
SB49	3-5	X		X	X	X								
SB49	8-10	X		X	X	X								
SB49	13-15	X		X	X	X								
NWSB	2-6	X		X	X	X	X	X	X					
MW-18	27-29	X			X	X								
MW-20	17-19	X			X	X								
MW-20	19-21	X			X	X								
MW-21	5-7	X			X	X								
TEST PIT SAMPLES														
NWTP	NR	X		X	X	X								
TP11	3-4	X	X	X	X	X	X	X	X	X	X	X	X	X
TP12	4-5	X	X	X	X	X	X	X	X	X	X	X	X	X
TP13	3-4	X	X	X	X	X	X	X	X	X	X	X	X	X
TP14	3-4	X	X	X	X	X	X	X	X	X	X	X	X	X
TP15	3-4	X	X	X	X	X	X	X	X	X	X	X	X	X
TP16	3-4	X	X	X	X	X	X	X	X	X	X	X	X	X
TP19	5-6	X		X	X	X	X	X	X	X	X	X	X	X
TP20	4-5	X		X	X	X	X	X	X	X	X	X	X	X
TP21	4-5	X	X	X	X	X	X	X	X	X	X	X	X	X
BALLAST SAMPLES														
Ballast-1	NR	X		X	X	X	X	X	X	X	X	X	X	X
Ballast-2	NR	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes:
TCLP: Toxicity Characteristic Leachate Procedure
ID: Indentification
ft bgs: feet below ground surface
TAL: Target Analyte List
TPH: Total Petroleum Hydrocarbon
VOCs: Volatile Organic Compounds
SVOCs: Semi-volatile Organic Compounds
PCBs: Polychlorinated Biphenyls
RCRA: Resource Conservation and Recovery Act

Table 2
New York City School
Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Soil Sample Laboratory Analyses

Sample ID	Sample Depth (ft bgs)	TAL Metals	VOCs	SVOCs	TOC
SOIL BORING SAMPLES					
PSB1	2-3	X	X	X	
PSB1	6-7	X	X	X	
PSB1	14-15	X	X	X	
PSB2	4-5	X	X	X	
PSB2	7-8	X	X	X	
PSB2	14-15	X	X	X	
PSB3	4-5	X	X	X	
PSB3	7-8	X	X	X	
PSB3	14-15	X	X	X	
PSB4	10-12	X	X	X	
PSB5	6-7	X	X	X	
PSB6	11-12	X	X	X	X
PSB7	9-10	X	X	X	
PSB8	6-7	X	X	X	X
PSB9	7-9	X	X	X	
PSB10	4-6	X	X	X	
PSB11	6-7	X	X	X	
PSB12	11-12	X	X	X	X
PSB13	9-11	X	X	X	
PSB14	7-8	X	X	X	
PSB16	6-7	X	X	X	X
PSB17	5-10	X	X	X	
PSB18	11-13	X	X	X	
PSB19	11-12	X	X	X	
PSB20	6-7	X	X	X	
PBSB1	2-3	X	X	X	
PBSB1	6-7	X	X	X	
PBSB1	13-14	X	X	X	
PBSB2	3-4	X	X	X	
PBSB2	5-7	X	X	X	
PBSB2	14-15	X	X	X	
PBSB3	6-7	X	X	X	
PBSB4	4-6	X	X	X	
PBSB5	13-15	X	X	X	

Notes:

TOC Total Organic Carbon
ID: Indentification
ft bgs: feet below ground surface
TAL: Target Analyte List
VOCs: Volatile Organic Compounds
SVOCs: Semi-volatile Organic Compounds

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	BALLAST-1	BALLAST-2	NWTPGRAB	NWSB	SB20	SB21	SB22
		Sample Depth (ft.):	NA	NA	NA	NA	14-16	4-6	3-5
		Sample Date:	04/20/05	04/20/05	04/06/05	04/06/05	04/19/05	04/18/05	04/27/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)									
Acetone	200		3.8 U	3.7 U	700 U	580 U	4.1 U	3.7 UJ	**12 JB**
Carbon Disulfide	2700		0.42 U	0.40 U	83 U	69 U	**2.6 J**	0.41 UJ	0.46 U
Methylene Chloride	100		2.1 U	2.0 U	130 U	110 U	2.2 U	2.0 UJ	**3.3 JB**
2-Butanone	300		3.2 U	3.1 U	600 U	500 U	3.5 U	3.1 UJ	3.5 U
1,1-Dichloropropene	^		0.37 U	0.35 U	160 U	140 U	0.40 U	0.36 UJ	0.41 U
cis-1,2-Dichloroethene	^		0.45 U	0.43 U	79 U	66 U	0.48 U	0.44 UJ	0.49 U
Benzene	60		0.46 UJ	0.44 U	51 U	42 U	**29 J**	0.44 UJ	0.50 U
Trichloroethene	700		0.35 U	0.34 U	140 U	120 U	0.38 U	0.34 UJ	0.38 U
Toluene	1500		0.46 U	0.44 U	**300 J**	**760 J**	**2.3 J**	0.45 UJ	0.51 U
Tetrachloroethene	1400		0.83 U	0.80 U	70 U	58 U	0.89 U	0.81 UJ	0.91 U
Ethylbenzene	5500		0.40 U	0.39 U	**6900**	**19000**	**2.3 J**	0.39 UJ	0.44 U
m/p-Xylenes	1200		0.99 U	0.94 U	**25000**	**50000**	**14**	0.96 UJ	1.1 U
o-Xylenes	1200		0.44 U	0.42 U	**4600**	**6400**	**4.5 J**	0.43 UJ	0.48 U
Isopropylbenzene	^		0.48 U	0.45 U	**1600**	**4900**	**41**	0.46 UJ	0.52 U
1,2,3-Trichloropropane	400		0.38 U	0.36 U	96 U	80 U	0.41 U	0.37 UJ	0.42 U
n-Propylbenzene	^		0.61 U	0.58 U	**3600**	**11000**	**51**	0.6 UJ	0.67 U
1, 3, 5-Trimenthylbenzene	^		0.56 U	0.54 U	**9600**	**14000**	**21**	0.55 UJ	0.62 U
1,2,4-Trimethylbenzene	^		0.43 U	0.41 U	**30000**	**93000 D**	**150**	0.42 UJ	**2.5 J**
Sec-butylbenzene	^		0.48 U	0.46 U	**730 J**	75 U	**5.4 J**	0.46 UJ	0.52 U
p-Isopropyltoluene	^		0.49 U	0.46 U	**1600**	**3200**	**2.1 J**	0.47 UJ	**1.3 J**
n-Butylbenzene	^		0.39 U	0.37 U	**1500**	**4500**	**5.8 J**	0.38 UJ	0.42 U
Naphthalene	13000		0.67 U	0.64 U	**7100**	**27000**	**4.7 J**	0.65 UJ	**9.4**
Semi-Volatile Organic Compounds (ppb)									
bis(2-Chloroethyl)ether	^		590 U	570 U	55 U	45 U	64 UJ	57 U	650 U
3+4-Methylphenols	900		590 U	570 U	**270 J**	42 U	64 UJ	57 U	650 U
Naphthalene	13,000		630 U	610 U	**1500**	**96000 D**	69 U	62 U	700 U
2-Methylnaphthalene	36,400		620 U	600 U	**770 J**	**57000 D**	68 U	61 U	690 U
Acenaphthylene	41,000		**1200 J**	580 U	**160 J**	**1200**	66 U	59 U	670 U
Acenaphthene	50,000		**910 J**	640 U	**250 J**	**11000 D**	72 U	64 U	730 U
Dibenzofuran	6,200		**620 J**	590 U	**120 J**	**7100**	67 U	60 U	680 U
Fluorene	50,000		**1100 J**	600 U	**280 J**	**12000 D**	68 U	61 U	690 U
Phenanthrene	50,000		**12000**	570 U	**2400**	**40000 D**	64 U	58 U	**4700**
Anthracene	50,000		**3100 J**	540 U	**440 J**	**11000 D**	61 U	55 U	**860 J**
Fluoranthene	50,000		**17000**	**1700 J**	**2500**	**24000 D**	60 U	**75 J**	**6400**
Pyrene	50,000		**17000**	**1700 J**	**2400**	**28000 D**	72 U	**65 J**	**7800**
Butylbenzylphthalate	50,000		600 U	580 U	37 U	31 U	65 U	59 U	660 U
Benzo(a)anthracene	224 or MDL		**9500**	**920 J**	**970 J**	**7400 D**	57 U	51 U	**3000 J**
Chrysene	400		**9400**	**750 J**	**1100 J**	**6700 D**	73 U	65 U	**2900 J**
bis(2-Ethylhexyl)phthalate	50,000		710 U	690 U	**490 J**	**150 J**	78 U	70 U	790 U
Benzo(b) fluoranthene	1,100		**16000 J**	**1200 J**	**1100**	**6600**	44 U	**62 J**	**3800 J**
Benzo(k)fluoranthene	1,100		**5100 J**	790 U	**380 J**	**2200**	89 U	80 U	**1600 J**
Benzo(a)pyrene	61 or MDL		**8400 J**	**840 J**	**900 J**	**5100**	65 U	58 U	**3000 J**
Indeno (1,2,3-cd)pyrene	3,200		**1300 J**	**680 J**	**360 J**	**1500**	51 U	46 U	**1500 J**
Dibenz(a,h)anthracene	14 or MDL		470 UJ	450 U	33 U	**190 J**	51 U	45 U	510 U
Benzo(g,h,i)perylene	50,000		**3200 J**	**760 J**	**470 J**	**1900**	67 U	60 U	**1900 J**
Pesticides/PCBs/Herbicides (ppb)									
4,4-DDE	2,100		0.88 U	0.85 U	NR	NR	0.96 U	0.87 U	**7.2**
4,4-DDD	2,900		0.79 U	0.76 U	NR	NR	0.86 U	0.77 U	**32**
alpha-Chlordane	110		0.94 U	0.90 U	NR	NR	1.0 U	0.92 U	**5.9**
gamma-Chlordane	540		0.98 U	0.94 U	NR	NR	1.1 U	0.96 U	**5.7 P**
Aroclor-1254	10,000		1.9 U	1.8 U	NR	NR	2.0 U	1.8 U	2.1 U
Aroclor-1260	10,000		**640 J**	**170 P**	NR	NR	5.1 U	4.6 U	5.2 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	SB22	SB23	SB24	SB25	SB25	SB25	SB25A
		Sample Depth (ft.):	6-8	10-11	6-8	6-8	2-4	6-8	14-16	4-6
		Sample Date:	04/27/05	04/27/05	04/15/05	04/18/05	04/15/05	04/15/05	04/15/05	04/15/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200		560 U	**11 JB**	4.6 U	**30 J**	**130**	**50**	**22 J**	**81**
Carbon Disulfide	2700		66 U	0.47 U	0.50 U	**2.4 J**	**4.9 J**	0.44 U	0.43 U	**8.2**
Methylene Chloride	100		110 U	2.3 U	**4.0 J**	3.3 UJ	**3.8 J**	**4.0 J**	**4.0 J**	**2.7 J**
2-Butanone	300		480 U	3.6 U	3.9 U	**3.6 J**	**7.0 J**	3.4 U	3.3 U	**7.2 J**
1,1-Dichloropropene	^		130 U	0.41 U	0.54 U	0.38 UJ	0.37 U	0.39 U	0.38 U	0.39 U
cis-1,2-Dichloroethene	^		63 U	0.50 U	**6.4 J**	0.43 UJ	0.45 U	0.47 U	0.46 U	0.47 U
Benzene	60		**23000**	0.51 U	0.55 U	0.46 UJ	0.45 U	0.48 U	0.46 U	0.48 U
Trichloroethene	700		110 U	0.39 U	**25**	0.36 UJ	0.35 U	0.37 U	0.36 U	0.37 U
Toluene	1500		**9600**	0.51 U	0.55 U	0.47 UJ	**2.0 J**	0.48 U	0.47 U	0.48 U
Tetrachloroethene	1400		56 U	0.92 U	**18**	0.85 UJ	0.83 U	0.87 U	0.85 U	0.87 U
Ethylbenzene	5500		**43000 D**	0.45 U	0.48 U	0.41 UJ	0.40 U	0.42 U	0.41 U	0.42 U
m/p-Xylenes	1200		**45000**	1.1 U	1.2 U	1.0 UJ	0.98 U	1.0 U	1.0 U	1.0 U
o-Xylenes	1200		**3300**	0.49 U	0.53 U	0.45 UJ	0.44 U	0.46 U	0.45 U	0.46 U
Isopropylbenzene	^		**12000**	0.53 U	0.57 U	0.48 UJ	0.47 U	0.50 U	0.48 U	0.50 U
1,2,3-Trichloropropane	400		76 U	0.42 U	0.46 U	0.39 UJ	0.38 U	0.40 U	0.39 U	0.40 U
n-Propylbenzene	^		**24000**	0.68 U	0.73 U	0.62 UJ	0.61 U	0.64 U	0.62 U	0.64 U
1, 3, 5-Trimenthylbenzene	^		**9900**	0.63 U	0.68 U	0.57 UJ	0.56 U	0.59 U	0.57 U	0.59 U
1,2,4-Trimethylbenzene	^		**83000 D**	0.48 U	0.52 U	0.44 UJ	**1.8 J**	0.45 U	0.44 U	0.45 U
Sec-butylbenzene	^		**3000**	0.53 U	0.57 U	0.49 UJ	0.48 U	0.50 U	0.49 U	0.50 U
p-Isopropyltoluene	^		**3400**	0.54 U	0.58 U	0.49 UJ	**190**	**16**	**20**	**4.0 J**
n-Butylbenzene	^		**8200**	0.43 U	0.46 U	0.39 UJ	0.38 U	0.40 U	0.39 U	0.40 U
Naphthalene	13000		**32000**	**4.1 J**	0.80 U	0.68 UJ	**60**	**6.3**	**27**	**3.2 J**
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^		70 U	65 U	71 U	60 U	120 U	62 U	60 U	120 U
3+4-Methylphenols	900		70 U	65 U	71 U	60 U	120 U	61 U	60 U	120 U
Naphthalene	13,000		**840**	70 U	76 U	65 U	**150 J**	**69 J**	65 U	130 U
2-Methylnaphthalene	36,400		**510**	69 U	75 U	63 U	**150 J**	**66 J**	64 U	130 U
Acenaphthylene	41,000		**80 J**	67 U	73 U	62 U	**510 J**	63 U	62 U	**180 J**
Acenaphthene	50,000		**130 J**	73 U	80 U	68 U	**650 J**	**100 J**	**68 J**	**170 J**
Dibenzofuran	6,200		73 U	68 U	74 U	63 U	**770**	**120 J**	**75 J**	130 U
Fluorene	50,000		**78 J**	70 U	76 U	64 U	**630 J**	**140 J**	**95 J**	**190 J**
Phenanthrene	50,000		**240 J**	66 U	71 U	60 U	**8100 D**	**1000**	**680**	**2500**
Anthracene	50,000		**100 J**	62 U	68 U	57 U	**1200**	**160 J**	**120 J**	**590 J**
Fluoranthene	50,000		**510**	61 U	67 U	56 U	**9800 D**	**1100**	**630**	**3900**
Pyrene	50,000		**1200**	73 U	79 U	67 U	**7700 D**	**820**	**420**	**4400**
Butylbenzylphthalate	50,000		71 U	67 U	72 U	61 U	**1500**	63 U	62 U	**25000 D**
Benzo(a)anthracene	224 or MDL		**360 J**	58 U	63 U	53 U	**3300**	**310 J**	**150 J**	**1700**
Chrysene	400		**450**	74 U	80 U	68 U	**3400**	**300 J**	**140 J**	**2000**
bis(2-Ethylhexyl)phthalate	50,000		85 U	79 U	86 U	73 U	**3300**	**110 J**	**79 J**	**360 J**
Benzo(b) fluoranthene	1,100		**460**	45 U	49 U	42 U	**4100**	**260 J**	**110 J**	**2400**
Benzo(k)fluoranthene	1,100		**140 J**	91 U	99 U	84 U	**1400**	**99 J**	84 U	**700 J**
Benzo(a)pyrene	61 or MDL		**460**	66 U	72 U	61 U	**2400**	**160 J**	**74 J**	**1500**
Indeno (1,2,3-cd)pyrene	3,200		**160 J**	52 U	57 U	48 U	**530 J**	**81 J**	49 U	**260 J**
Dibenz(a,h)anthracene	14 or MDL		55 U	52 U	56 U	48 U	**96 J**	49 U	48 U	98 U
Benzo(g,h,i)perylene	50,000		**310 J**	68 U	74 U	63 U	**850**	**95 J**	63 U	**510 J**
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100		1.1 U	0.99 U	1.1 U	0.90 U	0.89 U	0.93 U	0.91 U	0.93 U
4,4-DDD	2,900		0.94 U	0.88 U	0.95 U	0.80 U	0.79 U	0.83 U	0.81 U	0.83 U
alpha-Chlordane	110		1.1 U	1.1 U	1.1 U	0.96 U	0.94 U	0.99 U	0.97 U	0.99 U
gamma-Chlordane	540		1.2 U	1.1 U	1.2 U	1.0 U	0.98 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	10,000		2.2 U	2.1 U	2.3 U	1.9 U	1.9 U	1.9 U	1.9 U	2.0 U
Aroclor-1260	10,000		5.6 U	5.3 U	5.7 U	4.8 U	**190 P**	4.9 U	4.8 U	5.0 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*									
	Sample ID:	SB25A	SB26	SB27 ⇧	SB27DUP ⇧	SB-28	SB-29	SB-30	SB-30	SB-30
	Sample Depth (ft.):	6-8	10-12	14-16	14-16	4-6	4-6	0-2	6-8	12-14
	Sample Date:	04/15/05	04/15/05	04/19/05	04/19/05	04/14/05	04/13/05	04/14/05	04/14/05	04/14/05
	Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200	**140**	**11 J**	63 UJ	37 UJ	3.7 U	3.9 U	3.8 U	**24 JB**	4.0 U
Carbon Disulfide	2700	**5.2 J**	0.43 U	0.61 U	0.50 UJ	0.41 U	0.43 U	**2.5 J**	0.44 U	0.44 U
Methylene Chloride	100	**3.6 J**	**3.5 J**	3.0 U	2.5 UJ	**2.9 J**	**4.9 J**	**2.9 J**	2.2 U	**3.9 J**
2-Butanone	300	**17 J**	3.3 U	**9.9 J**	**7.2 J**	0.36 U	3.3 U	3.2 U	3.4 U	3.4 U
1,1-Dichloropropene	^	0.41 U	0.38 U	0.53 U	0.44 UJ	0.36 U	0.46 U	0.44 U	0.47 U	0.47 U
cis-1,2-Dichloroethene	^	0.50 U	0.46 U	0.65 U	0.53 UJ	0.45 U	0.38 U	0.37 U	0.39 U	0.39 U
Benzene	60	0.51 U	0.46 U	0.66 U	0.54 UJ	0.44 U	0.46 U	0.45 U	0.48 U	0.48 U
Trichloroethene	700	0.39 U	0.36 U	0.51 U	0.41 UJ	0.34 U	0.36 U	0.35 U	0.37 U	0.37 U
Toluene	1500	0.51 U	0.47 U	0.67 U	0.55 UJ	0.45 U	0.47 U	0.46 U	0.49 U	0.48 U
Tetrachloroethene	1400	0.92 U	0.85 U	1.2 U	0.98 UJ	0.81 U	0.85 U	0.82 U	0.88 U	0.87 U
Ethylbenzene	5500	0.45 U	0.41 U	0.58 U	0.48 UJ	0.39 U	0.41 U	0.40 U	0.43 U	0.42 U
m/p-Xylenes	1200	1.1 U	1.0 U	1.4 U	1.2 UJ	0.96 U	**1.7 J**	0.97 U	**1.5 J**	1.0 U
o-Xylenes	1200	0.49 U	0.45 U	0.63 U	0.52 UJ	0.43 U	0.45 U	0.43 U	**1.3 J**	0.46 U
Isopropylbenzene	^	0.53 U	0.48 U	0.68 U	0.56 UJ	0.46 U	0.48 U	0.47 U	0.50 U	0.50 U
1,2,3-Trichloropropane	400	0.42 U	0.39 U	0.55 U	0.45 UJ	0.37 U	0.39 U	0.38 U	0.40 U	0.40 U
n-Propylbenzene	^	0.68 U	0.62 U	0.88 U	0.72 UJ	0.6 U	0.62 U	0.60 U	0.65 U	0.64 U
1, 3, 5-Trimenthylbenzene	^	0.63 U	0.57 U	0.81 U	0.66 UJ	0.55 U	0.57 U	0.56 U	**16**	0.59 U
1,2,4-Trimethylbenzene	^	**3.0 J**	**1.9 J**	0.63 U	0.51 UJ	0.42 U	**1.2 J**	0.43 U	**25**	0.45 U
Sec-butylbenzene	^	0.53 U	0.49 U	0.69 U	0.56 UJ	0.46 U	0.49 U	0.47 U	0.50 U	0.50 U
p-Isopropyltoluene	^	**1200 D**	0.49 U	0.70 U	0.57 UJ	0.47 U	0.49 U	0.48 U	**6.9**	0.51 U
n-Butylbenzene	^	0.43 U	0.39 U	0.56 U	0.45 UJ	0.38 U	0.39 U	0.38 U	**3.5 J**	0.40 U
Naphthalene	13000	**5.7 J**	0.68 U	0.96 U	0.79 UJ	0.65 U	**1.2 J**	0.66 U	**7900 D**	0.70 U
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^	66 U	60 U	**1900 J**	70 UJ	58 U	60 U	580 U	62 U	62 U
3+4-Methylphenols	900	65 U	60 U	85 U	70 U	58 U	60 U	580 U	62 U	62 U
Naphthalene	13,000	71 U	65 U	92 U	76 U	62 U	65 U	630 U	67 U	67 U
2-Methylnaphthalene	36,400	69 U	63 U	90 U	74 U	61 U	64 U	610 U	66 U	65 U
Acenaphthylene	41,000	67 U	62 U	88 U	72 U	59 U	62 U	**1700 J**	64 U	64 U
Acenaphthene	50,000	74 U	68 U	96 U	79 U	65 U	68 U	650 U	70 U	70 U
Dibenzofuran	6,200	69 U	63 U	89 U	73 U	60 U	63 U	610 U	65 U	65 U
Fluorene	50,000	70 U	64 U	91 U	75 U	62 U	64 U	620 U	67 U	66 U
Phenanthrene	50,000	**100 J**	60 U	86 U	71 U	58 U	**560**	**5500**	**94 J**	62 U
Anthracene	50,000	63 U	57 U	82 U	67 U	55 U	**87 J**	**1800 J**	59 U	59 U
Fluoranthene	50,000	**99 J**	56 U	80 U	66 U	54 U	**840**	**14000**	**83 J**	58 U
Pyrene	50,000	**80 J**	67 U	96 U	78 U	65 U	**710**	**13000**	70 U	69 U
Butylbenzylphthalate	50,000	67 U	61 U	87 U	72 U	59 U	62 U	590 U	64 U	63 U
Benzo(a)anthracene	224 or MDL	58 U	53 U	76 U	62 U	51 U	**320 J**	**8300**	55 U	55 U
Chrysene	400	74 U	68 U	97 U	80 U	66 U	**370 J**	**8700**	71 U	70 U
bis(2-Ethylhexyl)phthalate	50,000	80 U	73 U	100 U	85 U	70 U	**93 J**	700 U	76 U	**91 J**
Benzo(b) fluoranthene	1,100	46 U	42 U	60 U	49 U	40 U	**390**	**14000**	43 U	43 U
Benzo(k)fluoranthene	1,100	91 U	84 U	120 U	97 U	80 U	**130 J**	**4500**	87 U	86 U
Benzo(a)pyrene	61 or MDL	66 U	61 U	86 U	71 U	58 U	**270 J**	**9500**	63 U	63 U
Indeno (1,2,3-cd)pyrene	3,200	53 U	48 U	69 UJ	56 UJ	46 U	**100 J**	**2800 J**	50 U	50 U
Dibenz(a,h)anthracene	14 or MDL	52 U	48 U	68 UJ	56 UJ	46 U	48 U	460 U	49 U	49 U
Benzo(g,h,i)perylene	50,000	69 U	63 U	89 UJ	73 UJ	60 U	**140 J**	**4300**	65 U	65 U
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100	0.99 U	0.91 U	1.3 U	1.1 U	0.87 U	0.90 U	0.88 U	0.94 U	0.93 U
4,4-DDD	2,900	0.88 U	0.81 U	1.1 U	0.94 U	0.77 U	0.80 U	0.78 U	0.84 U	0.83 U
alpha-Chlordane	110	1.1 U	0.97 U	1.4 U	1.1 U	0.92 U	0.96 U	0.93 U	1.0 U	0.99 U
gamma-Chlordane	540	1.1 U	1.0 U	1.4 U	1.2 U	0.96 U	1.0 U	0.98 U	1.0 U	1.0 U
Aroclor-1254	10,000	2.1 U	1.9 U	2.7 U	2.2 U	1.8 U	1.9 U	1.8 U	2.0 U	2.0 U
Aroclor-1260	10,000	5.3 U	4.9 U	6.8 U	5.6 U	4.6 U	**65**	**770 D**	5.0 U	5.0 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	SB-33	SB-34	SB35	SB-36	SB37	SB41	SB42	SB43
		Sample Depth (ft.):	0-4	6-8	0-2	2-4	4-6	4-6	4-6	2-4
		Sample Date:	04/14/05	04/13/05	04/20/05	04/14/05	04/20/05	04/15/05	04/20/05	04/19/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200		4.0 U	**7.8 JB**	**6.0 J**	3.7 U	**40**	**6.5 J**	**6.1 JB**	6.5 UJ
Carbon Disulfide	2700		0.44 U	0.44 U	0.40 U	0.40 U	0.44 U	0.47 U	0.43 U	0.44 U
Methylene Chloride	100		**4.5 J**	2.2 U	2.0 U	**5.6**	2.2 U	**4.1 J**	**2.5 JB**	2.2 U
2-Butanone	300		3.4 U	3.4 U	3.1 U	3.1 U	**4.2 J**	3.6 U	3.3 U	3.4 U
1,1-Dichloropropene	^		0.47 U	0.47 U	0.35 U	0.43 U	0.39 U	0.41 U	0.38 U	0.39 U
cis-1,2-Dichloroethene	^		0.39 U	0.39 U	0.43 U	0.36 U	0.47 U	0.5 U	0.46 U	0.47 U
Benzene	60		0.48 U	0.48 U	0.43 U	0.44 U	0.48 U	0.51 U	0.47 U	0.48 U
Trichloroethene	700		0.37 U	0.37 U	0.33 U	0.34 U	0.37 U	0.39 U	**3.6 J**	0.37 U
Toluene	1500		0.49 U	0.48 U	0.44 U	0.45 U	0.49 U	0.51 U	**1.5 J**	0.49 U
Tetrachloroethene	1400		0.88 U	0.87 U	0.79 U	0.80 U	0.88 U	0.92 U	**29**	0.87 U
Ethylbenzene	5500		0.43 U	0.42 U	0.38 U	0.39 U	0.43 U	0.45 U	0.41 U	0.42 U
m/p-Xylenes	1200		1.0 U	1.0 U	0.94 U	0.95 U	1.0 U	1.1 U	1.0 U	1.0 U
o-Xylenes	1200		0.46 U	0.46 U	0.42 U	0.42 U	0.46 U	0.49 U	0.45 U	0.46 U
Isopropylbenzene	^		0.50 U	0.50 U	0.45 U	0.46 U	0.50 U	0.53 U	0.49 U	0.50 U
1,2,3-Trichloropropane	400		0.40 U	0.40 U	0.36 U	0.37 U	0.40 U	0.42 U	0.39 U	0.40 U
n-Propylbenzene	^		0.65 U	0.64 U	0.58 U	0.59 U	0.65 U	0.68 U	0.63 U	0.64 U
1, 3, 5-Trimenthylbenzene	^		0.60 U	0.59 U	0.54 U	0.54 U	0.60 U	0.63 U	0.58 U	0.59 U
1,2,4-Trimethylbenzene	^		0.46 U	0.45 U	0.41 U	0.42 U	0.46 U	0.48 U	0.45 U	0.46 U
Sec-butylbenzene	^		0.50 U	0.50 U	0.45 U	0.46 U	0.50 U	0.53 U	0.49 U	0.50 U
p-Isopropyltoluene	^		**24**	0.51 U	0.46 U	0.47 U	0.51 U	**14**	0.50 U	0.51 U
n-Butylbenzene	^		0.41 U	0.40 U	0.37 U	0.37 U	0.41 U	0.43 U	0.40 U	0.40 U
Naphthalene	13000		0.70 U	0.70 U	**2.5 J**	0.64 U	0.71 U	**6.8**	**38**	0.70 U
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^		250 U	61 U	560 U	57 U	63 U	66 U	610 U	620 U
3+4-Methylphenols	900		250 U	61 U	560 U	57 U	62 U	66 U	610 U	620 U
Naphthalene	13,000		270 U	66 U	610 U	62 U	68 U	**87 J**	660 U	670 U
2-Methylnaphthalene	36,400		260 U	65 U	590 U	60 U	66 U	69 U	640 U	650 U
Acenaphthylene	41,000		**280 J**	63 U	**2600 J**	58 U	64 U	67 U	**770 J**	630 U
Acenaphthene	50,000		280 U	69 U	630 U	64 U	70 U	74 U	**850 J**	700 U
Dibenzofuran	6,200		260 U	64 U	590 U	60 U	65 U	69 U	**1400 J**	650 U
Fluorene	50,000		270 U	66 U	**610 J**	61 U	67 U	70 U	**2000 J**	660 U
Phenanthrene	50,000		**1800**	**240 J**	**6200**	**93 J**	63 U	**670**	**19000**	620 U
Anthracene	50,000		**410 J**	59 U	**2700 J**	54 U	60 U	**87 J**	**4400**	590 U
Fluoranthene	50,000		**4000**	**800**	**20000**	**240 J**	59 U	**790**	**17000**	**1600 J**
Pyrene	50,000		**3500**	**690**	**18000**	**200 J**	70 U	**660**	**13000**	**1500 J**
Butylbenzylphthalate	50,000		260 U	63 U	570 U	58 U	64 U	67 U	620 U	630 U
Benzo(a)anthracene	224 or MDL		**1900**	**380 J**	**9300**	**110 J**	55 U	**250 J**	**4900**	**860 J**
Chrysene	400		**2200**	**410**	**10000**	**150 J**	71 U	**280 J**	**5700**	**980 J**
bis(2-Ethylhexyl)phthalate	50,000		**360 J**	**88 J**	680 U	69 U	76 U	80 U	740 U	750 U
Benzo(b) fluoranthene	1,100		**2700**	**500**	**14000**	**170 J**	44 U	**290 J**	**5200**	**1200 J**
Benzo(k)fluoranthene	1,100		**870 J**	**160 J**	**4100**	79 U	87 U	**100 J**	**1500 J**	860 U
Benzo(a)pyrene	61 or MDL		**1700**	**360 J**	**9600**	**100 J**	63 U	**230 J**	**3500 J**	**780 J**
Indeno (1,2,3-cd)pyrene	3,200		**560 J**	**170 J**	**5700**	**58 J**	50 U	**150 J**	**1700 J**	500 U
Dibenz(a,h)anthracene	14 or MDL		200 U	49 U	**510 J**	45 U	50 U	52 U	480 U	490 U
Benzo(g,h,i)perylene	50,000		**740 J**	**230 J**	**5400**	**69 J**	65 U	**220 J**	**1900 J**	650 U
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100		0.94 U	0.92 U	0.85 U	0.86 U	0.94 U	0.99 U	0.92 U	0.93 U
4,4-DDD	2,900		0.84 U	0.82 U	0.75 U	0.77 U	0.84 U	0.88 U	0.82 U	0.83 U
alpha-Chlordane	110		1.0 U	0.98 U	0.90 U	0.91 U	1.0 U	1.1 U	0.98 U	0.99 U
gamma-Chlordane	540		1.0 U	1.0 U	0.94 U	0.95 U	1.0 U	1.1 U	1.0 U	1.0 U
Aroclor-1254	10,000		2.0 U	2.0 U	1.8 U	1.8 U	2.0 U	2.1 U	1.9 U	1.9 U
Aroclor-1260	10,000		**190**	5.0 U	**1900 DP**	4.6 U	5.0 U	5.3 U	4.9 U	**600 PD**

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	SB44	SB44	SB44 DUP	SB44	SB45	SB45DL	SB45	SB45
		Sample Depth (ft.):	3-5	5-7	5-7	14-15	2-4	2-4	5-7	14-15
		Sample Date:	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05	04/27/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200		20 UJ	520 U	530 U	26 UJ	4.0 U	**880 JD**	510 U	4.0 U
Carbon Disulfide	2700		0.45 U	62 U	62 U	0.45 U	**17**	57 UD	60 U	0.44 U
Methylene Chloride	100		3.1 UJ	98 U	100 U	5.3 UJ	2.1 U	91 UD	96 U	**9.6 B**
2-Butanone	300		3.4 U	450 U	450 U	**8.0 J**	3.3 U	420 UD	440 U	3.4 U
1,1-Dichloropropene	^		0.40 U	120 U	120 U	0.49 UJ	0.38 U	110 UD	120 U	0.39 U
cis-1,2-Dichloroethene	^		0.48 U	59 U	60 U	**4.1 J**	0.46 U	55 UD	58 U	0.47 U
Benzene	60		0.49 U	**4300 J**	**8600 J**	**5.9 J**	**12**	35 UD	37 U	**2.2 J**
Trichloroethene	700		0.38 U	110 U	110 U	0.38 U	0.36 U	99 UD	100 U	0.37 U
Toluene	1500		0.49 U	**1100 J**	**3400 J**	**18**	**70**	57 UD	**7700**	0.49 U
Tetrachloroethene	1400		0.89 U	52 UJ	53 U	0.90 U	0.86 U	49 UD	51 U	0.88 U
Ethylbenzene	5500		**2.3 J**	**14000**	**23000**	**160**	**530 E**	60 UD	**61000 D**	**5.7 J**
m/p-Xylenes	1200		**11**	**18000**	**35000**	**340**	**1600 E**	**140 D**	**130000 D**	**26**
o-Xylenes	1200		**2.5 J**	**2500 J**	**7800 J**	**25**	**300 E**	**54 D**	**30000**	**6.0**
Isopropylbenzene	^		0.51 U	**2400**	**2600**	**11 J**	**94**	49 UD	**18000**	**3.2 J**
1,2,3-Trichloropropane	400		0.41 UJ	72 UJ	72 UJ	0.41 U	0.39 U	66 UD	70 U	0.40 U
n-Propylbenzene	^		**1.4 J**	**4100**	**3800**	**17 J**	**230**	**120 JD**	**36000 D**	**5.9 J**
1, 3, 5-Trimenthylbenzene	^		**3.5 J**	**5400**	**7300**	**37**	**1000 E**	**500 JD**	**59000 D**	**21**
1,2,4-Trimethylbenzene	^		**12**	**27000**	**24000**	**140**	**3600 D**	**3600 D**	**250000 D**	**52**
Sec-butylbenzene	^		0.51 U	**720 J**	**610 J**	0.52 UJ	0.49 U	63 UD	**6100**	**1.6 J**
p-Isopropyltoluene	^		0.52 U	**620 J**	**600 J**	**1.4 J**	0.50 U	53 UD	**13000**	**6.2**
n-Butylbenzene	^		0.41 U	**1400**	**1300**	**3.1 J**	**370 E**	**310 JD**	**16000**	**10**
Naphthalene	13000		**5.4 J**	**33000 J**	**91000 J**	**62**	**3800 D**	**3800 D**	**220000 D**	**3.6 J**
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^		130 U	330 U	66 U	64 U	61 U	NR	640 U	62 U
3+4-Methylphenols	900		130 U	330 U	66 U	64 U	61 U	NR	640 U	62 U
Naphthalene	13,000		140 U	**40000 J**	**7,000 JD**	**230 J**	**3100**	NR	**50000 D**	**120 J**
2-Methylnaphthalene	36,400		130 U	**19000 J**	**3000 JD**	**81 J**	**2600 D**	NR	**21000**	66 U
Acenaphthylene	41,000		130 U	**2700 J**	**500 J**	66 U	**150 J**	NR	660 U	64 U
Acenaphthene	50,000		140 U	**4400**	**950**	72 U	**440**	NR	**2000 J**	70 U
Dibenzofuran	6,200		130 U	340 U	69 U	67 U	64 U	NR	**950 J**	65 U
Fluorene	50,000		140 U	**4500 J**	**920 J**	68 U	**370 J**	NR	**1900 J**	67 U
Phenanthrene	50,000		**1000**	**36000 J**	**6400 J**	**110 J**	**3000**	NR	**10000**	63 U
Anthracene	50,000		**190 J**	**7200 J**	**1500 J**	61 U	**560**	NR	**2100 J**	60 U
Fluoranthene	50,000		**680 J**	**13000 J**	**2400 J**	60 U	**780**	NR	**4000 J**	59 U
Pyrene	50,000		**630 J**	**29000 J**	**4900 J**	**110 J**	**1800**	NR	**7900**	70 U
Butylbenzylphthalate	50,000		**790 J**	330 U	68 U	65 U	63 U	NR	660 U	64 U
Benzo(a)anthracene	224 or MDL		**360 J**	**7400 J**	**1300 J**	57 U	**500**	NR	**2400 J**	55 U
Chrysene	400		**590 J**	**7100 J**	**1400 J**	73 U	**440**	NR	**2300 J**	71 U
bis(2-Ethylhexyl)phthalate	50,000		**540 J**	400 U	81 U	78 U	74 U	NR	**880 J**	76 U
Benzo(b) fluoranthene	1,100		**610 J**	**6100 J**	**1200 J**	45 U	**390**	NR	**2400 J**	43 U
Benzo(k)fluoranthene	1,100		**240 J**	**1700 J**	**380 J**	89 U	**150 J**	NR	890 U	87 U
Benzo(a)pyrene	61 or MDL		**400 J**	**8400 J**	**1700 J**	65 U	**590**	NR	**2500 J**	63 U
Indeno (1,2,3-cd)pyrene	3,200		**130 J**	**1600 J**	**310 J**	51 U	**200 J**	NR	**910 J**	50 U
Dibenz(a,h)anthracene	14 or MDL		100 U	**380 J**	**65 J**	51 U	49 U	NR	510 U	50 U
Benzo(g,h,i)perylene	50,000		**200 J**	**3700 J**	**690**	67 U	**460**	NR	**1800 J**	65 U
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100		0.95 U	0.98 U	1.0 U	0.96 U	0.91 U	NR	0.96 U	0.94 U
4,4-DDD	2,900		0.85 U	0.88 U	0.90 U	0.86 U	0.82 U	NR	**8.8 P**	0.84 U
alpha-Chlordane	110		1.0 U	1.0 U	1.1 U	1.0 U	0.97 U	NR	1.0 U	1.0 U
gamma-Chlordane	540		1.1 U	1.1 U	1.1 U	1.1 U	1.0 U	NR	1.1 U	1.0 U
Aroclor-1254	10,000		**63 J**	2.1 U	2.1 U	2.0 U	1.9 U	NR	2.0 U	2.0 U
Aroclor-1260	10,000		5.1 U	5.3 U	5.4 U	5.2 U	4.9 U	NR	**44**	5.1 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*								
	Sample ID:	SB46	SB46	SB46	SB47	SB47	SB47	SB48	SB48
	Sample Depth (ft.):	3-5	8-10	13-14	2-4	7-8	13-15	2-4	8-9
	Sample Date:	04/28/05	04/28/05	04/28/05	04/28/05	04/28/05	04/28/05	04/28/05	04/28/05
	Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)									
Acetone	200	**25 J**	4.0 U	4.1 U	540 U	550 U	**31 J**	**21 J**	550 U
Carbon Disulfide	2700	0.43 U	0.43 U	0.45 U	63 U	65 U	0.47 U	0.44 U	65 U
Methylene Chloride	100	2.1 U	2.1 U	2.2 U	100 U	100 U	2.3 U	**2.9 J**	**180 JB**
2-Butanone	300	3.3 U	3.3 U	3.4 U	460 U	470 U	3.6 U	3.3 U	470 U
1,1-Dichloropropene	^	0.38 U	0.38 U	0.40 U	120 U	130 U	0.41 U	0.38 U	130 U
cis-1,2-Dichloroethene	^	0.46 U	0.46 U	0.48 U	61 U	62 U	0.5 U	0.47 U	62 U
Benzene	60	0.47 U	**5.5 J**	**52**	**91 J**	**830 J**	0.51 U	0.47 U	**730 J**
Trichloroethene	700	0.36 U	0.36 U	0.38 U	110 U	110 U	0.39 U	0.36 U	110 U
Toluene	1500	0.48 U	0.48 U	**3.6 J**	**370 J**	**310 J**	0.51 U	0.48 U	64 U
Tetrachloroethene	1400	0.86 U	0.86 U	0.89 U	54 U	55 U	0.92 U	0.86 U	55 U
Ethylbenzene	5500	0.42 U	0.42 U	0.43 U	**1300**	**9200**	0.45 U	0.42 U	**7100**
m/p-Xylenes	1200	1.0 U	1.0 U	**28**	**3900**	**6800**	1.1 U	**2.2 J**	**2600**
o-Xylenes	1200	0.45 U	0.45 U	**5.5 J**	**2300**	**3900**	0.49 U	**4.4 J**	**1800**
Isopropylbenzene	^	0.49 U	**2.1 J**	**17**	**280 J**	**1600**	0.53 U	**22**	**960**
1,2,3-Trichloropropane	400	0.39 U	**49**	0.41 U	73 U	75 U	0.42 U	0.40 U	75 U
n-Propylbenzene	^	0.63 U	**3.8 J**	**12**	**360 J**	**1500**	0.68 U	**8.4**	**1300**
1, 3, 5-Trimenthylbenzene	^	0.58 U	**1.6 J**	**13**	**1800**	**3300**	0.63 U	**11**	**2100**
1,2,4-Trimethylbenzene	^	0.45 U	**2.4 J**	**2.2 J**	**4000**	**10000**	**1.4 J**	**35**	**8300**
Sec-butylbenzene	^	0.49 U	0.49 U	0.51 U	69 U	71 U	0.53 U	0.49 U	71 U
p-Isopropyltoluene	^	0.50 U	0.50 U	0.52 U	**540 J**	**1800**	0.54 U	**17**	**770 J**
n-Butylbenzene	^	0.40 U	0.40 U	0.41 U	76 U	**580 J**	0.43 U	0.40 U	**380 J**
Naphthalene	13000	0.69 U	**4.8 J**	**15**	**31000**	**180000 D**	**9.2**	**59**	**120000 D**
Semi-Volatile Organic Compounds (ppb)									
bis(2-Chloroethyl)ether	^	61 U	61 U	63 U	270 U	1400 U	65 U	120 U	69 U
3+4-Methylphenols	900	61 U	61 U	63 U	270 U	1400 U	65 U	120 U	69 U
Naphthalene	13,000	**110 J**	66 U	68 U	**13000**	**150000 D**	**130 J**	**2400**	**9400 D**
2-Methylnaphthalene	36,400	65 U	64 U	67 U	**9200**	**66000**	**84 J**	**710 J**	**3400**
Acenaphthylene	41,000	63 U	62 U	65 U	**600 J**	**6500 J**	67 U	**320 J**	**240 J**
Acenaphthene	50,000	69 U	68 U	71 U	**1800**	**25000**	74 U	**420 J**	**870**
Dibenzofuran	6,200	64 U	64 U	66 U	280 U	1400 U	68 U	130 U	72 U
Fluorene	50,000	**78 J**	65 U	68 U	**3400**	**31000**	70 U	**610 J**	**1400**
Phenanthrene	50,000	**560**	61 U	64 U	**19000 D**	**150000 D**	**190 J**	**2700**	**6800 D**
Anthracene	50,000	**140 J**	58 U	60 U	**1900**	**26000**	62 U	**600 J**	**680**
Fluoranthene	50,000	**640**	57 U	60 U	**8600**	**45000**	**68 J**	**2500**	**1900**
Pyrene	50,000	**540**	68 U	71 U	**13000**	**69000**	**100 J**	**3600**	**2600**
Butylbenzylphthalate	50,000	63 U	62 U	65 U	280 U	1400 U	67 U	130 U	71 U
Benzo(a)anthracene	224 or MDL	**270 J**	54 U	56 U	**4500**	**26000**	58 U	**1400**	**910**
Chrysene	400	**300 J**	69 U	72 U	**4600**	**24000**	74 U	**1400**	**940**
bis(2-Ethylhexyl)phthalate	50,000	74 U	74 U	77 U	330 U	1700 U	79 U	150 U	84 U
Benzo(b) fluoranthene	1,100	**420**	42 U	44 U	**4700**	**22000**	45 U	**1800**	**810**
Benzo(k)fluoranthene	1,100	**150 J**	85 U	88 U	**1700 J**	**9300**	91 U	**700 J**	**320 J**
Benzo(a)pyrene	61 or MDL	**280 J**	61 U	64 U	**4100**	**27000**	66 U	**1700**	**1000**
Indeno (1,2,3-cd)pyrene	3,200	**54 J**	49 U	51 U	**540 J**	**2200 J**	52 U	**200 J**	**130 J**
Dibenz(a,h)anthracene	14 or MDL	49 U	48 U	50 U	**450 J**	**2100 J**	52 U	98 U	**64 J**
Benzo(g,h,i)perylene	50,000	64 U	64 U	66 U	**2000**	**8200 J**	68 U	**760 J**	**380 J**
Pesticides/PCBs/Herbicides (ppb)									
4,4-DDE	2,100	0.92 U	0.92 U	0.96 U	1.0 U	1.0 U	0.98 U	0.93 U	1.0 U
4,4-DDD	2,900	0.82 U	0.82 U	0.85 U	0.91 U	0.93 U	0.88 U	0.83 U	0.93 U
alpha-Chlordane	110	0.98 U	0.98 U	1.0 U	1.1 U	1.1 U	1.0 U	0.99 U	1.1 U
gamma-Chlordane	540	1.0 U	1.0 U	1.1 U	1.1 U	1.2 U	1.1 U	1.0 U	1.2 U
Aroclor-1254	10,000	1.9 U	1.9 U	2.0 U	2.1 U	2.2 U	2.1 U	2.0 U	2.2 U
Aroclor-1260	10,000	4.9 U	4.9 U	5.1 U	5.4 U	5.6 U	5.3 U	5.0 U	5.6 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	SB48	SB49 ⇧	SB49 ⇧	SB49 DUP ⇧	SB49 ⇧	TP11	TP12	TP13
		Sample Depth (ft.):	14-15	3-5	8-10	8-10	13-15	3-4	4-5	3-4
		Sample Date:	04/28/05	04/29/05	04/29/05	04/29/05	04/29/05	04/19/05	04/19/05	04/18/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200		**45**	**78 JB**	4.2 U	4.1 U	26 UJ	4.0 U	3.9 U	3.7 U
Carbon Disulfide	2700		0.53 U	2.0 U	0.46 U	0.45 U	**3.0 J**	0.44 U	0.42 U	0.40 U
Methylene Chloride	100		**2.8 J**	**54 B**	8.9 U	13 U	15 U	2.2 U	2.1 U	**2.8 J**
2-Butanone	300		4.1 U	16 U	3.5 U	3.5 U	3.3 U	3.4 U	3.2 U	3.1 U
1,1-Dichloropropene	^		0.47 U	1.8 U	0.40 U	0.40 U	0.38 U	0.39 U	0.37 U	0.36 U
cis-1,2-Dichloroethene	^		0.57 U	2.2 U	0.49 U	0.48 U	0.46 U	0.47 U	0.45 U	0.43 U
Benzene	60		0.58 U	2.2 U	**17**	**5.5 U**	0.47 U	0.48 U	0.46 U	0.44 U
Trichloroethene	700		0.45 U	1.7 U	0.38 U	0.38 U	0.36 U	0.37 U	0.35 U	0.34 U
Toluene	1500		0.59 U	2.2 U	0.50 U	0.50 U	0.47 U	0.48 U	0.47 U	0.45 U
Tetrachloroethene	1400		1.1 U	4.1 U	0.90 U	0.90 U	0.85 U	0.87 U	0.84 U	0.80 U
Ethylbenzene	5500		0.51 U	2.0 U	0.44 U	0.44 U	0.41 U	0.42 U	0.41 U	0.39 U
m/p-Xylenes	1200		1.3 U	4.8 U	**6.4**	**6.2**	1.0 U	1.0 U	0.99 U	0.95 U
o-Xylenes	1200		0.56 U	2.1 U	0.48 U	0.47 U	0.45 U	0.46 U	0.44 U	0.42 U
Isopropylbenzene	^		0.60 U	2.3 U	**11**	**9.2**	**1.5 J**	0.50 U	0.48 U	0.46 U
1,2,3-Trichloropropane	400		0.48 U	1.9 U	0.41 U	0.41 U	0.39 U	0.40 U	0.38 U	0.37 U
n-Propylbenzene	^		0.78 U	3.0 U	**15**	**16**	0.63 U	0.64 U	0.62 U	0.59 U
1, 3, 5-Trimenthylbenzene	^		0.72 U	2.7 U	**1.3 J**	**3.1 J**	**1.3 J**	0.59 U	0.57 U	0.54 U
1,2,4-Trimethylbenzene	^		0.55 U	2.1 U	**4.5 J**	**4.4 J**	0.44 U	0.45 U	0.44 U	0.42 U
Sec-butylbenzene	^		0.61 U	2.3 U	**2.1 J**	**2.8 J**	0.49 U	0.50 U	0.48 U	0.46 U
p-Isopropyltoluene	^		0.62 U	2.4 U	0.53 U	0.52 U	0.50 U	0.51 U	0.49 U	0.47 U
n-Butylbenzene	^		0.49 U	1.9 U	**2.4 J**	**4.6 J**	0.40 U	0.40 U	0.39 U	0.37 U
Naphthalene	13000		0.85 U	**22 J**	**16 J**	**28 J**	**2.3 J**	0.70 U	**1.2 J**	0.64 U
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^		75 U	58 U	64 U	64 U	61 U	620 U	600 U	1100 U
3+4-Methylphenols	900		75 U	58 U	64 U	64 U	61 U	620 U	600 U	1100 U
Naphthalene	13,000		81 U	**540**	69 U	69 U	66 U	670 U	650 U	1200 U
2-Methylnaphthalene	36,400		80 U	**200 J**	68 U	68 U	65 U	650 U	630 U	1200 U
Acenaphthylene	41,000		77 U	**170 J**	66 U	66 U	63 U	**720 J**	610 U	1200 U
Acenaphthene	50,000		85 U	**150 J**	72 U	72 U	69 U	700 U	670 U	1300 U
Dibenzofuran	6,200		79 U	**400**	67 U	67 U	64 U	650 U	630 U	1200 U
Fluorene	50,000		80 U	**300 J**	68 U	69 U	65 U	660 U	**670 J**	1200 U
Phenanthrene	50,000		76 U	**610**	64 U	65 U	62 U	**8000**	**3500**	1100 U
Anthracene	50,000		72 U	**230 J**	61 U	61 U	58 U	**1600 J**	**82 J**	1100 U
Fluoranthene	50,000		71 U	**910**	60 U	60 U	57 U	**13000**	**5700**	**2000 J**
Pyrene	50,000		84 U	**1100**	72 U	72 U	68 U	**12000**	**4900**	**1800 J**
Butylbenzylphthalate	50,000		77 U	59 U	65 U	66 U	63 U	630 U	610 U	1200 U
Benzo(a)anthracene	224 or MDL		67 U	**530**	57 U	57 U	54 U	**6400**	**2700**	**1100 J**
Chrysene	400		85 U	**550**	73 U	73 U	69 U	**6900**	**2900**	1300 U
bis(2-Ethylhexyl)phthalate	50,000		91 U	70 U	78 U	78 U	74 U	750 U	730 U	1400 U
Benzo(b) fluoranthene	1,100		52 U	**850**	44 U	45 U	43 U	**8100**	**3100**	**1600 J**
Benzo(k)fluoranthene	1,100		100 U	**380**	89 U	90 U	85 U	**2200 J**	**120 J**	1600 U
Benzo(a)pyrene	61 or MDL		76 U	**580**	65 U	65 U	62 U	**5500**	**2400**	1200 U
Indeno (1,2,3-cd)pyrene	3,200		60 U	**130 J**	51 UJ	52 UJ	49 UJ	**2000 J**	**1000 J**	910 U
Dibenz(a,h)anthracene	14 or MDL		60 U	46 U	51 U	51 U	49 U	490 U	470 U	900 U
Benzo(g,h,i)perylene	50,000		79 U	**230 J**	67 U	67 U	64 U	**2500 J**	**1100 J**	1200 U
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100		1.1 U	NR	NR	NR	NR	0.92 U	0.90 U	0.86 U
4,4-DDD	2,900		1.0 U	NR	NR	NR	NR	0.82 U	0.80 U	0.77 U
alpha-Chlordane	110		1.2 U	NR	NR	NR	NR	0.98 U	0.96 U	0.91 U
gamma-Chlordane	540		1.3 U	NR	NR	NR	NR	1.0 U	1.0 U	0.95 U
Aroclor-1254	10,000		2.4 U	NR	NR	NR	NR	2.0 U	1.9 U	1.8 U
Aroclor-1260	10,000		6.0 U	NR	NR	NR	NR	**720 D**	**350**	4.6 U

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	TP14	TP15	TP16	TP19 ⇧	TP19 DUP ⇧	TP20 ⇧	TP21	MW-18(27-29)
		Sample Depth (ft.):	3-4	3-4	3-4	5-6	5-6	4-5	4-5	27-29
		Sample Date:	04/19/05	04/19/05	04/19/05	04/18/05	04/18/05	04/18/05	04/18/05	08/23/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb)										
Acetone	200		4.1 U	3.9 U	3.9 U	4.3 U	4.3 UJ	4.0 U	3.9 U	**1600 J**
Carbon Disulfide	2700		0.45 U	0.42 U	0.42 U	0.47 U	0.47 UJ	0.44 U	0.43 U	66 U
Methylene Chloride	100		**2.5 JB**	**2.8 JB**	**2.6 JB**	2.3 U	2.4 UJ	2.4 UJ	2.1 U	110 U
2-Butanone	300		3.5 U	3.3 U	3.2 U	3.6 U	3.6 UJ	3.4 U	3.3 U	480 U
1,1-Dichloropropene	^		0.40 U	0.38 U	0.37 U	0.41 U	0.42 UJ	0.39 U	0.38 U	130 U
cis-1,2-Dichloroethene	^		0.48 U	0.45 U	0.45 U	0.5 U	0.5 UJ	0.46 U	0.45 U	97 U
Benzene	60		0.49 U	0.46 U	0.46 U	0.51 U	0.51 UJ	0.48 U	0.46 U	**150 J**
Trichloroethene	700		0.38 U	0.36 U	0.35 U	0.39 U	0.40 UJ	0.37 U	0.36 U	110 U
Toluene	1500		0.50 U	0.47 U	0.46 U	0.51 U	0.52 UJ	0.48 U	0.47 U	65 U
Tetrachloroethene	1400		0.90 U	**1.7 J**	0.84 U	0.93 U	0.94 UJ	0.87 U	0.84 U	56 U
Ethylbenzene	5500		0.44 U	0.41 U	0.41 U	0.45 U	0.45 UJ	0.42 U	0.41 U	**1100**
m/p-Xylenes	1200		**2.3 J**	**2.8 J**	0.99 U	1.1 U	1.3 UJ	1.0 U	**1.6 J**	**1000 J**
o-Xylenes	1200		0.47 U	0.44 U	0.44 U	0.49 U	0.49 UJ	0.46 U	0.44 U	**830 J**
Isopropylbenzene	^		0.51 U	0.48 U	0.48 U	0.53 U	0.53 UJ	0.50 U	0.48 U	**250 J**
1,2,3-Trichloropropane	400		0.41 U	0.39 U	0.38 U	0.42 U	0.43 UJ	0.40 U	0.39 U	76 U
n-Propylbenzene	^		0.66 U	0.62 U	0.61 U	0.68 U	0.69 UJ	0.64 U	0.62 U	**220 J**
1, 3, 5-Trimenthylbenzene	^		0.61 U	0.57 U	0.57 U	0.63 U	0.63 UJ	0.59 U	0.57 U	**1200**
1,2,4-Trimethylbenzene	^		0.47 U	**1.5 J**	0.44 U	0.48 U	0.49 UJ	0.45 U	0.44 U	**2500**
Sec-butylbenzene	^		0.52 U	0.48 U	0.48 U	0.53 U	0.54 UJ	0.50 U	0.48 U	72 U
p-Isopropyltoluene	^		0.52 U	0.49 U	0.49 U	0.54 U	0.55 UJ	0.51 U	0.49 U	61 U
n-Butylbenzene	^		0.42 U	0.39 U	0.39 U	0.43 U	0.43 UJ	0.40 U	0.39 U	79 U
Naphthalene	13000		0.72 U	0.68 U	0.67 U	0.74 U	0.75 UJ	0.70 U	0.68 U	**220000 D**
Semi-Volatile Organic Compounds (ppb)										
bis(2-Chloroethyl)ether	^		640 U	240 U	240 U	1300 U	1300 U	620 U	240 U	140 U
3+4-Methylphenols	900		640 U	240 U	240 U	1300 U	1300 U	620 U	240 U	140 U
Naphthalene	13,000		690 U	260 U	260 U	**4600 J**	1400 U	670 U	260 U	**37000 D**
2-Methylnaphthalene	36,400		680 U	250 U	250 U	**2400 J**	1400 U	660 U	260 U	**12000 D**
Acenaphthylene	41,000		**930 J**	**280 J**	**340 J**	**1600 J**	1400 U	640 U	250 U	**9100 D**
Acenaphthene	50,000		720 U	270 U	270 U	**9200 J**	**3600 J**	700 U	270 U	**4500 JD**
Dibenzofuran	6,200		670 U	250 U	250 U	**6800 J**	**2200 J**	650 U	250 U	150 U
Fluorene	50,000		680 U	250 U	**280 J**	**11000 J**	**4200 J**	660 U	260 U	**8400 JD**
Phenanthrene	50,000		**4800**	**760 J**	**3300**	**65000 J**	**33000 J**	**1800 J**	**1700**	**41000 D**
Anthracene	50,000		**1100 J**	**250 J**	**890 J**	**17000 J**	**8600 J**	590 U	**360 J**	**7200**
Fluoranthene	50,000		**13000**	**2200**	**5800**	**79000 D**	**45000**	**3300 J**	**3300**	**15000 D**
Pyrene	50,000		**11000**	**2200**	**5500**	**63000 J**	**37000 J**	**2700 J**	**3900**	**21000 D**
Butylbenzylphthalate	50,000		**2300 J**	240 U	240 U	1300 U	1400 U	**53000 D**	250 U	**140**
Benzo(a)anthracene	224 or MDL		**6100**	**1300 J**	**2900**	**31000**	**19000**	**1400 J**	**1800**	**6800 JD**
Chrysene	400		**7500**	**1400 J**	**3100**	**31000**	**19000**	**1500 J**	**1800**	**6000**
bis(2-Ethylhexyl)phthalate	50,000		**2200 J**	290 U	290 U	1600 U	1600 U	**4100**	290 U	170 U
Benzo(b) fluoranthene	1,100		**8800**	**1900**	**4200**	**34000**	**23000**	**2500 J**	**1900**	**6900**
Benzo(k)fluoranthene	1,100		**2900 J**	**730 J**	**1300 J**	**11000**	**7000 J**	860 U	**690 J**	**3300**
Benzo(a)pyrene	61 or MDL		**5600**	**1400 J**	**2600**	**23000**	**15000**	**1800 J**	**1500 J**	**6600 JD**
Indeno (1,2,3-cd)pyrene	3,200		**2200 J**	**690 J**	**580 J**	**7900 J**	**4700 J**	**660 J**	**340 J**	**1400 JD**
Dibenz(a,h)anthracene	14 or MDL		510 U	190 U	190 U	**1100 J**	1100 U	490 U	190 U	**500 J**
Benzo(g,h,i)perylene	50,000		**2400 J**	**780 J**	**970 J**	**9300**	**6300 J**	**1100 J**	**590 J**	**3500**
Pesticides/PCBs/Herbicides (ppb)										
4,4-DDE	2,100		0.96 U	0.90 U	0.90 U	0.99 U	1.0 U	0.93 U	0.90 U	N/A
4,4-DDD	2,900		0.85 U	0.80 U	0.80 U	0.88 U	0.89 U	0.83 U	0.81 U	N/A
alpha-Chlordane	110		1.0 U	0.95 U	0.95 U	1.1 U	1.1 U	0.99 U	0.96 U	N/A
gamma-Chlordane	540		1.1 U	0.99 U	0.99 U	1.1 U	1.1 U	1.0 U	1.0 U	N/A
Aroclor-1254	10,000		2.0 U	1.9 U	1.9 U	2.1 U	2.1 U	2.0 U	1.9 U	N/A
Aroclor-1260	10,000		**260**	**120**	**290**	**390 J**	**880 J**	5.0 U	4.9 U	N/A

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	MW-20(17-19)	MW-20(19-21)	MW-21 (5-7)	RB-41905(A)	RB-41905(B)	RB-42005
		Sample Depth (ft.):	17-19	19-21	5-7	--------	--------	--------
		Sample Date:	8/24/2005	08/23/05	08/23/05	4/19/2005	4/19/2005	4/20/2005
		Sample Classification:	SOIL	SOIL	SOIL	WATER	WATER	WATER
Volatile Organic Compounds (ppb)								
Acetone	200		3.9 U	3.9 U	**21 J**	2.3 U	2.3 U	2.3
Carbon Disulfide	2700		0.43 U	0.43 U	0.42 U	0.4 U	0.4 U	0.4
Methylene Chloride	100		**3.5 J**	**8.6**	**3.1 J**	0.43 U	0.43 U	0.43
2-Butanone	300		3.3 U	3.3 U	3.2 U	1.1 U	1.1 U	1.1
1,1-Dichloropropene	^		0.32 U	0.45 U	0.44 U	0.62 U	0.62 U	0.62
cis-1,2-Dichloroethene	^		0.38 U	0.38 U	0.33 U	0.29 U	0.29 U	0.29
Benzene	60		0.47 U	0.46 U	0.45 U	0.39 U	0.39 U	0.39
Trichloroethene	700		0.36 U	0.36 U	0.35 U	0.46 U	0.46 U	0.46
Toluene	1500		0.48 U	0.47 U	0.46 U	0.36 U	0.36 U	0.36
Tetrachloroethene	1400		0.86 U	0.84 U	0.83 U	0.48 U	0.48 U	0.48
Ethylbenzene	5500		0.42 U	0.41 U	0.4 U	0.45 U	0.45 U	0.45
m/p-Xylenes	1200		1.0 U	1.0 U	**2.0 J**	1.2 U	1.2 U	1.2
o-Xylenes	1200		0.45 U	0.44 U	**2.6 J**	0.46 U	0.46 U	0.46
Isopropylbenzene	^		0.49 U	0.48 U	**1.8 J**	0.44 U	0.44 U	0.44
1,2,3-Trichloropropane	400		0.39 U	0.39 U	0.38 U	0.58 U	0.58 U	0.58
n-Propylbenzene	^		0.63 U	0.62 U	**4.6 J**	0.49 U	0.49 U	0.49
1, 3, 5-Trimenthylbenzene	^		0.58 U	0.57 U	**39**	0.42 U	0.42 U	0.42
1,2,4-Trimethylbenzene	^		0.45 U	0.44 U	**120**	0.44 U	0.44 U	0.44
Sec-butylbenzene	^		0.49 U	0.48 U	**10**	0.44 U	0.44 U	0.44
p-Isopropyltoluene	^		0.50 U	0.49 U	**30**	0.49 U	0.49 U	0.49
n-Butylbenzene	^		0.40 U	0.39 U	**24**	0.49 U	0.49 U	0.49
Naphthalene	13000		**16**	**3.8 J**	**96**	0.34 U	0.34 U	0.34
Semi-Volatile Organic Compounds (ppb)								
bis(2-Chloroethyl)ether	^		61 U	61 U	580 U	1.5 U	1.5 U	1.5
3+4-Methylphenols	900		61 U	61 U	580 U	1.4 U	1.4 U	1.4
Naphthalene	13,000		66 U	66 U	630 U	1.4 U	1.4 U	1.4
2-Methylnaphthalene	36,400		64 U	64 U	610 U	1.1 U	1.1 U	1.1
Acenaphthylene	41,000		63 U	62 U	590 U	1.3 U	1.3 U	1.3
Acenaphthene	50,000		69 U	68 U	650 U	1.4 U	1.4 U	1.4
Dibenzofuran	6,200		**64 J**	64 U	610 U	1.3 U	1.3 U	1.3
Fluorene	50,000		65 U	65 U	**620**	1.5 U	1.5 U	1.5
Phenanthrene	50,000		**120 J**	**110 J**	**1500 J**	1.5 U	1.5 U	1.5
Anthracene	50,000		58 U	58 U	550 U	1.5 U	1.5 U	1.5
Fluoranthene	50,000		**130 J**	57 U	**2200 J**	1.3 U	1.3 U	1.3
Pyrene	50,000		**87 J**	**69 J**	**1700 J**	1.5 U	1.5 U	1.5
Butylbenzylphthalate	50,000		**87 J**	62 U	590 U	1.5 U	1.5 U	1.5
Benzo(a)anthracene	224 or MDL		54 U	54 U	**820 J**	1.2 U	1.2 U	1.2
Chrysene	400		69 U	69 U	**890 J**	1.7 U	1.7 U	1.7
bis(2-Ethylhexyl)phthalate	50,000		**280 J**	74 U	700	1.6 U	1.6 U	1.6
Benzo(b) fluoranthene	1,100		42 U	42 U	**940 J**	0.780 U	0.780 U	0.780
Benzo(k)fluoranthene	1,100		85 U	85 U	810 U	2.0 U	2.0 U	2.0
Benzo(a)pyrene	61 or MDL		62 U	61 U	**690 J**	1.2 U	1.2 U	1.2
Indeno (1,2,3-cd)pyrene	3,200		49 U	49 U	470 U	0.860 U	0.860 U	0.860
Dibenz(a,h)anthracene	14 or MDL		48 U	48 U	460 U	0.900 U	0.900 U	0.900
Benzo(g,h,i)perylene	50,000		64 U	64 U	610 U	1.1 U	1.1 U	1.1
Pesticides/PCBs/Herbicides (ppb)								
4,4-DDE	2,100		N/A	N/A	N/A	0.008 U	0.008 U	0.008
4,4-DDD	2,900		N/A	N/A	N/A	0.007 U	0.007 U	0.007
alpha-Chlordane	110		N/A	N/A	N/A	0.008 U	0.008 U	0.008
gamma-Chlordane	540		N/A	N/A	N/A	0.008 U	0.008 U	0.008
Aroclor-1254	10,000		N/A	N/A	N/A	0.04 U	0.04 U	0.04
Aroclor-1260	10,000		N/A	N/A	N/A	0.16 U	0.16 U	0.16

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*		
	Sample ID:		**TB-42005**
	Sample Depth (ft.):		**-------**
	Sample Date:		**4/20/2005**
	Sample Classification:		**WATER**
Volatile Organic Compounds (ppb)			
Acetone	200	U	2.3 U
Carbon Disulfide	2700	U	0.4 U
Methylene Chloride	100	U	0.43 U
2-Butanone	300	U	1.1 U
1,1-Dichloropropene	^	U	0.62 U
cis-1,2-Dichloroethene	^	U	0.29 U
Benzene	60	U	0.39 U
Trichloroethene	700	U	0.46 U
Toluene	1500	U	0.36 U
Tetrachloroethene	1400	U	0.48 U
Ethylbenzene	5500	U	0.45 U
m/p-Xylenes	1200	U	1.2 U
o-Xylenes	1200	U	0.46 U
Isopropylbenzene	^	U	0.44 U
1,2,3-Trichloropropane	400	U	0.58 U
n-Propylbenzene	^	U	0.49 U
1, 3, 5-Trimenthylbenzene	^	U	0.42 U
1,2,4-Trimethylbenzene	^	U	0.44 U
Sec-butylbenzene	^	U	0.44 U
p-Isopropyltoluene	^	U	0.49 U
n-Butylbenzene	^	U	0.49 U
Naphthalene	13000	U	0.34 U
Semi-Volatile Organic Compounds (ppb)			
bis(2-Chloroethyl)ether	^	U	NR
3+4-Methylphenols	900	U	NR
Naphthalene	13,000	U	NR
2-Methylnaphthalene	36,400	U	NR
Acenaphthylene	41,000	U	NR
Acenaphthene	50,000	U	NR
Dibenzofuran	6,200	U	NR
Fluorene	50,000	U	NR
Phenanthrene	50,000	U	NR
Anthracene	50,000	U	NR
Fluoranthene	50,000	U	NR
Pyrene	50,000	U	NR
Butylbenzylphthalate	50,000	U	NR
Benzo(a)anthracene	224 or MDL	U	NR
Chrysene	400	U	NR
bis(2-Ethylhexyl)phthalate	50,000	U	NR
Benzo(b) fluoranthene	1,100	U	NR
Benzo(k)fluoranthene	1,100	U	NR
Benzo(a)pyrene	61 or MDL	U	NR
Indeno (1,2,3-cd)pyrene	3,200	U	NR
Dibenz(a,h)anthracene	14 or MDL	U	NR
Benzo(g,h,i)perylene	50,000	U	NR
Pesticides/PCBs/Herbicides (ppb)			
4,4-DDE	2,100	U	NR
4,4-DDD	2,900	U	NR
alpha-Chlordane	110	U	NR
gamma-Chlordane	540	U	NR
Aroclor-1254	10,000	U	NR
Aroclor-1260	10,000	U	NR

Table 3A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Organics in Soil
Remedial Investigation

Notes:

General Comments

All results are in µg/kg (microgram per kilogram or parts per billion (ppb)).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedence of TAGM value.
Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).
NR - Not reported or not analyzed
.⏃ = Sample was used for the DUSR; only validator qualifiers were used.

Standards

* = NYSDEC TAGM Memorandum No. 4046, revised January 24, 1994
^ = No standard or guidance value is available for this compound.
MDL = Method Detection Limit

Validator Qualifiers

U - Not detected. The compound/analyte was analyzed for, but not detected above the associated reporting limit.
J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed.
UJ - The compound/analyte was analyzed for, but not detected above the established reporting limit. However, review and evaluation of supporting quality (QC) data and/or sampling and analysis process have indicated that the "non-detect" may be inaccurate or imprecise. The non-detect result should be estimated.

Laboratory Qualifiers - Organic

U - Indicates the compound was analyzed for but was not detected.
J - Indicates an estimated value. This flag is used:
(1) When estimating, a concentration for a tentatively identified compound
(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero.
B - Indicates the analyte was found in the blank as well as the sample.
E - Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P - This flag is used for Pesticide/polychlorinated biphenyl (PCB) target analyte when there is >25% difference for detected concentrations between the two gas chromatography (GC) columns. The lower of the two values is reported.
N - 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.

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*					
	Sample ID:	PSB1	PSB1	PSB1	PSB2	PSB2
	Sample Depth (ft.):	2-3	6-7	14-15	4-5	7-8
	Sample Date:	08/17/05	08/17/05	08/17/05	08/17/05	08/17/05
	Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)						
Acetone	200	4.7 U	**1100 J**	**48**	**120**	450 U
Carbon Disulfide	2700	0.52 U	49 U	2.4 J	0.45 U	49 U
Methylene Chloride	100	**2.9 JB**	**2000 B**	**2.3 JB**	2.3 U	240 U
2-Butanone	300	4.0 U	370 U	**7.1 J**	**25 J**	370 U
1,1-Dichloropropene	^	0.35 U	0.52 U	0.98 U	0.49 U	52 U
cis-1,2-Dichloroethene	^	0.46 U	0.43 U	0.40 U	0.40 U	43 U
Benzene	60	0.56 U	**1100**	0.49 U	**4.2 J**	**1000**
Trichloroethene	700	0.43 U	41 U	0.38 U	0.38 U	41 U
Toluene	1500	0.57 U	53 U	0.49 U	0.50 U	**400 J**
Tetrachloroethene	1400	1.0 U	96 U	0.89 U	0.90 U	97 U
Ethylbenzene	5500	0.50 U	47 U	0.43 U	0.44 U	**3800**
m/p-Xylenes	1200	1.2 U	**150 J**	1.1 U	**1.3 J**	**9200**
o-Xylenes	1200	0.54 U	51 U	0.47 U	**2.0 J**	**1900**
Isopropylbenzene	^	0.58 U	**130 J**	0.51 U	0.51 U	**14000**
n-Propylbenzene	^	0.75 U	**180 J**	0.65 U	0.66 U	**20000**
1, 3, 5-Trimenthylbenzene	^	0.69 U	65 U	0.60 U	0.61 U	**460 J**
1,2,4-Trimethylbenzene	^	0.53 U	**290 J**	0.46 U	**1.9 J**	**850**
Sec-butylbenzene	^	0.59 U	55 U	0.51 U	0.52 U	**2400**
p-Isopropyltoluene	^	0.60 U	56 U	0.52 U	0.52 U	**290 J**
n-Butylbenzene	^	0.48 U	45 U	0.41 U	0.42 U	**2500**
Naphthalene	13000	0.82 U	**2400**	0.71 U	0.72 U	**800**
Semi-Volatile Organic Compounds (ppb or ug/kg)						
Naphthalene	13,000	79 U	71 U	68 U	69 U	**370 J**
2-Methylnaphthalene	36,400	78 U	70 U	67 U	68 U	74 U
Acenaphthylene	41,000	75 U	68 U	65 U	66 U	72 U
Acenaphthene	50,000	83 U	74 U	71 U	72 U	79 U
Dibenzofuran	6,200	77 U	69 U	66 U	67 U	74 U
Diethylphthalate	7,100	80 U	72 U	69 U	70 U	77 U
Fluorene	50,000	78 U	70 U	68 U	69 U	75 U
Phenanthrene	50,000	**130 J**	66 U	64 U	65 U	**92 J**
Anthracene	50,000	70 U	63 U	60 U	61 U	67 U
Di-n-butylphthalate	8,100	71 U	63 U	61 U	62 U	68 U
Fluoranthene	50,000	**310 J**	62 U	60 U	**79 J**	**250 J**
Pyrene	50,000	**260 J**	74 U	71 U	72 U	**210 J**
Benzo(a)anthracene	224 or MDL	**170 J**	58 U	56 U	57 U	**120 J**
Chrysene	400	**180 J**	75 U	72 U	73 U	**150 J**
bis(2-Ethylhexyl)phthalate	50,000	**160 J**	**100 J**	77 U	78 U	**130 J**
Benzo(b) fluoranthene	1,100	**270 J**	46 U	44 U	45 U	**230 J**
Benzo(k)fluoranthene	1,100	**160 J**	92 U	88 U	90 U	**140 J**
Benzo(a)pyrene	61 or MDL	**180 J**	67 U	64 U	65 U	**160 J**
Indeno (1,2,3-cd)pyrene	3,200	59 U	53 U	51 U	52 U	56 U
Benzo(g,h,i)perylene	50,000	**80 J**	69 U	66 U	67 U	74 U
Total Organic Carbon (TOC) (ppm or mg/kg)						
TOC	^	N/A	N/A	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PSB2	PSB3	PSB3	PSB3	PSB4
		Sample Depth (ft.):	14-15	4-5	7-8	14-15	10-12
		Sample Date:	08/17/05	08/17/05	08/17/05	08/17/05	08/18/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		4.1 U	600 U	110 U	**25 J**	4.1 U
Carbon Disulfide	2700		0.45 U	71 U	12 U	0.43 U	0.45 U
Methylene Chloride	100		2.2 U	110 U	**96 JB**	**5.0 JB**	**5.8 J**
2-Butanone	300		3.4 U	510 U	90 U	3.3 U	3.4 U
1,1-Dichloropropene	^		0.48 U	60 U	13 U	0.46 U	0.48 U
cis-1,2-Dichloroethene	^		0.40 U	140 U	10 U	0.38 U	0.39 U
Benzene	60		0.49 U	**100 J**	**170**	**3.2 J**	0.48 U
Trichloroethene	700		0.38 U	120 U	9.8 U	0.36 U	0.37 U
Toluene	1500		0.49 U	70 U	13 U	**7.5**	0.49 U
Tetrachloroethene	1400		0.89 U	60 U	23 U	0.86 U	0.89 U
Ethylbenzene	5500		0.43 U	74 U	**470**	**55**	0.43 U
m/p-Xylenes	1200		1.1 U	170 U	**880**	**160**	1.1 U
o-Xylenes	1200		0.47 U	66 U	**66 J**	**110**	0.47 U
Isopropylbenzene	^		0.51 U	**670 J**	**89 J**	**15**	0.51 U
n-Propylbenzene	^		0.65 U	**610 J**	**140 J**	**27**	0.65 U
1, 3, 5-Trimenthylbenzene	^		0.60 U	67 U	16 U	**18**	0.60 U
1,2,4-Trimethylbenzene	^		0.46 U	**220 J**	**510**	**87**	0.46 U
Sec-butylbenzene	^		0.51 U	77 U	13 U	**1.8 J**	0.51 U
p-Isopropyltoluene	^		0.52 U	66 U	14 U	**1.9 J**	0.52 U
n-Butylbenzene	^		0.41 U	85 U	11 U	**4.9 J**	0.41 U
Naphthalene	13000		0.71 U	**4700**	**160 J**	**38**	**1.4 J**
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		69 U	**1900**	70 U	66 U	68 U
2-Methylnaphthalene	36,400		67 U	80 U	69 U	65 U	66 U
Acenaphthylene	41,000		65 U	77 U	67 U	63 U	64 U
Acenaphthene	50,000		72 U	85 U	73 U	69 U	70 U
Dibenzofuran	6,200		67 U	79 U	68 U	64 U	65 U
Diethylphthalate	7,100		**88 J**	82 U	71 U	67 U	68 U
Fluorene	50,000		68 U	80 U	69 U	65 U	67 U
Phenanthrene	50,000		64 U	76 U	66 U	62 U	63 U
Anthracene	50,000		61 U	72 U	62 U	59 U	60 U
Di-n-butylphthalate	8,100		61 U	73 U	63 U	59 U	60 U
Fluoranthene	50,000		60 U	**91 J**	61 U	58 U	59 U
Pyrene	50,000		71 U	84 U	73 U	69 U	70 U
Benzo(a)anthracene	224 or MDL		56 U	67 U	58 U	54 U	55 U
Chrysene	400		72 U	86 U	74 U	70 U	71 U
bis(2-Ethylhexyl)phthalate	50,000		77 U	91 U	**100 J**	75 U	76 U
Benzo(b) fluoranthene	1,100		44 U	52 U	45 U	43 U	44 U
Benzo(k)fluoranthene	1,100		89 U	100 U	91 U	85 U	87 U
Benzo(a)pyrene	61 or MDL		64 U	76 U	66 U	62 U	63 U
Indeno (1,2,3-cd)pyrene	3,200		51 U	60 U	52 U	49 U	50 U
Benzo(g,h,i)perylene	50,000		67 U	79 U	68 U	64 U	65 U
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	N/A	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PSB5	PSB6	PSB7	PSB8	PSB-9
		Sample Depth (ft.):	6-7	11-12	9-10	6-7	7-9
		Sample Date:	08/19/05	08/19/05	08/18/05	08/19/05	8/24/2005
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		**70**	**39**	**1300**	**150**	3.9 U
Carbon Disulfide	2700		**2.0 J**	0.44 U	**260**	0.44 U	0.43 U
Methylene Chloride	100		**6.4**	**6.5**	**180**	**9.6**	**2.9 J**
2-Butanone	300		**13 J**	**8.1 J**	94 U	**27 J**	**3.3 J**
1,1-Dichloropropene	^		0.49 U	0.32 U	13 U	0.32 U	0.31 U
cis-1,2-Dichloroethene	^		0.40 U	0.39 U	11 U	0.39 U	0.38 U
Benzene	60		0.50 U	0.48 U	13 U	0.48 U	0.46 U
Trichloroethene	700		0.38 U	0.37 U	10 U	0.37 U	0.36 U
Toluene	1500		0.50 U	0.49 U	13 U	0.48 U	0.47 U
Tetrachloroethene	1400		0.91 U	0.88 U	24 U	0.87 U	0.85 U
Ethylbenzene	5500		0.44 U	0.43 U	12 U	0.42 U	0.41 U
m/p-Xylenes	1200		1.1 U	1.0 U	29 U	1.0 U	1.0 U
o-Xylenes	1200		0.48 U	0.46 U	13 U	0.46 U	0.45 U
Isopropylbenzene	^		0.52 U	0.50 U	14 U	0.50 U	0.48 U
n-Propylbenzene	^		0.67 U	0.64 U	18 U	0.64 U	0.62 U
1, 3, 5-Trimenthylbenzene	^		0.62 U	0.59 U	16 U	0.59 U	0.57 U
1,2,4-Trimethylbenzene	^		0.47 U	0.46 U	**39 J**	0.45 U	0.44 U
Sec-butylbenzene	^		0.52 U	0.50 U	14 U	0.50 U	0.49 U
p-Isopropyltoluene	^		0.53 U	0.51 U	14 U	0.51 U	0.49 U
n-Butylbenzene	^		0.42 U	0.41 U	**81 J**	0.40 U	0.39 U
Naphthalene	13000		0.73 U	0.70 U	**150 J**	0.70 U	0.68 U
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		70 U	67 U	**260 J**	**210 J**	65 U
2-Methylnaphthalene	36,400		68 U	66 U	150 U	65 U	64 U
Acenaphthylene	41,000		66 U	64 U	**220 J**	97 J	62 U
Acenaphthene	50,000		73 U	70 U	**400 J**	69 U	68 U
Dibenzofuran	6,200		67 U	65 U	**150 J**	**67 J**	63 U
Diethylphthalate	7,100		70 U	68 U	150 U	67 U	66 U
Fluorene	50,000		69 U	66 U	**210 J**	65 U	64 U
Phenanthrene	50,000		65 U	63 U	**1100**	**390**	61 U
Anthracene	50,000		61 U	59 U	**560 J**	**96 J**	58 U
Di-n-butylphthalate	8,100		62 U	60 U	130 U	59 U	58 U
Fluoranthene	50,000		61 U	58 U	**1500**	**650**	57 U
Pyrene	50,000		72 U	69 U	**2000**	**480**	68 U
Benzo(a)anthracene	224 or MDL		57 U	55 U	**1200**	**300 J**	53 U
Chrysene	400		73 U	71 U	**1400**	**360 J**	69 U
bis(2-Ethylhexyl)phthalate	50,000		78 U	75 U	170 U	**92 JB**	73 U
Benzo(b) fluoranthene	1,100		45 U	43 U	**1500**	**410**	42 U
Benzo(k)fluoranthene	1,100		90 U	86 U	**480 J**	**180 J**	84 U
Benzo(a)pyrene	61 or MDL		65 U	63 U	**1100**	**290 J**	61 U
Indeno (1,2,3-cd)pyrene	3,200		52 U	50 U	**580 J**	**160 J**	49 U
Benzo(g,h,i)perylene	50,000		67 U	65 U	**490 J**	**170 J**	**63 J**
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	**2800**	N/A	**>19,000**	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PSB-10	PSB-10RE	PSB11	PSB12	PSB-13
		Sample Depth (ft.):	4-6	4-6	6-7	11-12	9-11
		Sample Date:	08/22/05	08/22/05	8/19/2005	08/19/05	08/25/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		**140**	**930**	3.8 U	**44**	3.9 U
Carbon Disulfide	2700		0.43 U	10 U	0.42 U	0.47 U	0.43 U
Methylene Chloride	100		**2.4 J**	**70 J**	**4.3 J**	**5.7 J**	**8.9 B**
2-Butanone	300		**18 J**	**120 J**	3.2 U	3.6 U	3.3 U
1,1-Dichloropropene	^		0.46 U	9.2 U	0.45 U	0.34 U	0.48 U
cis-1,2-Dichloroethene	^		0.38 U	9.8 U	0.37 U	0.41 U	0.38 U
Benzene	60		0.46 U	11 U	0.46 U	0.51 U	0.46 U
Trichloroethene	700		0.36 U	8.7 U	0.35 U	0.39 U	0.36 U
Toluene	1500		0.47 U	11 U	0.46 U	0.52 U	0.47 U
Tetrachloroethene	1400		0.85 U	21 U	0.84 U	0.93 U	0.85 U
Ethylbenzene	5500		0.41 U	10 U	0.41 U	0.45 U	0.41 U
m/p-Xylenes	1200		1.0 U	24 U	0.99 U	1.1 U	1.0 U
o-Xylenes	1200		0.45 U	11 U	0.44 U	0.49 U	0.45 U
Isopropylbenzene	^		**58**	**470**	0.48 U	0.53 U	0.48 U
n-Propylbenzene	^		**83**	**780**	0.61 U	0.68 U	0.62 U
1, 3, 5-Trimenthylbenzene	^		0.57 U	14 U	0.57 U	0.63 U	0.57 U
1,2,4-Trimethylbenzene	^		0.44 U	11 U	0.44 U	0.48 U	0.44 U
Sec-butylbenzene	^		**70**	**810**	0.48 U	0.53 U	0.49 U
p-Isopropyltoluene	^		0.49 U	12 U	0.49 U	0.54 U	0.49 U
n-Butylbenzene	^		**22**	**260**	0.39 U	0.43 U	0.39 U
Naphthalene	13000		**19**	**340**	0.67 U	0.74 U	0.68 U
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		65 U	N/A	65 U	71 U	65 U
2-Methylnaphthalene	36,400		**670**	N/A	63 U	69 U	64 U
Acenaphthylene	41,000		62 U	N/A	61 U	67 U	62 U
Acenaphthene	50,000		68 U	N/A	67 U	74 U	68 U
Dibenzofuran	6,200		63 U	N/A	63 U	69 U	63 U
Diethylphthalate	7,100		66 U	N/A	65 U	72 U	66 U
Fluorene	50,000		64 U	N/A	64 U	70 U	64 U
Phenanthrene	50,000		**680**	N/A	**63 J**	66 U	61 U
Anthracene	50,000		**130 J**	N/A	57 U	63 U	58 U
Di-n-butylphthalate	8,100		58 U	N/A	58 U	63 U	58 U
Fluoranthene	50,000		**930**	N/A	**60 J**	62 U	57 U
Pyrene	50,000		**520**	N/A	67 U	74 U	**120 J**
Benzo(a)anthracene	224 or MDL		**270 J**	N/A	53 U	58 U	**87 J**
Chrysene	400		**290 J**	N/A	68 U	75 U	**92 J**
bis(2-Ethylhexyl)phthalate	50,000		73 U	N/A	73 U	**150 J**	**210 J**
Benzo(b) fluoranthene	1,100		**380**	N/A	42 U	46 U	**56 J**
Benzo(k)fluoranthene	1,100		**140 J**	N/A	83 U	91 U	84 U
Benzo(a)pyrene	61 or MDL		**210 J**	N/A	61 U	66 U	**93 J**
Indeno (1,2,3-cd)pyrene	3,200		**82 J**	N/A	48 U	53 U	**64 J**
Benzo(g,h,i)perylene	50,000		**99 J**	N/A	63 U	69 U	63 U
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	N/A	N/A	**3700**	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PSB-14	PSB16	PSB-17	PSB-18	DUPLICATE
		Sample Depth (ft.):	7-8	6-7	5-10	11-13	11-13
		Sample Date:	8/22/2005	8/19/2005	8/22/2005	08/25/05	08/25/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		3.9 U	**14 J**	**10 J**	**90**	**140**
Carbon Disulfide	2700		0.43 U	0.44 U	0.43 U	**3.9 J**	**4.1 J**
Methylene Chloride	100		**5.0 J**	**3.5 JB**	2.1 U	**13 B**	**9.2 B**
2-Butanone	300		3.3 U	3.3 U	3.3 U	**14 J**	**26 J**
1,1-Dichloropropene	^		0.46 U	0.47 U	0.46 U	0.49 U	0.49 U
cis-1,2-Dichloroethene	^		0.38 U	0.38 U	0.38 U	0.41 U	0.41 U
Benzene	60		0.47 U	0.47 U	0.46 U	0.50 U	0.46 U
Trichloroethene	700		0.36 U	0.36 U	0.36 U	**3.1 J**	**7.7**
Toluene	1500		0.47 U	0.48 U	0.47 U	0.51 U	0.47 U
Tetrachloroethene	1400		0.85 U	0.86 U	0.85 U	**5.5 J**	**18**
Ethylbenzene	5500		0.41 U	0.42 U	0.41 U	0.44 U	0.41 U
m/p-Xylenes	1200		1.0 U	1.0 U	1.0 U	1.1 U	1.0 U
o-Xylenes	1200		0.45 U	0.45 U	0.45 U	0.48 U	0.44 U
Isopropylbenzene	^		0.49 U	0.49 U	0.48 U	0.52 U	0.48 U
n-Propylbenzene	^		0.63 U	0.63 U	0.62 U	0.67 U	0.62 U
1, 3, 5-Trimenthylbenzene	^		0.58 U	0.58 U	0.58 U	0.62 U	0.57 U
1,2,4-Trimethylbenzene	^		0.44 U	0.45 U	0.44 U	0.48 U	0.44 U
Sec-butylbenzene	^		0.49 U	0.49 U	0.49 U	0.52 U	0.48 U
p-Isopropyltoluene	^		0.50 U	0.50 U	0.50 U	0.53 U	0.49 U
n-Butylbenzene	^		0.40 U	0.40 U	0.39 U	0.42 U	0.39 U
Naphthalene	13000		0.68 U	0.69 U	0.68 U	0.73 U	0.68 U
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		66 U	65 U	66 U	70 U	65 U
2-Methylnaphthalene	36,400		64 U	64 U	64 U	69 U	63 U
Acenaphthylene	41,000		63 U	62 U	62 U	67 U	**160 J**
Acenaphthene	50,000		69 U	68 U	68 U	73 U	68 U
Dibenzofuran	6,200		64 U	63 U	63 U	68 U	63 U
Diethylphthalate	7,100		67 U	66 U	66 U	71 U	66 U
Fluorene	50,000		65 U	65 U	65 U	69 U	64 U
Phenanthrene	50,000		61 U	61 U	61 U	66 U	60 U
Anthracene	50,000		58 U	58 U	58 U	62 U	**82 J**
Di-n-butylphthalate	8,100		59 U	58 U	58 U	63 U	58 U
Fluoranthene	50,000		57 U	57 U	57 U	**120 J**	**1600**
Pyrene	50,000		68 U	68 U	68 U	**370 J**	**2800 D**
Benzo(a)anthracene	224 or MDL		54 U	54 U	54 U	**200 J**	**1300**
Chrysene	400		69 U	69 U	69 U	**230 J**	**1300**
bis(2-Ethylhexyl)phthalate	50,000		74 U	74 U	74 U	79 U	**79 J**
Benzo(b) fluoranthene	1,100		42 U	42 U	42 U	**180 J**	**870**
Benzo(k)fluoranthene	1,100		85 U	84 U	84 U	91 U	**290 J**
Benzo(a)pyrene	61 or MDL		62 U	61 U	61 U	**260 J**	**1300**
Indeno (1,2,3-cd)pyrene	3,200		49 U	49 U	49 U	52 U	**530**
Benzo(g,h,i)perylene	50,000		64 U	63 U	63 U	**200 J**	**710**
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	**5200**	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PSB19	PSB20	PBSB1	PBSB1	PBSB1
		Sample Depth (ft.):	11-12	6-7	2-3	6-7	13-14
		Sample Date:	8/19/2005	08/19/05	08/16/05	08/16/05	08/16/05
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		**33**	**14 J**	4.1 U	4.0 U	100 U
Carbon Disulfide	2700		0.45 U	0.45 U	0.45 U	0.44 U	**36 J**
Methylene Chloride	100		**3.9 J**	**3.6 JB**	2.2 U	**6.4 B**	**72 J**
2-Butanone	300		**6.0 J**	3.4 U	3.5 U	3.4 U	86 U
1,1-Dichloropropene	^		0.49 U	0.48 U	0.48 U	0.47 U	12 U
cis-1,2-Dichloroethene	^		0.40 U	0.39 U	0.40 U	0.39 U	9.9 U
Benzene	60		0.49 U	**1.8 J**	0.49 U	**4500 D**	**390**
Trichloroethene	700		0.38 U	0.37 U	0.38 U	0.37 U	9.4 U
Toluene	1500		0.50 U	0.49 U	0.50 U	**14**	12 U
Tetrachloroethene	1400		0.90 U	0.88 U	0.90 U	0.88 U	22 U
Ethylbenzene	5500		0.44 U	0.43 U	0.43 U	**2700 D**	**250**
m/p-Xylenes	1200		1.1 U	1.0 U	1.1 U	**64**	**65 J**
o-Xylenes	1200		0.47 U	0.47 U	0.47 U	**110**	**35 J**
Isopropylbenzene	^		0.51 U	0.50 U	0.51 U	**15**	13 U
n-Propylbenzene	^		0.66 U	0.65 U	0.66 U	**13**	16 U
1, 3, 5-Trimenthylbenzene	^		0.61 U	0.60 U	0.61 U	**21**	15 U
1,2,4-Trimethylbenzene	^		0.47 U	0.46 U	0.47 U	**76**	**94 J**
Sec-butylbenzene	^		0.52 U	0.51 U	0.51 U	0.50 U	13 U
p-Isopropyltoluene	^		0.52 U	0.52 U	0.52 U	**6.0 J**	13 U
n-Butylbenzene	^		0.42 U	0.41 U	0.41 U	0.41 U	10 U
Naphthalene	13000		0.72 U	0.71 U	0.72 U	**2900 D**	**5800**
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		69 U	**74 J**	**1100 J**	**1300**	**410**
2-Methylnaphthalene	36,400		68 U	67 U	670 U	**130 J**	**68 J**
Acenaphthylene	41,000		66 U	**77 J**	**1100 J**	65 U	66 U
Acenaphthene	50,000		72 U	72 U	720 U	71 U	72 U
Dibenzofuran	6,200		67 U	66 U	660 U	66 U	67 U
Diethylphthalate	7,100		70 U	69 U	690 U	69 U	70 U
Fluorene	50,000		68 U	68 U	680 U	67 U	68 U
Phenanthrene	50,000		65 U	**190 J**	**2600 J**	**190 J**	**78 J**
Anthracene	50,000		61 U	**64 J**	**1000 J**	60 U	61 U
Di-n-butylphthalate	8,100		62 U	61 U	610 U	61 U	62 U
Fluoranthene	50,000		60 U	**500**	**5300**	**96 J**	**70 J**
Pyrene	50,000		72 U	**510**	**11000**	**210 J**	**89 J**
Benzo(a)anthracene	224 or MDL		57 U	**250 J**	**4000 J**	63 J	57 U
Chrysene	400		73 U	**300 J**	**5100**	71 U	73 U
bis(2-Ethylhexyl)phthalate	50,000		78 U	77 U	770 U	**120 J**	**81 J**
Benzo(b) fluoranthene	1,100		45 U	**390 J**	**5100**	54 J	45 U
Benzo(k)fluoranthene	1,100		89 U	**330 J**	**1600 J**	88 U	89 U
Benzo(a)pyrene	61 or MDL		65 U	**280 J**	**6600**	**77 J**	65 U
Indeno (1,2,3-cd)pyrene	3,200		52 U	51 U	**4000**	51 U	52 U
Benzo(g,h,i)perylene	50,000		67 U	**130 J**	**4900**	66 U	67 U
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	N/A	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	PBSB2	PBSB2	PBSB2D	PBSB2	PBSB3
		Sample Depth (ft.):	3-4	5-7	5-7	14-15	6-7
		Sample Date:	8/15/2005	8/15/2005	08/15/05	08/15/05	8/18/2005
		Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
Volatile Organic Compounds (ppb or ug/kg)							
Acetone	200		4.2 U	4.3 U	**13 J**	**11 J**	**18 J**
Carbon Disulfide	2700		0.46 U	0.47 U	0.47 U	0.44 U	0.44 U
Methylene Chloride	100		2.3 U	2.3 U	2.3 U	2.2 U	**8.2**
2-Butanone	300		3.5 U	3.6 U	3.6 U	3.4 U	3.4 U
1,1-Dichloropropene	^		0.50 U	0.50 U	0.50 U	0.47 U	0.47 U
cis-1,2-Dichloroethene	^		0.41 U	0.42 U	0.42 U	0.39 U	0.39 U
Benzene	60		**2.5 J**	**0.77 J**	**1.6 J**	0.48 U	0.48 U
Trichloroethene	700		0.38 U	0.39 U	0.39 U	0.37 U	0.37 U
Toluene	1500		0.51 U	**1.6 J**	**3.4 J**	0.49 U	0.48 U
Tetrachloroethene	1400		0.91 U	0.94 U	0.94 U	0.88 U	0.87 U
Ethylbenzene	5500		0.44 U	**19**	**6.9**	**6.1**	0.42 U
m/p-Xylenes	1200		1.1 U	**41**	**24**	**27**	1.0 U
o-Xylenes	1200		0.48 U	**26**	**11**	**12**	0.46 U
Isopropylbenzene	^		**14**	**4.9 J**	**1.9 J**	**0.83 J**	0.50 U
n-Propylbenzene	^		**36**	**11**	**5.1 J**	**1.4 J**	0.64 U
1, 3, 5-Trimenthylbenzene	^		**1.5 J**	**4.5 J**	**5.0 J**	**3.4 J**	0.59 U
1,2,4-Trimethylbenzene	^		**0.85 J**	**53**	**13**	**13**	0.45 U
Sec-butylbenzene	^		**3.8 J**	**1.4 J**	0.54 U	0.50 U	0.50 U
p-Isopropyltoluene	^		**0.65 J**	0.54 U	0.54 U	0.51 U	0.51 U
n-Butylbenzene	^		**4.8 J**	0.43 U	0.43 U	0.41 U	0.40 U
Naphthalene	13000		0.73 U	**11**	**6.1 J**	**5.1 J**	0.70 U
Semi-Volatile Organic Compounds (ppb or ug/kg)							
Naphthalene	13,000		**72 J**	72 U	72 U	**91 J**	67 U
2-Methylnaphthalene	36,400		69 U	70 U	71 U	66 U	66 U
Acenaphthylene	41,000		67 U	68 U	69 U	64 U	64 U
Acenaphthene	50,000		**180 J**	75 U	75 U	71 U	70 U
Dibenzofuran	6,200		68 U	70 U	70 U	66 U	65 U
Diethylphthalate	7,100		71 U	73 U	73 U	69 U	68 U
Fluorene	50,000		70 U	71 U	71 U	67 U	66 U
Phenanthrene	50,000		66 U	67 U	67 U	63 U	63 U
Anthracene	50,000		62 U	64 U	64 U	60 U	59 U
Di-n-butylphthalate	8,100		63 U	64 U	64 U	60 U	60 U
Fluoranthene	50,000		**270 J**	63 U	63 U	59 U	58 U
Pyrene	50,000		**1000**	75 U	75 U	70 U	70 U
Benzo(a)anthracene	224 or MDL		**200 J**	59 U	59 U	56 U	55 U
Chrysene	400		**260 J**	76 U	76 U	71 U	71 U
bis(2-Ethylhexyl)phthalate	50,000		79 U	81 U	81 U	76 U	75 U
Benzo(b) fluoranthene	1,100		**510**	46 U	47 U	44 U	43 U
Benzo(k)fluoranthene	1,100		**140 J**	93 U	93 U	87 U	87 U
Benzo(a)pyrene	61 or MDL		**760**	67 U	68 U	63 U	63 U
Indeno (1,2,3-cd)pyrene	3,200		**650**	54 U	54 U	50 U	50 U
Benzo(g,h,i)perylene	50,000		**850**	70 U	70 U	66 U	65 U
Total Organic Carbon (TOC) (ppm or mg/kg)							
TOC	^		N/A	N/A	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*					
	Sample ID:	PBSB-4	PBSB-5	TRIPBLANK	TRIPBLANK	TRIPBLANK
	Sample Depth (ft.):	4-6	13-15	---	---	---
	Sample Date:	8/23/2005	8/25/2005	08/22/05	08/23/05	8/24/2005
	Sample Classification:	SOIL	SOIL	WATER	WATER	WATER
Volatile Organic Compounds (ppb or ug/kg)						
Acetone	200	**200**	**13 J**	2.3 U	2.3 U	2.3 U
Carbon Disulfide	2700	0.43 U	0.47 U	0.40 U	0.40 U	0.40 U
Methylene Chloride	100	**11**	**6.1 J**	0.43 U	0.43 U	**2.5 J**
2-Butanone	300	**30**	3.6 U	1.1 U	1.1 U	1.1 U
1,1-Dichloropropene	^	0.38 U	0.50 U	0.62 U	0.62 U	0.62 U
cis-1,2-Dichloroethene	^	0.38 U	0.41 U	0.29 U	0.29 U	0.29 U
Benzene	60	0.46 U	0.51 U	0.39 U	0.39 U	0.39 U
Trichloroethene	700	0.36 U	0.39 U	0.46 U	0.46 U	0.46 U
Toluene	1500	0.47 U	0.51 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	1400	0.84 U	0.92 U	0.48 U	0.48 U	0.48 U
Ethylbenzene	5500	0.41 U	0.45 U	0.45 U	0.45 U	0.45 U
m/p-Xylenes	1200	1.0 U	1.1 U	1.2 U	1.2 U	1.2 U
o-Xylenes	1200	0.44 U	0.49 U	0.46 U	0.46 U	0.46 U
Isopropylbenzene	^	0.48 U	0.53 U	0.44 U	0.44 U	0.44 U
n-Propylbenzene	^	0.62 U	0.68 U	0.49 U	0.49 U	0.49 U
1, 3, 5-Trimenthylbenzene	^	0.57 U	0.63 U	0.42 U	0.42 U	0.42 U
1,2,4-Trimethylbenzene	^	0.44 U	0.48 U	0.44 U	0.44 U	0.44 U
Sec-butylbenzene	^	0.48 U	0.53 U	0.44 U	0.44 U	0.44 U
p-Isopropyltoluene	^	0.49 U	0.54 U	0.49 U	0.49 U	0.49 U
n-Butylbenzene	^	0.39 U	0.43 U	0.49 U	0.49 U	0.49 U
Naphthalene	13000	**13**	0.74 U	0.34 U	0.34 U	0.34 U
Semi-Volatile Organic Compounds (ppb or ug/kg)						
Naphthalene	13,000	**3600**	71 U	N/A	N/A	N/A
2-Methylnaphthalene	36,400	**1500**	70 U	N/A	N/A	N/A
Acenaphthylene	41,000	**690 J**	68 U	N/A	N/A	N/A
Acenaphthene	50,000	**930**	74 U	N/A	N/A	N/A
Dibenzofuran	6,200	**700 J**	69 U	N/A	N/A	N/A
Diethylphthalate	7,100	130 U	72 U	N/A	N/A	N/A
Fluorene	50,000	**1500**	**70**	N/A	N/A	N/A
Phenanthrene	50,000	**7300 D**	66 U	N/A	N/A	N/A
Anthracene	50,000	**1300**	63 U	N/A	N/A	N/A
Di-n-butylphthalate	8,100	120 U	64 U	N/A	N/A	N/A
Fluoranthene	50,000	**4200**	62 U	N/A	N/A	N/A
Pyrene	50,000	**4200**	74 U	N/A	N/A	N/A
Benzo(a)anthracene	224 or MDL	**1700**	58 U	N/A	N/A	N/A
Chrysene	400	**1600**	75 U	N/A	N/A	N/A
bis(2-Ethylhexyl)phthalate	50,000	**260 J**	80 U	N/A	N/A	N/A
Benzo(b) fluoranthene	1,100	**1600**	46 U	N/A	N/A	N/A
Benzo(k)fluoranthene	1,100	**930**	92 U	N/A	N/A	N/A
Benzo(a)pyrene	61 or MDL	**1400**	67 U	N/A	N/A	N/A
Indeno (1,2,3-cd)pyrene	3,200	**320 J**	53 U	N/A	N/A	N/A
Benzo(g,h,i)perylene	50,000	**590 J**	69 U	N/A	N/A	N/A
Total Organic Carbon (TOC) (ppm or mg/kg)						
TOC	^	N/A	N/A	N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective*	Sample ID:	TRIPBLANK	FIELDBLANK-8-23-05	RB-081905
		Sample Depth (ft.):	---	---	---
		Sample Date:	08/25/05	8/23/2005	8/19/2005
		Sample Classification:	WATER	WATER	WATER
Volatile Organic Compounds (ppb or ug/kg)					
Acetone	200		2.3 U	2.3 U	N/A
Carbon Disulfide	2700		0.40 U	0.4 U	N/A
Methylene Chloride	100		0.43 U	0.43 U	N/A
2-Butanone	300		1.1 U	1.1 U	N/A
1,1-Dichloropropene	^		0.62 U	0.62 U	N/A
cis-1,2-Dichloroethene	^		0.29 U	0.29 U	N/A
Benzene	60		0.39 U	0.39 U	N/A
Trichloroethene	700		0.46 U	0.46 U	N/A
Toluene	1500		0.36 U	0.36 U	N/A
Tetrachloroethene	1400		0.48 U	0.48 U	N/A
Ethylbenzene	5500		0.45 U	0.45 U	N/A
m/p-Xylenes	1200		1.2 U	1.2 U	N/A
o-Xylenes	1200		0.46 U	0.46 U	N/A
Isopropylbenzene	^		0.44 U	0.44 U	N/A
n-Propylbenzene	^		0.49 U	0.49 U	N/A
1, 3, 5-Trimenthylbenzene	^		0.42 U	0.42 U	N/A
1,2,4-Trimethylbenzene	^		0.44 U	0.44 U	N/A
Sec-butylbenzene	^		0.44 U	0.44 U	N/A
p-Isopropyltoluene	^		0.49 U	0.49 U	N/A
n-Butylbenzene	^		0.49 U	0.49 U	N/A
Naphthalene	13000		0.34 U	0.34 U	N/A
Semi-Volatile Organic Compounds (ppb or ug/kg)					
Naphthalene	13,000		N/A	1.4 U	1.4 U
2-Methylnaphthalene	36,400		N/A	1.1 U	1.1 U
Acenaphthylene	41,000		N/A	**1.3 J**	1.3 U
Acenaphthene	50,000		N/A	1.4 U	1.4 U
Dibenzofuran	6,200		N/A	1.3 U	1.3 U
Diethylphthalate	7,100		N/A	1.4 U	1.4 U
Fluorene	50,000		N/A	1.5 U	1.5 U
Phenanthrene	50,000		N/A	1.5 U	1.5 U
Anthracene	50,000		N/A	1.5 U	1.5 U
Di-n-butylphthalate	8,100		N/A	1.4 U	**1.6 J**
Fluoranthene	50,000		N/A	1.3 U	1.3 U
Pyrene	50,000		N/A	1.5 U	1.5 U
Benzo(a)anthracene	224 or MDL		N/A	1.2 U	1.2 U
Chrysene	400		N/A	1.7 U	1.7 U
bis(2-Ethylhexyl)phthalate	50,000		N/A	**2.6 J**	1.6 U
Benzo(b) fluoranthene	1,100		N/A	0.780 U	0.780 U
Benzo(k)fluoranthene	1,100		N/A	2.0 U	2.0 U
Benzo(a)pyrene	61 or MDL		N/A	1.2 U	1.2 U
Indeno (1,2,3-cd)pyrene	3,200		N/A	0.860 U	0.860 U
Benzo(g,h,i)perylene	50,000		N/A	1.1 U	1.1 U
Total Organic Carbon (TOC) (ppm or mg/kg)					
TOC	^		N/A	N/A	N/A

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Notes:

General Comments

All results are in µg/kg (microgram per kilogram or parts per billion (ppb)).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedance of TAGM value.
NR - Not reported or not analyzed

Standards

* = NYSDEC TAGM Memorandum No. 4046, revised January 24, 1994
^ = No standard or guidance value is available for this compound.
MDL = Method Detection Limit

Laboratory Qualifers - Organic

U - Indicates the compound was analyzed for but was not detected.
J - Indicates an estimated value. This flag is used:
(1) When estimating, a concentration for a tentatively identified compound
(2) When the mass specral data indicated the indentification, however the result was less than the specified detection limit greater than zero.
B - Indicates the analyte was found in the blank as well as the sample.
E - Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
D - This flag identifies all compounds identigied in an analysis at a secondary dilution factor.
N - 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 applis to all TIC results.

Table 3B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Organics in Soil
Supplemental Investigation

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	BALLAST-1	BALLAST-2	NWTPGRAB	NWSB	SB20	SB21	SB22	SB22	SB22
				Sample Depth (ft.):	NA	NA	NA	NA	14-16	4-6	3-5	6-8	10-11
				Sample Date:	04/20/05	04/20/05	04/06/05	04/06/05	04/19/05	04/18/05	04/27/05	04/27/05	04/27/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**6390**	**10200**	**6160**	**3090**	**6400**	**3380**	**8170**	**8590**	**6080**
Antimony	SB	N/A	N/A		**2.260 J**	**0.542 J**	**8.120 J**	**15.6**	0.404 U	3.800 U	**0.880 J**	**1.760 J**	0.410 U
Arsenic	7.5 or SB	3-12	2.2-23.1		**72.7**	**15.3**	**6.300 N**	**27.6 N**	2.340 U	**7.080**	**3.860**	**7.960**	**0.628 J**
Barium	300 or SB	15-600	38.5-187		**122**	**108**	**1040 N**	**153 N**	**385**	**49.1**	**1120**	**891**	**23.2 J**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.349 J**	**0.957**	**0.486 JN**	**0.237 JN**	**0.256 J**	**0.486 J**	**0.477 J**	**0.497 J**	**0.321 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		1.380 U	**0.352 J**	**1.250 N**	**0.751 N**	0.041 U	0.036 U	0.041 U	**3.350**	0.041 U
Calcium	SB	130-35,000	N/A		**27100**	**59100**	**29200**	**15600**	**6760**	**71300**	**37400**	**12400**	**928**
Chromium	10 or SB	1.5-40	11.2-51.2		**53.2**	**21.9**	**23.5 N**	**34.9 N**	**11.9**	**11.5 J**	**21.8 N**	**17.2 N**	**8.930 N**
Cobalt	30 or SB	2.5-60	N/A		**14.3**	**10.5**	**9.610 N**	**6.710 JN**	**5.840 J**	**4.900 J**	**10.0**	**13.5**	**2.960 J**
Copper	25 or SB	1-50	5.8-64.8		**299**	**155**	**90.2 N**	**309 N**	**18.1**	**166**	**44.6**	**627**	**21.8**
Iron	2,000 or SB	2,000-550,000	N/A		**71400**	**34400**	**16200**	**51500**	**10100**	**17600**	**15000**	**22300**	**12100**
Lead	SB	200-500	6.9-303		**742 J**	**146**	**1970 N**	**989 N**	**53.9 J**	**199 J**	**283**	**1170**	**37.2**
Magnesium	SB	100-5,000	N/A		**12200**	**31800**	**5990**	**2240**	**4070**	**46800**	**9400**	**2600**	**2490**
Manganese	SB	50-5,000	N/A		**616**	**942**	**417**	**307**	**137**	**294**	**219**	**110**	**96.2**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.540**	**0.120 N**	**0.520**	**0.423**	**0.067**	**0.102**	**0.274 N**	**0.583 N**	**0.009 JN**
Nickel	13 or SB	0.5-25	8.7-54.5		**54.0**	**17.1**	**27.3 N**	**19.9 N**	**11.6**	**13.2**	**17.1**	**28.4**	**9.780**
Potassium	SB	8,500-43,000	N/A		**1150 J**	**1240**	**1440 N**	**444 JN**	**1080 J**	**770 J**	**3130**	**866**	**793**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.388 U	0.370 U	0.531 U	0.440 U	0.420 U	0.377 U	0.428 U	**1.600**	0.426 U
Silver	SB	N/A	N/A		**4.670 J**	**3.250 N**	**0.381 J**	**2.390**	**0.805 J**	0.087 UN*	**0.371 JN**	**2.360 N**	0.099 UN
Sodium	SB	6,000-8,000	N/A		**260 J**	**776**	**675 JN**	**279 JN**	**238 J**	167 UJ	**356 J**	**435 J**	**179 J**
Thallium	SB	N/A	N/A		0.600 U	0.572 U	0.559 U	**1.620**	0.650 U	1.980 U	0.661 U	0.700 U	0.658 U
Vanadium	150 or SB	1-300	N/A		**61.8**	**64.9**	**40.2 N**	**43.8 N**	**14.1**	**13.5**	**31.4**	**15.6**	**11.0**
Zinc	20 or SB	9-50	35.7-225		**364**	**302**	**901 N**	**218 N**	**227**	**82.1**	**731**	**1250**	**46.7**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		NR	560	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.569 U	0.543 U	0.847 U	0.702 U	0.617 U	0.558 U	0.627 U	0.678 U	0.637 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	SB23	SB24 ⇧	SB25	SB25	SB25	SB25A	SB25A	SB26	SB27 ⇧
				Sample Depth (ft.):	6-8	6-8	2-4	6-8	14-16	4-6	6-8	10-12	14-16
				Sample Date:	04/15/05	04/18/05	04/15/05	04/15/05	04/15/05	04/15/05	04/15/05	04/15/05	04/19/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**8560**	**10400**	**6790**	**7630**	**6260**	**5060**	**6340**	**2340**	**10300**
Antimony	SB	N/A	N/A		**1.140 J**	1.110 U	**2.490 J**	**0.874 J**	**1.010 J**	**4.540 J**	**1.500 J**	**0.730 J**	0.534 U
Arsenic	7.5 or SB	3-12	2.2-23.1		**1.490**	**1.960**	**8.600**	**1.560**	**0.423 J**	**9.330**	**2.760**	0.448 U	0.638 U
Barium	300 or SB	15-600	38.5-187		**51.0**	**72.1**	**336**	**88.9**	**84.6**	**553**	**125**	**23.6**	**69.7**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.456 J**	**0.497 J**	**0.311 J**	**0.308 J**	**0.286 J**	**0.373 J**	**0.355 J**	**0.154 J**	**0.529 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		0.045 U	0.038 U	**0.321 J**	0.055 U	0.054 U	**0.374 J**	**0.130 J**	0.038 U	0.130 UJ
Calcium	SB	130-35,000	N/A		**2440**	**7600**	**37500**	**10200**	**13200**	**42500**	**7120**	**24600**	**3880 J**
Chromium	10 or SB	1.5-40	11.2-51.2		**11.4 N**	**20.4 J**	**17.1 N**	**13.9 N**	**14.0 N**	**20.4 N**	**14.5 N**	**6.540 N**	**16.7**
Cobalt	30 or SB	2.5-60	N/A		**5.450 J**	**10.1**	**6.200**	**4.840 J**	**7.670**	**8.410**	**4.340 J**	**3.920 J**	**6.310 J**
Copper	25 or SB	1-50	5.8-64.8		**11.4**	**28.6**	**93.0**	**27.8**	**16.8**	**141**	**29.8**	**8.990**	**14.9 J**
Iron	2,000 or SB	2,000-550,000	N/A		**12900**	**15800**	**15700**	**10700**	**10700**	**29200**	**9530**	**5490**	**10600**
Lead	SB	200-500	6.9-303		**35.0**	**74.1 J**	**341**	**72.0**	**14.8**	**422**	**81.4**	**11.0**	**10.5 J**
Magnesium	SB	100-5,000	N/A		**2480**	**8120**	**7220**	**3720**	**6980**	**5140**	**3990**	**11400**	**4220**
Manganese	SB	50-5,000	N/A		**138**	**232**	**262**	**140**	**100**	**315**	**131**	**106**	**98.7 J**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.643 N**	**0.232**	**0.450 N**	**0.097 N**	0.007 UN	**0.310 N**	**0.063 N**	0.007 UN	**0.034 N**
Nickel	13 or SB	0.5-25	8.7-54.5		**10.6**	**17.1**	**19.0**	**13.2**	**13.5**	**24.7**	**13.5**	**5.890**	**14.4 J**
Potassium	SB	8,500-43,000	N/A		**701 N**	**3320 J**	**2260 N**	**1050 N**	**3300 N**	**1470 N**	**707 N**	**915 N**	**1030 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.464 U	0.395 U	0.358 U	0.372 U	0.365 U	0.372 U	0.390 U	0.358 U	0.555 U
Silver	SB	N/A	N/A		**1.320 J**	0.091 UN*	0.120 U	0.125 U	0.123 U	0.125 U	**0.471 J**	0.120 U	**0.129**
Sodium	SB	6,000-8,000	N/A		**65.8 JN**	162 UJ	**526 JN**	**146 JN**	**260 JN**	**312 JN**	**223 JN**	**215 JN**	49.0 UJ
Thallium	SB	N/A	N/A		**2.320**	0.610 U	**0.602 J**	0.626 U	0.385 U	0.626 U	**1.260**	**1.250**	0.858 U
Vanadium	150 or SB	1-300	N/A		**16.1 N**	**27.7**	**29.8**	**14.3 N**	**20.4 N**	**31.1 N**	**22.3 N**	**8.580**	**17.7**
Zinc	20 or SB	9-50	35.7-225		**42.0 N**	**72.7**	**558**	**127 N**	**54.5 N**	**445 N**	**112 N**	**23.5**	**86.5**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		NR	NR	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.688 U	0.585 U	0.571 U	0.594 U	0.583 U	0.594 U	0.630 U	0.583 U	0.822 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	SB27DUP ⇧	SB-28	SB-29	SB-30	SB-30	SB-30	SB-33	SB-34
				Sample Depth (ft.):	14-16	4-6	4-6	0-2	6-8	12-14	0-4	6-8
				Sample Date:	04/19/05	04/14/05	04/13/05	04/14/05	04/14/05	04/14/05	04/14/05	04/13/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)												
Aluminum	SB	33000	N/A		**7390**	**5010**	**8770**	**4280**	**10400**	**10100**	**6160**	**26500**
Antimony	SB	N/A	N/A		0.443 U	**1.420 J**	0.384 U	**3.530 J**	0.387 U	0.386 U	**0.482 J**	**0.555 J**
Arsenic	7.5 or SB	3-12	2.2-23.1		1.760 U	**3.730**	**3.080**	**39.2**	**1.410**	**0.560 J**	**16.2**	**0.481 J**
Barium	300 or SB	15-600	38.5-187		**56.6**	**54.9**	**135**	**158**	**26.9**	**41.2**	**153**	**25.6**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		0.383 UJ	**0.264 J**	**0.499 J**	**0.253 J**	**0.429 J**	**0.907**	**0.384 J**	**0.397 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		**0.045 U**	0.037 U	0.039 U	**1.020**	0.039 U	0.039 U	**0.353 J**	0.039 U
Calcium	SB	130-35,000	N/A		**12800 J**	**40800**	**40300**	**75400**	**945**	**56900**	**42800**	**151000 D**
Chromium	10 or SB	1.5-40	11.2-51.2		**14.1**	**10.9 N**	**14.4 N**	**41.5 N**	**14.5 N**	**14.3**	**14.7 N**	**17.3 N**
Cobalt	30 or SB	2.5-60	N/A		**6.020 J**	**5.490 J**	**5.870**	**8.110**	**9.620**	**28.2**	**8.050**	**5.73 J**
Copper	25 or SB	1-50	5.8-64.8		**62.4 J**	**24.0**	**23.0**	**228**	**13.6**	**16.5**	**170**	**7.25**
Iron	2,000 or SB	2,000-550,000	N/A		**11900**	**10400**	**12400**	**59000**	**19300**	**13500**	**17900**	**6200**
Lead	SB	200-500	6.9-303		**33.1 J**	**72.5**	**77.0**	**698**	**11.5**	**2.610**	**241**	**3.91**
Magnesium	SB	100-5,000	N/A		**5110**	**17700**	**5580**	**15300**	**3130**	**44900**	**13100**	**69200**
Manganese	SB	50-5,000	N/A		**224 J**	**238**	**224**	**413**	**221**	**604**	**254**	**166**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.052 N**	0.006 U	**0.088**	**0.317**	**0.132**	0.007 U	**0.809 D**	0.007 U
Nickel	13 or SB	0.5-25	8.7-54.5		**25.1 J**	**11.3 N**	**14.1 N**	**36.0 N**	**12.7 N**	**39.3 N**	**16.5 N**	**5.31 N**
Potassium	SB	8,500-43,000	N/A		**1800 J**	**1970 N**	**1600 N**	**1100 N**	**557 JN**	**2400 N**	**2590 N**	**594 JN**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.460 U	**1.310**	**0.930 J**	**1.430**	0.402 U	0.401 U	**0.772 J**	0.405 U
Silver	SB	N/A	N/A		**0.107**	0.088 U	0.092 U	0.088 U	0.093 U	0.093 U	**0.285 J**	0.094 U
Sodium	SB	6,000-8,000	N/A		**281 J**	**75.2 JN**	**421 JN**	**37.9 JN**	30.4 UN	**247 JN**	**256 JN**	**178 JN**
Thallium	SB	N/A	N/A		0.711 U	0.586 U	**0.616 U**	**1.870**	0.621 U	0.620 U	0.636 U	0.627 U
Vanadium	150 or SB	1-300	N/A		**19.3**	**16.2**	**26.8**	**43.9**	**18.2**	**21.5**	**27.1**	**35**
Zinc	20 or SB	9-50	35.7-225		**65.5**	**98.9**	**125**	**239**	**47.8**	**94.7**	**338**	**30.3**
Total Petroleum Hydrocarbons (mg/kg)												
TPH	^	N/A	N/A		NR	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)												
Cyanide	^	N/A	N/A		0.675 U	0.556 U	0.585 U	0.561 U	0.601 U	0.594 U	0.604 U	0.595 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	SB35	SB-36	SB37	SB41	SB42	SB43 ⇧	SB44 ⇧	SB44 ⇧	SB44 DUP ⇧
				Sample Depth (ft.):	0-2	2-4	4-6	4-6	4-6	2-4	3-5	5-7	5-7
				Sample Date:	04/20/05	04/14/05	04/20/05	04/15/05	04/20/05	04/19/05	04/27/05	04/27/05	04/27/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**3760**	**11200**	**12600**	**9370**	**8050**	**7260**	**12300**	**6900**	**5620**
Antimony	SB	N/A	N/A		**1.400 J**	0.361 U	0.393 U	0.699 U	**1.620 J**	1.370 UJ	0.398 U	**0.464 J**	0.422 U
Arsenic	7.5 or SB	3-12	2.2-23.1		**70.3**	**2.340**	**4.160**	**3.250**	**9.400**	**7.280**	**9.690**	**3.580**	**2.730**
Barium	300 or SB	15-600	38.5-187		**89.1**	**129**	**58.8**	**200**	**145**	**117**	**338 J**	**40.3 J**	**31.8 J**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.388 J**	**0.385 J**	**0.429 J**	**0.454 J**	**0.542 J**	**0.425 J**	0.467 UJ	0.395 UJ	0.343 UJ
Cadmium	1 or SB	0.1-1	0.04U-1.2		**0.885**	0.036 U	0.040 U	0.057 U	**0.626**	0.753 U	0.040 U	0.042 U	0.042 U
Calcium	SB	130-35,000	N/A		**64200**	**28000**	**2740**	**9320**	**29400**	**20100**	**43800**	**11700**	**9570**
Chromium	10 or SB	1.5-40	11.2-51.2		**28.2**	**23.5 N**	**17.7**	**14.0 N**	**20.8**	**17.0**	**9.140 J**	**10.5 J**	**7.640 J**
Cobalt	30 or SB	2.5-60	N/A		**7.820**	**12.9**	**8.350**	**7.480**	**13.9**	**8.480**	**3.090 J**	**5.070 J**	**3.920 J**
Copper	25 or SB	1-50	5.8-64.8		**178**	**38.2**	**42.6**	**16.5**	**103**	**130**	**7.710**	**42.3 J**	**12.7 J**
Iron	2,000 or SB	2,000-550,000	N/A		**42100**	**19500**	**16800**	**14200**	**42200**	**16400**	**7350**	**12200**	**8910**
Lead	SB	200-500	6.9-303		**543**	**96.1**	**121**	**57.0**	**390**	**891 N**	**187**	**73.1 J**	**15.5 J**
Magnesium	SB	100-5,000	N/A		**25000**	**17200**	**4340**	**6850**	**16100**	**10700**	**3590**	**5590 J**	**2980 J**
Manganese	SB	50-5,000	N/A		**440**	**249**	**243**	**652**	**346**	**277**	**167**	**184**	**127**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.552 ND**	**0.101**	**0.058 N**	**0.161 N**	**0.888 ND**	**1.1 ND**	**0.132 N**	**0.056 N**	**0.046 N**
Nickel	13 or SB	0.5-25	8.7-54.5		**29.2**	**21.7 N**	**15.9**	**13.7**	**27.5**	**18.8**	**6.050**	**10.3**	**7.900**
Potassium	SB	8,500-43,000	N/A		**989**	**7770 N**	**1470**	**1460 N**	**1990**	**1940**	**1040 J**	**1130 J**	**747 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.372 U	0.376 U	0.408 U	0.388 U	0.399 U	0.406 U	0.414 U	0.434 U	0.439 U
Silver	SB	N/A	N/A		**3.330 N**	**0.515 J**	**1.250 N**	0.130 U	**6.430 N**	0.094 UN	0.096 UJ	1.330 UJ	0.102 UJ
Sodium	SB	6,000-8,000	N/A		**231 J**	**171 JN**	**60.2 J**	**184 JN**	**292 J**	**197 J**	**1710**	**260 J**	**245 J**
Thallium	SB	N/A	N/A		0.575 U	0.580 U	0.631 U	**1.410**	0.616 U	0.628 U	0.640 U	0.671 U	0.678 U
Vanadium	150 or SB	1-300	N/A		**47.7**	**35.7**	**23.8**	**18.7 N**	**29.6**	**25.4**	**17.9 J**	**16.4 J**	**11.9 J**
Zinc	20 or SB	9-50	35.7-225		**239**	**92.7**	**68.7**	**89.7 N**	**487**	**492**	**265 J**	**77.9 J**	**54.7 J**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		NR	NR	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.545 U	0.551 U	0.605 U	0.633 U	0.590 U	0.596 U	0.613 U	0.637 U	0.644 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	SB44	SB45	SB45	SB45	SB46	SB46	SB46	SB47	SB47
				Sample Depth (ft.):	14-15	2-4	5-7	14-15	3-5	8-10	13-14	2-4	7-8
				Sample Date:	04/27/05	04/27/05	04/27/05	04/27/05	04/28/05	04/28/05	04/28/05	04/28/05	04/28/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**5550**	**9100**	**1720**	**6770**	**4390**	**6780**	**4780**	**9360**	**6930**
Antimony	SB	N/A	N/A		0.407 U	0.383 U	**992**	**0.767 J**	**6.150 J**	**0.454 J**	0.392 U	**3.410 J**	0.435 U
Arsenic	7.5 or SB	3-12	2.2-23.1		**1.020 J**	**4.090**	**14.6**	**0.758 J**	**4.720**	0.459 U	0.468 U	**4.330**	**1.020 J**
Barium	300 or SB	15-600	38.5-187		**13.5 J**	**42.4**	**116**	**27.1**	**51.7**	**34.6**	**16.7 J**	**115**	**26.5 J**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		0.341 UJ	**0.455 J**	**0.251 J**	**0.398 J**	**0.238 J**	**0.249 J**	**0.193 J**	**0.375 J**	**0.227 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		0.041 U	0.038 U	**0.143 J**	0.040 U	0.038 U	0.039 U	0.039 U	0.042 U	0.044 U
Calcium	SB	130-35,000	N/A		**1140**	**28700**	**9680**	**1400**	**6900**	**949**	**4810**	**36900**	**3260**
Chromium	10 or SB	1.5-40	11.2-51.2		**13.6 J**	**7.460 N**	**8.88 N**	**14.9 N**	**8.290**	**15.5**	**8.150**	**14.9**	**12.6**
Cobalt	30 or SB	2.5-60	N/A		**3.980 J**	**1.720 J**	**4.210 J**	**4.970 J**	**6.870**	**4.630 J**	**5.170 J**	**3.850 J**	**5.140 J**
Copper	25 or SB	1-50	5.8-64.8		**11.6**	**4.330**	**144**	**11.7**	**98.6**	**16.0**	**10.7**	**34.4**	**14.0**
Iron	2,000 or SB	2,000-550,000	N/A		**9040**	**6940**	**12400**	**10200**	**16800**	**10500**	**9850**	**11500**	**10300**
Lead	SB	200-500	6.9-303		**12.1**	**6.190**	**150000 D**	**139**	**456**	**89.0**	**4.650**	**163**	**36.6**
Magnesium	SB	100-5,000	N/A		**2650**	**2110**	**2130**	**3040**	**4290**	**2790**	**4780**	**12300**	**3410**
Manganese	SB	50-5,000	N/A		**123**	**201**	**255**	**99.0**	**175**	**103**	**210**	**439**	**165**
Mercury	0.1	0.001-0.2	0.04-0.92		0.007 UN	0.007 UN	**0.014 N**	**0.008 JN**	**0.539**	**0.008 J**	**0.007 J**	**0.249**	**0.025**
Nickel	13 or SB	0.5-25	8.7-54.5		**10.9**	**2.810 J**	**7.870**	**13.7**	**10.7**	**11.0**	**10.6**	**12.7**	**10.6**
Potassium	SB	8,500-43,000	N/A		**793 J**	**589**	**360 J**	**1110**	**466 J**	**814**	**554 J**	**2260**	**714**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.424 U	0.398 U	0.424 U	0.412 U	0.394 U	0.399 U	0.407 U	0.438 U	0.452 U
Silver	SB	N/A	N/A		0.993 UJ	0.092 UN	**6.030 N**	**0.271 JN**	**0.102 JN***	0.092 UN*	0.094 UN*	0.102 UN*	**0.489 JN***
Sodium	SB	6,000-8,000	N/A		32.1 U	**1340**	**263 J**	**74.5 J**	**90.5 J**	**112 J**	**151 J**	**1180**	**150 J**
Thallium	SB	N/A	N/A		0.655 U	0.615 U	**5.330**	0.636 U	0.609 U	0.617 U	0.629 U	0.678 U	0.699 U
Vanadium	150 or SB	1-300	N/A		**13.6 J**	**11.0**	**10.3**	**14.9**	**12.3**	**13.1**	**10.3**	**21.1**	**13.1**
Zinc	20 or SB	9-50	35.7-225		**38.5 J**	**10.1**	**108**	**42.0**	**96.3**	**71.3**	**52.6**	**180**	**38.9**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		NR	**200**	**2700**	31 U	**960**	**110**	**150**	NR	NR
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.621 U	0.589 U	**3.730**	0.604 U	0.589 U	0.591 U	0.609 U	0.649 U	0.663 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	SB47	SB48	SB48	SB48	SB49 ⇧	SB49 ⇧	SB49 DUP ⇧	SB49	TP11
				Sample Depth (ft.):	13-15	2-4	8-9	14-15	3-5	8-10	8-10	13-15	3-4
				Sample Date:	04/28/05	04/28/05	04/28/05	04/28/05	04/29/05	04/29/05	04/29/05	04/29/05	04/19/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**6720**	**7320**	**5880**	**5480**	**2610**	**8410**	**5210**	**2540**	**5630**
Antimony	SB	N/A	N/A		0.415 U	**4.300 J**	0.432 U	0.469 U	**3.930 J**	0.558 UJ	0.574 UJ	0.388 U	**4.990 J**
Arsenic	7.5 or SB	3-12	2.2-23.1		**3.040**	**3.880**	0.517 U	**9.880**	**4.840**	0.679 UJ	0.485 U	**2.470**	**21.5**
Barium	300 or SB	15-600	38.5-187		**25.2 J**	**479**	**25.6 J**	**30.1**	**38.7 J**	**101 J**	**28.8 J**	**13.8 J**	**531**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.309 J**	**0.348 J**	**0.217 J**	**0.283 J**	0.179 UJ	**0.431 J**	0.243 UJ	0.135 UJ	**0.343 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		0.042 U	**0.093 J**	0.044 U	0.047 U	0.036 U	0.040 U	0.041 U	0.039 U	**1.450**
Calcium	SB	130-35,000	N/A		**2190**	**20700**	**946**	**4110**	**28800**	**888**	**885**	**1840**	**37300**
Chromium	10 or SB	1.5-40	11.2-51.2		**11.9**	**31.9**	**10.5**	**10.6**	**20.6 J**	**16.0 J**	**8.850 J**	**9.810 J**	**28.6**
Cobalt	30 or SB	2.5-60	N/A		**7.350**	**5.610**	**4.350 J**	**5.530 J**	**5.340 J**	**6.960**	**3.490 J**	**3.240 J**	**6.500**
Copper	25 or SB	1-50	5.8-64.8		**16.4**	**58.0**	**9.240**	**15.2**	**67.3**	**20.6**	**8.000**	**4.450**	**199**
Iron	2,000 or SB	2,000-550,000	N/A		**12900**	**14200**	**8900**	**14700**	**19600**	**11700**	**8130**	**6520**	**25900**
Lead	SB	200-500	6.9-303		**4.510**	**649**	**5.890**	**3.470**	**120**	**8.300**	**3.660**	**2.380**	**660 N**
Magnesium	SB	100-5,000	N/A		**3960**	**7360**	**2650**	**4260**	**16900**	**4400**	**2640**	**1290**	**6820**
Manganese	SB	50-5,000	N/A		**106**	**263**	**97.1**	**165**	**173**	**114**	**79.3**	**56.8**	**343**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.010 J**	**0.870 D**	0.008 U	**0.011 J**	**0.125**	0.014 U	0.007 U	0.007 U	**0.927 ND**
Nickel	13 or SB	0.5-25	8.7-54.5		**15.1**	**11.5**	**10.4**	**11.6**	**14.8**	**16.8**	**10.2**	**4.750**	**23.1**
Potassium	SB	8,500-43,000	N/A		**708**	**1080**	**644 J**	**547 J**	**1140**	**1390**	**643**	**342 J**	**1300**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.432 U	0.406 U	0.450 U	0.487 U	0.371 U	0.418 U	0.422 U	0.404 U	0.402 U
Silver	SB	N/A	N/A		0.100 UN	**1.100 JN***	**0.476 JN***	0.113 UN*	0.086 UJ	0.097 UJ	0.098 UJ	0.093 UJ	0.093 UN
Sodium	SB	6,000-8,000	N/A		**65.2 J**	**307 J**	**131 J**	**70.9 J**	67.4 UJ	31.7 UJ	51.2 UJ	178 UJ	**403 J**
Thallium	SB	N/A	N/A		0.667 U	0.627 U	0.695 U	0.753 U	0.573 U	0.647 U	0.652 U	0.624 U	0.621 U
Vanadium	150 or SB	1-300	N/A		**15.6**	**24.9**	**11.5**	**21.7**	**12.7**	**19.1**	**10.2**	**20.6**	**30.8**
Zinc	20 or SB	9-50	35.7-225		**46.5**	**159**	**31.0**	**42.8**	**35.7**	**57.2**	**32.3**	**44.8**	**504**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		NR	**790**	**150**	**170**	NR	NR	NR	NR	**2700**
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.633 U	0.595 U	0.666 U	0.729 U	0.554 U	0.620 U	0.619 U	0.592 U	0.595 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	TP12	TP13	TP14	TP15	TP16	TP19 ⇧	TP19 DUP ⇧	TP20 ⇧	TP21
				Sample Depth (ft.):	4-5	3-4	3-4	3-4	3-4	5-6	5-6	4-5	4-5
				Sample Date:	04/19/05	04/18/05	04/19/05	04/19/05	04/19/05	04/18/05	04/18/05	04/18/05	04/18/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)													
Aluminum	SB	33000	N/A		**5410**	**5180**	**5760**	**5260**	**6450**	**4950**	**4350**	**8630**	**6790**
Antimony	SB	N/A	N/A		**7.250**	**1.270 J**	**3.100 J**	**3.490 J**	**5.410 J**	**15.4**	**10.8**	0.913 UJ	0.376 U
Arsenic	7.5 or SB	3-12	2.2-23.1		**19.7**	**4.810**	**9.710**	**11.9**	**21.4**	**22.7**	**22.9**	**4.910**	**4.880**
Barium	300 or SB	15-600	38.5-187		**74.6**	**103**	**469**	**61.5**	**82.5**	**137**	**114**	**693**	**90.7**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.348 J**	**0.247 J**	**0.382 J**	**0.529 J**	**0.498 J**	**0.461 J**	**0.317 J**	**0.384 J**	**0.566 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		**0.404 J**	**0.365 J**	**0.461 J**	0.038 U	0.038 U	**2.150**	**1.420**	**1.120**	0.038 U
Calcium	SB	130-35,000	N/A		**20700**	**35600**	**53600**	**53900**	**35200**	**25100**	**19700**	**34000**	**56800**
Chromium	10 or SB	1.5-40	11.2-51.2		**20.7**	**12.4 N**	**19.8**	**16.5**	**24.7**	**40.7 J**	**31.4 J**	**18.0 J**	**13.7 N**
Cobalt	30 or SB	2.5-60	N/A		**9.180**	**5.620**	**5.480 J**	**6.300**	**8.740**	**8.230**	**7.420**	**7.080 J**	**6.810**
Copper	25 or SB	1-50	5.8-64.8		**198**	**58.8**	**79.5**	**125**	**150**	**467 J**	**231 J**	**46.8**	**52.2**
Iron	2,000 or SB	2,000-550,000	N/A		**34200**	**12200**	**17200**	**29000**	**41900**	**43400**	**52700**	**14900**	**13500**
Lead	SB	200-500	6.9-303		**361 N**	**239**	**525 N**	**219 N**	**365 N**	**1220 J**	**877 J**	**216 J**	**110**
Magnesium	SB	100-5,000	N/A		**9560**	**15700**	**7130**	**30300**	**17700**	**9660**	**8900**	**4440**	**32700**
Manganese	SB	50-5,000	N/A		**330**	**201**	**243**	**370**	**446**	**418**	**365**	**255**	**322**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.465 N**	**0.271**	**0.584 N**	**0.429 N**	**0.407 N**	**0.726 D**	**1.1 D**	**0.276**	**0.301**
Nickel	13 or SB	0.5-25	8.7-54.5		**21.9**	**13.8**	**17.4**	**20.4**	**24.5**	**35.1**	**25.8**	**13.9**	**10.1**
Potassium	SB	8,500-43,000	N/A		**2650**	**1370**	**1170**	**1340**	**1490**	**746 J**	**688 J**	**1910 J**	**1590**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.393 U	0.367 U	0.414 U	0.392 U	0.392 U	0.434 U	0.437 U	0.405 U	0.391 U
Silver	SB	N/A	N/A		**3.290 N**	0.085 UN*	0.096 UN	0.091 UN	0.091 UN	0.101 UN*	0.101 UN*	1.430 UJ	0.091 UN*
Sodium	SB	6,000-8,000	N/A		**170 J**	**216 JN**	**277 J**	**71.3 J**	**139 J**	**374 J**	149 UJ	**784 J**	**169 JN**
Thallium	SB	N/A	N/A		0.608 U	0.567 U	0.639 U	0.606 U	0.605 U	0.720 UJ	2.590 UJ	0.625 U	0.605 U
Vanadium	150 or SB	1-300	N/A		**33.2**	**24.5**	**35.7**	**26.3**	**38.1**	**55.2**	**47.8**	**29.4**	**22.4**
Zinc	20 or SB	9-50	35.7-225		**162**	**223**	**391**	**122**	**197**	**995 J**	**328 J**	**597**	**134**
Total Petroleum Hydrocarbons (mg/kg)													
TPH	^	N/A	N/A		**1200**	**2100**	**2300**	**720**	**1400**	**NR**	**NR**	**NR**	**520**
Wet Chemistry (mg/kg)													
Cyanide	^	N/A	N/A		0.577 U	0.549 U	0.619 U	0.575 U	0.574 U	0.636 U	**2.240**	0.593 U	0.579 U

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	MW-18(27-29)	MW-20(17-19)	MW-20(19-21)	MW-21 (5-7)
Sample ID:				MW-18(27-29)	MW-20(17-19)	MW-20(19-21)	MW-21 (5-7)
Sample Depth (ft.):				27-29	17-19	19-21	5-7
Sample Date:				8/22/2005	08/23/05	08/23/05	8/24/2005
Sample Classification:				SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)							
Aluminum	SB	33000	N/A	**8160**	**5930**	**6360**	**9790**
Antimony	SB	N/A	N/A	0.441 UN	0.383 U	0.381 UN	0.367 U
Arsenic	7.5 or SB	3-12	2.2-23.1	**1.730**	**1.010 J**	**1.930**	**3.450**
Barium	300 or SB	15-600	38.5-187	**102 N**	**23.7**	**28.8 N**	**136**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.321 J**	**0.249 J**	**0.233 J**	**0.325 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.044 U	0.039 U	0.038 U	0.037 U
Calcium	SB	130-35,000	N/A	**1820**	**876**	**958**	**43000**
Chromium	10 or SB	1.5-40	11.2-51.2	**12.2**	**6.78**	**7.520**	**17.6**
Cobalt	30 or SB	2.5-60	N/A	**4.330 J**	**4.2 J**	**4.570 J**	**7.86**
Copper	25 or SB	1-50	5.8-64.8	**35**	**10**	**11.2**	**109**
Iron	2,000 or SB	2,000-550,000	N/A	**14600**	**11500**	**12500**	**14500**
Lead	SB	200-500	6.9-303	**93.3**	**4.18**	**4.450**	**134**
Magnesium	SB	100-5,000	N/A	**2290**	**2580**	**2630**	**21700**
Manganese	SB	50-5,000	N/A	**90.7**	**317**	**449**	**297**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.144**	0.007 U	**0.016**	**0.202**
Nickel	13 or SB	0.5-25	8.7-54.5	**8.840**	**8.250**	**8.100**	**15.7**
Potassium	SB	8,500-43,000	N/A	**925 N**	723 U	**710**	**3940**
Selenium	2 or SB	0.1-3.9	0.20-2.9	**0.897 J**	0.399 U	0.396 U	0.381 U
Silver	SB	N/A	N/A	**0.239 J**	0.092 U	0.092 U	0.088 U
Sodium	SB	6,000-8,000	N/A	**247 JN**	**37.6 J**	30.0 U	**561**
Thallium	SB	N/A	N/A	0.708 U	**0.981 J**	**1.7**	**1.73**
Vanadium	150 or SB	1-300	N/A	**14**	**8.67**	**9.290**	**38.1**
Zinc	20 or SB	9-50	35.7-225	**44.3**	**35.6**	**32.900**	**223**
Total Petroleum Hydrocarbons (mg/kg)							
TPH	^	N/A	N/A	N/A	N/A	N/A	N/A
Wet Chemistry (mg/kg)							
Cyanide	^	N/A	N/A	N/A	N/A	N/A	N/A

Table 4A
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Soil
Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	RB-41905A	RB-41905B	RB-42005
			Sample ID:	RB-41905A	RB-41905B	RB-42005
			Sample Depth (ft.):	---	---	---
			Sample Date:	4/19/2005	4/19/2005	4/19/2005
			Sample Classification:	WATER	WATER	WATER
TAL Metals (mg/kg)						
Aluminum	SB	33000	N/A	**12.4 J**	**10.1 J**	5.310 U
Antimony	SB	N/A	N/A	3.170 U	3.170 U	3.170 U
Arsenic	7.5 or SB	3-12	2.2-23.1	**4.510 J**	**3.520 J**	3.320 U
Barium	300 or SB	15-600	38.5-187	**0.930 J**	0.732 U	0.732 U
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.145 J**	**0.170 J**	**0.160 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.327 U	**0.510 J**	**0.450 J**
Calcium	SB	130-35,000	N/A	**850 J**	**1.340 J**	**1.860 J**
Chromium	10 or SB	1.5-40	11.2-51.2	**4.93 J**	**5.150 J**	**5.200 J**
Cobalt	30 or SB	2.5-60	N/A	**3.640 J**	**4.380 J**	**5.380 J**
Copper	25 or SB	1-50	5.8-64.8	**8.190 J**	**5.670 J**	**6.920 J**
Iron	2,000 or SB	2,000-550,000	N/A	**84.0 J**	27.0 U	27.0 U
Lead	SB	200-500	6.9-303	2.180 U	2.180 U	2.180 U
Magnesium	SB	100-5,000	N/A	**194 J**	**21.7 J**	**22.8 J**
Manganese	SB	50-5,000	N/A	**2.220 J**	**0.980 J**	**0.810 J**
Mercury	0.1	0.001-0.2	0.04-0.92	0.0300 U	0.0300 U	0.0300 U
Nickel	13 or SB	0.5-25	8.7-54.5	**3.540 J**	**3.530 J**	**3.060 J**
Potassium	SB	8,500-43,000	N/A	**71.4 J**	**116 J**	**85.5 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9	3.040 U	3.040 U	3.040 U
Silver	SB	N/A	N/A	**3.440 J**	**4.420 J**	**4.770 J**
Sodium	SB	6,000-8,000	N/A	**1240 J**	**912 J**	**1320 J**
Thallium	SB	N/A	N/A	3.050 U	3.050 U	3.050 U
Vanadium	150 or SB	1-300	N/A	**2.390 J**	**2.680 J**	**2.100 J**
Zinc	20 or SB	9-50	35.7-225	**6.800 J**	0.611 U	0.611 U
Total Petroleum Hydrocarbons (mg/kg)						
TPH	^	N/A	N/A	NR	NR	NR
Wet Chemistry (mg/kg)						
Cyanide	^	N/A	N/A	0.010 U	0.010 U	0.010 U

Table 4A
New York City School Construction Authority
Metro-North/Motthaven Site
Bronx, New York
Summary of Inorganic Soil Analytical Data

Notes:

General Comments

All results are in mg/kg (milligram per kilogram or parts per million (ppm)).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedence of TAGM value.
Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).
NR - Not reported or not analyzed
.⏃ = Sample was used for the DUSR; only validator qualifiers were used.

Standards

** - NYSDEC TAGM Memorandum No. 4046, Revised January 24, 1994.
^^ - NYSDEC Reg. 3 "Background Levels of Heavy Metals in Soils of the Lower Hudson Valley", July 1, 2003. Values listed are minimum & maximum concentrations reported on Table 2.
^ - No standard or guidance value is available for this compound.
SB - Site Background
N/A - Not Available

Validator Qualifiers

U - Not detected. The compound/analyte was analyzed for, but not detected above the associated reporting limit.
J - The compound/analyte was positively identified; the reported value is the estimated concentration of theconstituent detected in the sample analyzed.
UJ - The compound/analyte was analyzed for, but no detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the "non-detect" may be inaccurate or imprecise. The non-detect result should be estimated.

Laboratory Qualifiers - Organic

U - Indicates the compound was analyzed for but was not detected.
J - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but the greater than or equal to the Instrument Detection Limit (IDL).
E - The reported value is estimated because of the presence of interference
N - Spiked sample recovery not within control limits.
* - Duplicate analysis not within control limits.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^					
			Sample ID:	PSB1	PSB1	PSB1	PSB2	PSB2
			Sample Depth (ft.):	2-3	6-7	14-15	4-5	7-8
			Sample Date:	08/17/05	08/17/05	08/17/05	08/17/05	08/17/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)								
Aluminum	SB	33000	N/A	**9170**	**9500**	**5790**	**7680**	**6660**
Antimony	SB	N/A	N/A	**1.6 J**	0.41 U	0.40 U	**1.7 J**	**5.7 J**
Arsenic	7.5 or SB	3-12	2.2-23.1	**1.6**	0.49 U	0.48 U	**3.0**	**11.4**
Barium	300 or SB	15-600	38.5-187	**48.3**	**39.8**	**22.7**	**56.9**	**93.7**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	0.01 U	0.01 U	0.01 U	**0.06 J**	**0.11 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.05 U	0.04 U	0.04 U	0.04 U	**1.0**
Calcium	SB	130-35,000	N/A	**1820**	**1180**	**1580**	**6370**	**2910**
Chromium	10 or SB	1.5-40	11.2-51.2	**11.8**	**12.2**	**9.5**	**15.1**	**29.6**
Cobalt	30 or SB	2.5-60	N/A	**4.9 J**	**3.8 J**	**5.5 J**	**6.1 J**	**6.7 J**
Copper	25 or SB	1-50	5.8-64.8	**25.5**	**8.3**	**13.3**	**84.6**	**319**
Iron	2,000 or SB	2,000-550,000	N/A	**13100**	**11800**	**11100**	**18600**	**28000**
Lead	SB	200-500	6.9-303	**63.9**	**8.8**	**7.2**	**209**	**411**
Magnesium	SB	100-5,000	N/A	**3150**	**3250**	**3200**	**3130**	**2310**
Manganese	SB	50-5,000	N/A	**104**	**107**	**92.3**	**238**	**227**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.244**	**0.015**	0.007 U	**0.226**	**0.701**
Nickel	13 or SB	0.5-25	8.7-54.5	**12.6**	**11.8**	**11.9**	**14.9**	**17.5**
Potassium	SB	8,500-43,000	N/A	**814**	**941**	**864**	**815**	**578 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.48 U	0.42 U	0.42 U	0.42 U	0.46 U
Silver	SB	N/A	N/A	0.11 U	0.10 U	0.10 U	0.10 U	0.11 U
Sodium	SB	6,000-8,000	N/A	**274 J**	**170 J**	**133 J**	**237 J**	**373 J**
Thallium	SB	N/A	N/A	**1.4**	0.65 U	0.65 U	0.65 U	0.71 U
Vanadium	150 or SB	1-300	N/A	**14.5**	**10.2**	**11.7**	**19.2**	**32.8**
Zinc	20 or SB	9-50	35.7-225	**56.1**	**38.9**	**87.2**	**123**	**245**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^					
			Sample ID:	PSB2	PSB3	PSB3	PSB3	PSB4
			Sample Depth (ft.):	14-15	4-5	7-8	14-15	10-12
			Sample Date:	08/17/05	08/17/05	08/17/05	08/17/05	08/18/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)								
Aluminum	SB	33000	N/A	**5330**	**7450**	**6140**	**5470**	**4970**
Antimony	SB	N/A	N/A	0.40 U	0.47 U	**0.51 J**	0.39 U	**3.520 J**
Arsenic	7.5 or SB	3-12	2.2-23.1	0.48 U	**0.79 J**	**0.91 J**	**1.4**	0.473 U
Barium	300 or SB	15-600	38.5-187	**27.6**	**77.4**	**27.7**	**23.6**	**22.7 J**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	0.01 U	0.01 U	0.01 U	0.01 U	**0.275 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.04 U	0.05 U	0.04 U	0.04 U	**0.303 J**
Calcium	SB	130-35,000	N/A	**1270**	**2850**	**789**	**1170**	**1400**
Chromium	10 or SB	1.5-40	11.2-51.2	**9.3**	**11.8**	**10.6**	**9.6**	**10**
Cobalt	30 or SB	2.5-60	N/A	**3.7 J**	**2.1 J**	**3.6 J**	**4.2 J**	**5.610 J**
Copper	25 or SB	1-50	5.8-64.8	**10.5**	**9.7**	**8.9**	**9.9**	**12.3**
Iron	2,000 or SB	2,000-550,000	N/A	**9680**	**10100**	**12400**	**11600**	**9750**
Lead	SB	200-500	6.9-303	**6.6**	**35.7**	**6.6**	**6.3**	**6.250**
Magnesium	SB	100-5,000	N/A	**2790**	**1670**	**2290**	**2690**	**2710**
Manganese	SB	50-5,000	N/A	**90.0**	**174**	**106**	**105**	**97.4**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.010 J**	**0.259**	0.007 U	**0.011 J**	**0.011 J**
Nickel	13 or SB	0.5-25	8.7-54.5	**9.5**	**5.8**	**8.7**	**10.1**	**12.6**
Potassium	SB	8,500-43,000	N/A	**783**	**531 J**	**697**	**902**	**718**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.42 U	0.49 U	0.43 U	0.40 U	**1.050 J**
Silver	SB	N/A	N/A	0.10 U	0.11 U	0.10 U	0.09 U	**0.682 J**
Sodium	SB	6,000-8,000	N/A	**172 J**	**340 J**	**239 J**	**134 J**	**155 J**
Thallium	SB	N/A	N/A	0.64 U	0.76 U	0.66 U	0.62 U	0.636 U
Vanadium	150 or SB	1-300	N/A	**10.2**	**12.8**	**12.8**	**11.1**	**11.8**
Zinc	20 or SB	9-50	35.7-225	**34.3**	**43.8**	**30.2**	**33.8**	**35.2**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^						
			Sample ID:	PSB5	PSB6	PSB7	PSB8	PSB-9	PSB-10
			Sample Depth (ft.):	6-7	11-12	9-10	6-7	7-9	4-6
			Sample Date:	08/19/05	08/19/05	08/18/05	08/19/05	8/24/2005	08/22/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)									
Aluminum	SB	33000	N/A	**17100**	**4890**	**5230**	**7250**	**14000**	**11200**
Antimony	SB	N/A	N/A	**22.3 N**	**8.050 N**	**24.4**	**25.8 N**	0.373 U	0.383
Arsenic	7.5 or SB	3-12	2.2-23.1	0.491 U	0.469 U	**7.300**	**8.000**	**1.070 J**	0.458
Barium	300 or SB	15-600	38.5-187	**66.7 N**	**16.5 JN**	**83.8**	**79.6 N**	**86.3**	**49.5**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.587 J**	**0.168 J**	**0.389 J**	**0.512 J**	**0.438 J**	**0.211**
Cadmium	1 or SB	0.1-1	0.04U-1.2	**1.010**	**0.211 J**	**2.780**	**1.770**	0.038 U	0.039
Calcium	SB	130-35,000	N/A	**53200 N**	**2240 N**	**33600**	**14300 N**	**3560**	**2280**
Chromium	10 or SB	1.5-40	11.2-51.2	**19.3**	**7.730**	**50.2**	**27.7**	**20.0**	**15.8**
Cobalt	30 or SB	2.5-60	N/A	**10.2**	**5.820 J**	**37.4**	**8.430**	**12.6**	**7.460**
Copper	25 or SB	1-50	5.8-64.8	**23.5 N**	**12.0 N**	**83.6**	**116 N**	**26.8**	**18.4**
Iron	2,000 or SB	2,000-550,000	N/A	**18400**	**8940**	**22200**	**24400**	**22800**	**17300**
Lead	SB	200-500	6.9-303	**11.6**	**6.190**	**622**	**309**	**15.8**	**19.5**
Magnesium	SB	100-5,000	N/A	**13600**	**3460**	**12400**	**9060**	**8990**	**5510**
Manganese	SB	50-5,000	N/A	**195**	**96.5**	**507**	**291**	**431**	**275**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.019**	0.007 U	**0.412**	**0.250 ***	**0.028**	**0.040**
Nickel	13 or SB	0.5-25	8.7-54.5	**17.0**	**10.6**	**14.7**	**19.9**	**23**	**17.0**
Potassium	SB	8,500-43,000	N/A	**2270 N**	**653 N**	**1130**	**1170 N**	**4610 J**	**1420**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.427 U	0.408 U	**2.720**	**0.473 J**	0.388 U	**0.787**
Silver	SB	N/A	N/A	**1.530**	**0.751 J**	**1.270 J**	**2.790**	0.090 U	**1.220**
Sodium	SB	6,000-8,000	N/A	**871**	**233 J**	**324 J**	**522 J**	**98.4 J**	**336**
Thallium	SB	N/A	N/A	0.660 U	0.631 U	0.683 U	0.617 U	0.60 U	0.616
Vanadium	150 or SB	1-300	N/A	**28.6 N**	**7.520 N**	**32.1**	**25.6 N**	**33.3**	**22.8**
Zinc	20 or SB	9-50	35.7-225	**39.9 N**	**32.5 N**	**227**	**140 N**	**87.6**	**50.4**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^					
			Sample ID:		PSB11	PSB12	PSB-13	PSB-14
			Sample Depth (ft.):		6-7	11-12	9-11	7-8
			Sample Date:		08/19/05	08/19/05	08/25/05	8/22/2005
			Sample Classification:		SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)								
Aluminum	SB	33000	N/A		**8370**	**8290**	**13400**	**9480**
Antimony	SB	N/A	N/A	UN	**12.6 N**	**16.5 N**	0.383 UN	0.379 UN
Arsenic	7.5 or SB	3-12	2.2-23.1	U	**1.950**	0.498 U	**1.030 J**	**5.890**
Barium	300 or SB	15-600	38.5-187	**N**	**71.8 N**	**37.8 N**	**71.9**	**83.6 N**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**J**	**0.307 J**	**0.323 J**	**0.508 J**	**0.189 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	U	**0.681**	**0.593 J**	0.039 U	0.038 U
Calcium	SB	130-35,000	N/A		**1480 N**	**6860 N**	**76800**	**2150**
Chromium	10 or SB	1.5-40	11.2-51.2		**12.6**	**12.9**	**17.7**	**12.7**
Cobalt	30 or SB	2.5-60	N/A		**7.400**	**7.340**	**8.650**	**8.270**
Copper	25 or SB	1-50	5.8-64.8		**74.3 N**	**16.1 N**	**35.5**	**34.7**
Iron	2,000 or SB	2,000-550,000	N/A		**15400**	**15000**	**15600**	**18100**
Lead	SB	200-500	6.9-303		**158**	**8.260**	**23.2**	**41.3**
Magnesium	SB	100-5,000	N/A		**3670**	**4250**	**19800 N**	**4860**
Manganese	SB	50-5,000	N/A		**380**	**224**	**407**	**396**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.536**	**0.064**	**0.179**	**0.087**
Nickel	13 or SB	0.5-25	8.7-54.5		**14.3**	**13.6**	**18.6**	**19.4**
Potassium	SB	8,500-43,000	N/A	**N**	**988 N**	**845 N**	**4200**	**2110 N**
Selenium	2 or SB	0.1-3.9	0.20-2.9	**J**	0.389 U	0.433 U	0.398 U	**0.669 J**
Silver	SB	N/A	N/A		**1.720**	**1.530**	0.092 U	**0.930 J**
Sodium	SB	6,000-8,000	N/A	**JN**	**251 J**	**269 J**	**460 JN**	**185 JN**
Thallium	SB	N/A	N/A	U	0.601 U	0.670 U	0.616 U*	0.609 U
Vanadium	150 or SB	1-300	N/A		**16.9 N**	**16.1 N**	**26.8**	**21.2**
Zinc	20 or SB	9-50	35.7-225		**55.3 N**	**41.4 N**	**191 N**	**128**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^					
			Sample ID:	PSB16	PSB-17	PSB-18	DUPLICATE	PSB19
			Sample Depth (ft.):	6-7	5-10	11-13	---	11-12
			Sample Date:	08/19/05	8/22/2005	08/25/05	08/25/05	08/19/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)								
Aluminum	SB	33000	N/A	**11700**	**8460**	**2000**	**1670**	**5900**
Antimony	SB	N/A	N/A	**20.9 N**	0.379 UN	0.405 UN	0.376 U	**10.1 N**
Arsenic	7.5 or SB	3-12	2.2-23.1	**0.786 J**	0.453 U	0.485 U	0.450 U	**3.000**
Barium	300 or SB	15-600	38.5-187	**56.5 N**	**3.780 JN**	**27.7**	**8.160 J**	**40.8 N**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.457 J**	**0.769**	**0.341 J**	**0.296 J**	**0.262 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	**0.760**	0.038 U	0.041 U	0.038 U	**0.317 J**
Calcium	SB	130-35,000	N/A	**11400 N**	**211000 D**	**153000 D**	**191000**	**1670 N**
Chromium	10 or SB	1.5-40	11.2-51.2	**21.0**	**4.050**	**2.820**	**1.740**	**10.4**
Cobalt	30 or SB	2.5-60	N/A	**8.650**	**1.070 J**	**0.136 J**	0.111 U	**5.010 J**
Copper	25 or SB	1-50	5.8-64.8	**21.0 N**	**4.430**	**8.000**	**2.940**	**11.2 N**
Iron	2,000 or SB	2,000-550,000	N/A	**17100**	**7670**	**5360**	**4120**	**11100**
Lead	SB	200-500	6.9-303	**10.4**	**10.7**	**48.2**	**20.4**	**5.960**
Magnesium	SB	100-5,000	N/A	**9440**	**105000**	**94900 N**	**118000**	**2840**
Manganese	SB	50-5,000	N/A	**219**	**409**	**234**	**222**	**84.2**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.039**	**0.041**	**0.048**	**0.021**	**0.013**
Nickel	13 or SB	0.5-25	8.7-54.5	**13.5**	**1.640 J**	0.151 U	0.140 U	**11.4**
Potassium	SB	8,500-43,000	N/A	**1570 N**	**168 JN**	**273 J**	**200 J**	**603 JN**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.401 U	0.394 U	0.422 U	0.391 U	0.419 U
Silver	SB	N/A	N/A	**1.790**	0.091 U	0.098 U	0.091 U	**1.060 J**
Sodium	SB	6,000-8,000	N/A	**261 J**	**262 JN**	**124 JN**	**122 J**	**221 J**
Thallium	SB	N/A	N/A	0.619 U	0.610 U	**1.380 ***	0.604 U	0.648 U
Vanadium	150 or SB	1-300	N/A	**28.9 N**	**6.750**	**5.190 J**	**2.220 J**	**11.5 N**
Zinc	20 or SB	9-50	35.7-225	**39.7 N**	**26.6**	**129 N**	**58.1**	**38.4 N**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^					
			Sample ID:	PSB20	PBSB1	PBSB1	PBSB1	PBSB2
			Sample Depth (ft.):	6-7	2-3	6-7	13-14	3-4
			Sample Date:	08/17/05	08/16/05	08/16/05	08/16/05	08/15/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)								
Aluminum	SB	33000	N/A	**14600**	**6700**	**5690**	**5510**	**6930 N**
Antimony	SB	N/A	N/A	**0.58 J**	**22.3 N**	**2.420 JN**	**2.180 JN**	**3.220 JN**
Arsenic	7.5 or SB	3-12	2.2-23.1	**1.7**	**18.3**	0.473 U	0.477 U	**2.460**
Barium	300 or SB	15-600	38.5-187	**82.4**	**112**	**34.7**	**26.1**	**28.9**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.42 J**	**0.371 J**	**0.214 J**	**0.189 J**	**0.539 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.04 U	**5.320**	**0.317 J**	**0.371 J**	**1.790**
Calcium	SB	130-35,000	N/A	**51700 D**	**13000**	**978**	**1030**	**1270**
Chromium	10 or SB	1.5-40	11.2-51.2	**24.2**	**56.9**	**10.1**	**11.4**	**11.7**
Cobalt	30 or SB	2.5-60	N/A	**9.4**	**11.3**	**4.070 J**	**4.320 J**	**5.480 J**
Copper	25 or SB	1-50	5.8-64.8	**38.7**	**248**	**8.760**	**10.5**	**14.2**
Iron	2,000 or SB	2,000-550,000	N/A	**21600**	**51500**	**8400**	**8710**	**10800**
Lead	SB	200-500	6.9-303	**68.8**	**902**	**8.100**	**6.250**	**31.7**
Magnesium	SB	100-5,000	N/A	**12100**	**6470**	**2260**	**2420**	**2420**
Manganese	SB	50-5,000	N/A	**361**	**394**	**78.6**	**90.2**	**103**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.101**	**0.426**	**0.012 J**	**0.010 J**	**0.320**
Nickel	13 or SB	0.5-25	8.7-54.5	**18.0**	**53.6**	**11.6**	**11.3**	**11.7**
Potassium	SB	8,500-43,000	N/A	**4740**	**1570**	**623**	**667**	**658**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.41 U	**2.800**	**0.649 J**	**0.527 J**	0.426 U
Silver	SB	N/A	N/A	0.10 U	**3.600**	**0.364 J**	**0.515 J**	**1.300**
Sodium	SB	6,000-8,000	N/A	**654**	**499 J**	**147 J**	**176 J**	**343 J**
Thallium	SB	N/A	N/A	0.64 U	0.646 U	0.636 U	0.642 U	0.659 U
Vanadium	150 or SB	1-300	N/A	**40.3**	**27.0**	**10.7**	**12.2**	**14.0**
Zinc	20 or SB	9-50	35.7-225	**76.5**	**259**	**28.8**	**33.2**	**53.6**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	PBSB2	PBSB2D	PBSB2	PBSB3	PBSB-4(4-6)
				Sample Depth (ft.):	5-7	5-7	14-15	6-7	4-6
				Sample Date:	08/15/05	08/15/05	08/15/05	08/18/05	08/23/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)									
Aluminum	SB	33000	N/A		**7220 N**	**6850 N**	**5650 N**	**5120**	**10100**
Antimony	SB	N/A	N/A		**7.310 JN**	**4.590 JN**	**3.250 JN**	0.391 U	0.384 UN
Arsenic	7.5 or SB	3-12	2.2-23.1		**2.770**	**2.180**	0.470 U	0.468 U	**2.660**
Barium	300 or SB	15-600	38.5-187		**34.8**	**28.5**	**29.1**	**31.8**	**55.0 N**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.556 J**	**0.486 J**	**0.466 J**	**0.328 J**	**0.325 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		**2.430 N**	**1.930 N**	**1.520 N**	**0.353 J**	0.039 U
Calcium	SB	130-35,000	N/A		**931**	**1190**	**1210**	**1250**	**3850**
Chromium	10 or SB	1.5-40	11.2-51.2		**15.8**	**12.8**	**12.6**	**12.2**	**12.1**
Cobalt	30 or SB	2.5-60	N/A		**7.130**	**4.990 J**	**5.410 J**	**4.180 J**	**5.660 J**
Copper	25 or SB	1-50	5.8-64.8		**14.5**	**10.2**	**12.2**	**9.200**	**38.1**
Iron	2,000 or SB	2,000-550,000	N/A		**15900**	**13300**	**9210**	**8340**	**17800**
Lead	SB	200-500	6.9-303		**15.8**	**26.3**	**6.460**	**5.970**	**177**
Magnesium	SB	100-5,000	N/A		**2540 N**	**2220 N**	**2890 N**	**2310**	**3820**
Manganese	SB	50-5,000	N/A		**138**	**104**	**95.2**	**90.7**	**312**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.048**	**0.048**	**0.011 J**	0.007 U	**0.267**
Nickel	13 or SB	0.5-25	8.7-54.5		**11.7**	**10.3**	**13.3**	**10.7**	**11.6**
Potassium	SB	8,500-43,000	N/A		**668**	**611 J**	**823**	**516 J**	**1170 N**
Selenium	2 or SB	0.1-3.9	0.20-2.9		**0.439 J**	**0.675 J**	0.409 U	0.407 U	0.399 U
Silver	SB	N/A	N/A		**1.570 N**	**1.470 N**	**1.200 N**	**0.153 J**	0.092 U
Sodium	SB	6,000-8,000	N/A		**325 J**	**332 J**	**208 J**	**126 J**	**202 JN**
Thallium	SB	N/A	N/A		0.674 U	0.677 U	0.632 U	0.629 U	0.616 U
Vanadium	150 or SB	1-300	N/A		**18.7**	**17.6**	**14.1**	**12.2**	**17.9**
Zinc	20 or SB	9-50	35.7-225		**39.6**	**38.0**	**39.1**	**33.4**	**71.9**

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^		
			Sample ID:	PBSB-5	RB-081905
			Sample Depth (ft.):	13-15	---
			Sample Date:	8/24/2005	8/19/2005
			Sample Classification:	SOIL	WATER
TAL Metals (mg/kg)					
Aluminum	SB	33000	N/A	**6330**	**23.5 J**
Antimony	SB	N/A	N/A	0.413 U	3.170 U
Arsenic	7.5 or SB	3-12	2.2-23.1	0.494 U	3.320 U
Barium	300 or SB	15-600	38.5-187	**52.2**	0.723 U
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.282 J**	**1.120 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.042 U	0.327 U
Calcium	SB	130-35,000	N/A	**3020**	**27.2 J**
Chromium	10 or SB	1.5-40	11.2-51.2	**8.790**	**1.060 J**
Cobalt	30 or SB	2.5-60	N/A	**4.140 J**	0.370 U
Copper	25 or SB	1-50	5.8-64.8	**12.8**	3.640 U
Iron	2,000 or SB	2,000-550,000	N/A	**10400**	27.0 U
Lead	SB	200-500	6.9-303	**8.680**	**3.760 J**
Magnesium	SB	100-5,000	N/A	**3580**	8.300 U
Manganese	SB	50-5,000	N/A	**93.1**	0.106 U
Mercury	0.1	0.001-0.2	0.04-0.92	**0.011 J**	**0.1000 J**
Nickel	13 or SB	0.5-25	8.7-54.5	**11.0**	1.560 U
Potassium	SB	8,500-43,000	N/A	**1030**	61.8 U
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.430 U	3.040 U
Silver	SB	N/A	N/A	0.100 U	1.640 U
Sodium	SB	6,000-8,000	N/A	**67.4 J**	**978 J**
Thallium	SB	N/A	N/A	**1.720**	3.050 U
Vanadium	150 or SB	1-300	N/A	**11.6**	0.701 U
Zinc	20 or SB	9-50	35.7-225	**47.7**	0.611 U

Table 4B
New York City School Construction Authority
Metro-North/Mott Haven
Bronx, New York
Summary of Inorganics in Soil
Supplemental Investigation

Notes:

General Comments

All results are in mg/kg (milogram per kilogram or parts per million (ppm)).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedance of TAGM value.
NR - Not reported or not analyzed

Standards

** - NYSDEC TAGM Memorandum No. 4046, Revised January 24, 1994.
^^ - NYSDEC Reg. 3 "Background Levels of Heavy Metals in Soils of the Lower Hudson Valley", July 1, 2003. Values listed are minimum & maximum concentrations reported on Table 2.
^ - No standard or guidance value is available for this compound.
SB - Site Background
N/A - Not Available

Laboratory Qualifers - Organic

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

E - The reported value is estimated because of the presence of interference
N - Spiked sample recovery not within control limits.
* - Duplicate analysis not within control limits.

Table 5
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Soil Analytical Data -
Hazardous Waste Characteristics
Remedial Investigation

Compound	Max. Conc. for Toxicity Characteristics*	Sample ID:	BALLAST-1	BALLAST-2	SB-45	SB-45	SB-45	SB-46	SB-46	SB-46
		Sample Depth (ft.):	------	------	2-4'	5-7'	14-15'	3-5'	9-10'	13-14'
TCLP Volatile Organic Compounds (ppb)										
Benzene	500		1.9 U	1.9 U	1.9 U	**770**	1.9 U	1.9 U	1.9 U	1.9 U
Carbon Tetrachloride	500		5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Chlorobenzene	100,000		2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Chloroform	6,000		1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,2-Dichloroethane	500		1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,1-Dichloroethylene	700		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2- Butanone (MEK)	200,000		5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Tetrachloroethylene	700		2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Trichloroethylene	50		2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Vinyl Chloride	20		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
TCLP Base Neutral/Acid Extractable Compounds (ppb)										
2-Methylphenol (o-Cresol)	200,000		1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	NR
3&4-Methylphenol (m&p-Cresol)	200,000		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	NR
1,4-Dichlorobenzene	7,500		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NR
2,4-Dinitrotoluene	130		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NR
Hexachlorobenzene	130		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NR
Hexachlorobutadiene	500		1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	NR
Hexachloroethane	3,000		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NR
Nitrobenzene	2,000		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	NR
Pentachlorophenol	100,000		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**2 J**	NR
Pyridine	5,000		0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	NR
2,4,5-Trichlorophenol	400,000		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NR
2,4,6-Trichlorophenol	2,000		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	NR
TCLP Pesticides (ppb)										
Chlordane	30		0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	NR
2,4-D	10,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NR
Endrin	20		0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	NR
Heptachlor	8		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	NR
Lindane	400		0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	NR
Methoxychlor	10,000		1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR
Toxaphene	50		4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	NR
2,4,5-TP (Silvex)	1,000		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	NR
TCLP Metals (ppb)										
Arsenic	5,000		**38.0 J**	33.2 U	33.2 U	33.2 U	33.2 U	**37.7 J**	33.2 U	33.2 U
Barium	100,000		**895 J**	**642 J**	**317 J**	**578 J**	**293 J**	**880 J**	**547 J**	**502 J**
Cadmium	1,000		3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U
Chromium	5,000		3.430 U	3.430 U	3.430 U	3.430 U	**5.150 J**	**15.3 J**	**11.2 J**	3.430 U
Lead	5,000		**37.2 J**	21.8 U	21.8 U	**48500**	**426**	**5050**	21.8 U	**25.4 J**
Mercury	200		0.330 U	0.330 U	0.330 U	**0.610 J**	**0.510 J**	0.330 U	**0.660 J**	0.330 U
Selenium	1,000		30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U
Silver	5,000		16.4 U	16.4 U	16.4 U	16.4 U	16.4 U	**45.5 J**	**19 J**	**31.6 J**
Wet Chemistry (ppm)										
Ignitability	^		NO	NO	NO	NO	NO	NO	NO	NO
Corrosivity (as pH)	^		8.4	8.8	10.5	10.2	7.1	7.6	7.1	7.4
Reactive Cyanide (ppm)	^		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Reactive Sulfide (ppm)	^		40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U

Notes:

* = 40CFR 261.20 Subpart C, Characteristics of Hazardous Waste.

^ = No value available for this compound.

ppb = parts per billion ppm = parts per million

NR - Sample Not Analyzed

J = The concentration listed is an approximate value detected at a concentration less than the laboratory MDL.

U = The compound was not detected at the indicated concentration.

D - This flag identifies all compounds analyzed at a secondary dilution factor.

Bold face and shaded values indicate exceedence of Maximum Concentration for Toxicity Characteristic.

Table 5
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Soil Analytical Data -
Hazardous Waste Characteristics
Remedial Investigation

Compound	Max. Conc. for Toxicity Characteristics*	Sample ID:	SB-48	SB-48	SB-48	TP-11	TP-12	TP-13	TP-14	TP-15
		Sample Depth (ft.):	2-4'	8-9'	14-15'	3-4'	4-5'	3-4'	3-4'	3-4'
TCLP Volatile Organic Compounds (ppb)										
Benzene	500		1.9 U	**11 J**	NR	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Carbon Tetrachloride	500		5.7 U	5.7 U	NR	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Chlorobenzene	100,000		2.3 U	2.3 U	NR	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Chloroform	6,000		1.7 U	1.7 U	NR	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,2-Dichloroethane	500		1.7 U	1.7 U	NR	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,1-Dichloroethylene	700		2.1 U	2.1 U	NR	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2- Butanone (MEK)	200,000		5.7 U	5.7 U	NR	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Tetrachloroethylene	700		2.4 U	2.4 U	NR	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Trichloroethylene	50		2.3 U	2.3 U	NR	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Vinyl Chloride	20		1.6 U	1.6 U	NR	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
TCLP Base Neutral/Acid Extractable Compounds (ppb)										
2-Methylphenol (o-Cresol)	200,000		1.5 U	1.5 U	NR	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol (m&p-Cresol)	200,000		1.3 U	1.3 U	NR	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
1,4-Dichlorobenzene	7,500		1.2 U	1.2 U	NR	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2,4-Dinitrotoluene	130		1.2 U	1.2 U	NR	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Hexachlorobenzene	130		1.2 U	1.2 U	NR	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Hexachlorobutadiene	500		1.4 U	1.4 U	NR	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Hexachloroethane	3,000		1.2 U	1.2 U	NR	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Nitrobenzene	2,000		1.6 U	1.6 U	NR	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Pentachlorophenol	100,000		1.6 U	1.6 U	NR	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Pyridine	5,000		0.98 U	0.98 U	NR	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
2,4,5-Trichlorophenol	400,000		1.2 U	1.2 U	NR	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2,4,6-Trichlorophenol	2,000		1.1 U	1.1 U	NR	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
TCLP Pesticides (ppb)										
Chlordane	30		0.97 U	0.97 U	NR	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
2,4-D	10,000		0.05 U	0.05 U	NR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endrin	20		0.99 U	0.99 U	NR	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
Heptachlor	8		1.1 U	1.1 U	NR	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Lindane	400		0.84 U	0.84 U	NR	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
Methoxychlor	10,000		1 U	1 U	NR	1 U	1 U	1 U	1 U	1 U
Toxaphene	50		4.2 U	4.2 U	NR	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
2,4,5-TP (Silvex)	1,000		0.03 U	0.03 U	NR	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
TCLP Metals (ppb)										
Arsenic	5,000		33.2 U	**36.6 J**	33.2 U	**47.8 J**	33.2 U	**45.6 J**	33.2 U	**79.6 J**
Barium	100,000		**774 J**	**488 J**	**758 J**	**938 J**	**596 J**	**690 J**	**620 J**	**559 J**
Cadmium	1,000		3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U	3.270 U
Chromium	5,000		**21.7 J**	**12.5 J**	3.430 U	3.430 U	3.430 U	3.430 U	3.430 U	3.430 U
Lead	5,000		**790**	21.8 U	21.8 U	**118**	21.8 U	**50.4**	**126**	21.8 U
Mercury	200		0.330 U	0.330 U	0.330 U	**0.410 J**	0.330 U	0.330 U	**0.940 J**	**1.0 J**
Selenium	1,000		30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U
Silver	5,000		16.4 U	16.4 U	16.4 U	16.4 UN	16.4 UN	16.4 UN	16.4 UN	16.4 UN
TCLP Wet Chemistry (ppm)										
Ignitability	^		NO	NO	NO	NO	NO	NO	NO	NO
Corrosivity (as pH)	^		8.1	7.2	7.0	8.4	7.8	8.8	7.9	8.1
Reactive Cyanide (ppm)	^		10 U	10 U	10.0 U	10 U	10 U	10 U	10 U	10 U
Reactive Sulfide (ppm)	^		40 U	40 U	40.0 U	40 U	40 U	40 U	40	40 U

Notes:

* = 40CFR 261.20 Subpart C, Characteristics of Hazardous Waste.

^ = No value available for this compound.

ppb = parts per billion ppm = parts per million

NR - Sample Not Analyzed

J = The concentration listed is an approximate value detected at a concentration less than the laboratory MDL.

U = The compound was not detected at the indicated concentration.

D - This flag identifies all compounds analyzed at a secondary dilution factor.

Bold face and shaded values indicate exceedence of Maximum Concentration for Toxicity Characteristic.

Table 5
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Soil Analytical Data -
Hazardous Waste Characteristics
Remedial Investigation

Compound	Max. Conc. for Toxicity Characteristics*	Sample ID:	TP-16	TP-19	TP-19 DUP	TP-20	TP-21
		Sample Depth (ft.):	3-4'	5-6'	5-6'	4-5'	4-5'
TCLP Volatile Organic Compounds (ppb)							
Benzene	500		1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Carbon Tetrachloride	500		5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Chlorobenzene	100,000		2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Chloroform	6,000		1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,2-Dichloroethane	500		1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,1-Dichloroethylene	700		2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2- Butanone (MEK)	200,000		5.7 U	5.7 U	5.7 U	5.7 U	5.7 U
Tetrachloroethylene	700		2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Trichloroethylene	50		2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Vinyl Chloride	20		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
TCLP Base Neutral/Acid Extractable Compounds (ppb)							
2-Methylphenol (o-Cresol)	200,000		1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3&4-Methylphenol (m&p-Cresol)	200,000		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
1,4-Dichlorobenzene	7,500		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2,4-Dinitrotoluene	130		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Hexachlorobenzene	130		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Hexachlorobutadiene	500		1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Hexachloroethane	3,000		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Nitrobenzene	2,000		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Pentachlorophenol	100,000		1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Pyridine	5,000		0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
2,4,5-Trichlorophenol	400,000		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
2,4,6-Trichlorophenol	2,000		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
TCLP Pesticides (ppb)							
Chlordane	30		0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
2,4-D	10,000		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endrin	20		0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
Heptachlor	8		1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Lindane	400		0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
Methoxychlor	10,000		1 U	1 U	1 U	1 U	1 U
Toxaphene	50		4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
2,4,5-TP (Silvex)	1,000		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
TCLP Metals (ppb)							
Arsenic	5,000		33.2 U	33.2 U	33.2 U	**34.8 J**	**40.0 J**
Barium	100,000		**682 J**	**1170 J**	**998 J**	**166 J**	**577 J**
Cadmium	1,000		3.270 U	3.270 U	3.270 U	3.270 U	3.270 U
Chromium	5,000		3.430 U	3.430 U	3.430 U	3.430 U	2.430 U
Lead	5,000		21.8 U	**85.2**	21.8 U	21.8 U	**106**
Mercury	200		0.330 U	**0.430 J**	**0.460 J**	**0.440 J**	**0.570 J**
Selenium	1,000		30.4 U	30.4 U	30.4 U	**56.4 J**	**49.5 J**
Silver	5,000		16.4 UN	16.4 UN	16.4 UN	16.4 UN	16.4 UN
TCLP Wet Chemistry (ppm)							
Ignitability	^		NO	NO	NO	NO	NO
Corrosivity (as pH)	^		8.0	8.2	8.0	7.7	8.1
Reactive Cyanide (ppm)	^		10 U	10 U	10 U	10 U	10.0 U
Reactive Sulfide (ppm)	^		40 U	40 U	40 U	40 U	40.0 U

Notes:

* = 40CFR 261.20 Subpart C, Characteristics of Hazardous Waste.

^ = No value available for this compound.

ppb = parts per billion ppm = parts per million

NR - Sample Not Analyzed

J = The concentration listed is an approximate value detected at a concentration less than the laboratory MDL.

U = The compound was not detected at the indicated concentration.

D - This flag identifies all compounds analyzed at a secondary dilution factor.

Bold face and shaded values indicate exceedence of Maximum Concentration for Toxicity Characteristic.

Table 6
New York City School Construction Authority
Metro-North/Mott Haven Site
Bronx, New York
Monitoring Well Gauging Data

		MW Elevation:	DTW:	DTP:	DTB:	Water Column Height:	**Groundwater Elevation:**	Final Temperature:	Final Conductivity:	Final pH:	Final Turbidity:
Units		feet	feet	feet	feet	feet	**feet**	ºCelsius	mS/cm	---	NTU
MW-1	5/18/2005	23.11	6.53	---	16.06	9.53	**16.58**	14.06	1.971	6.5	21.3
	9/13/2005	23.11	7.41	---	NM	8.65	**15.7**	---	---	---	---
MW-2	5/19/2005	18.29	5.11	---	11.71	6.6	**13.18**	17.14	1.039	6.78	1339.3
	9/13/2005	18.29	7.25	---	NM	4.46	**11.04**	---	---	---	---
MW-3**	5/16/2005	18.07	6.61	---	11.2	4.59	**11.46**	12.71	1.341	6.6	3.0
	9/13/2005	18.07	7.99	---	NM	3.21	**10.08**	---	---	---	---
MW-4**	5/16/2005	19.58	3.89	---	10.08	6.19	**15.69**	16.31	0.904	7.15	25.0
	9/13/2005	19.58	6.26	---	NM	3.82	**13.32**	---	---	---	---
MW-5**	5/16/2005	18.19	4.1	---	11.55	7.45	**14.09**	14.92	0.926	6.68	49.9
	9/13/2005	18.19	4.91	---	NM	6.64	**13.28**	---	---	---	---
MW-6**	5/16/2005	18.92	6.35	---	15.25	8.9	**12.57**	14.66	1.748	6.62	12.8
	9/13/2005	18.92	7.78	---	NM	7.47	**11.14**	---	---	---	---
MW-7***	5/16/2005	23.88	3.41	---	13	9.59	**20.47**	12.92	2.893	6.68	7.1
	9/13/2005	23.88	4.60	---	NM	8.40	**19.28**	---	---	---	---
MW-8	5/18/2005	49.43	28.29	---	40.18	11.89	**21.14**	22.03	2.428	2.74	31.6
	9/13/2005	49.43	29.47	---	NM	10.71	**19.96**	---	---	---	---
MW-9	5/18/2005	56.11	34.06	---	42.02	7.96	**22.05**	24.81	2.739	7.14	7.6
	9/13/2005	56.11	33.58	---	NM	8.44	**22.53**	---	---	---	---
MW-10	5/16/2005	19.41	6.05	---	15.1	9.05	**13.36**	15.19	1.672	6.91	8.2
	9/13/2005	19.41	6.47	---	NM	8.63	**12.94**	---	---	---	---
MW-11	5/16/2005	18.75	8.1	---	13.75	5.65	**10.65**	16.16	1.366	6.79	31.3
	9/13/2005	18.75	9.33	---	NM	4.42	**9.42**	---	---	---	---
MW-12***	5/16/2005	24.65	4.15	---	13	8.85	**20.5**	14.22	6.8	3.637	1.5
	9/13/2005	24.65	5.42	---	NM	7.58	**19.23**	---	---	---	---
MW-13***	5/16/2005	23.32	3.75	---	13	9.25	**19.57**	12.16	6.63	2.943	3.6
	9/13/2005	23.32	5.11	---	NM	7.89	**18.21**	---	---	---	---
MW-14*, ***	5/16/2005	21.16	0.5	---	13	12.5	**20.66**	12.36	7.26	2.958	5.2
	9/13/2005	21.16	1.81	---	NM	11.19	**19.35**	---	---	---	---
MW-15*,***	5/16/2005	21.13	0.5	---	13	12.5	**20.63**	11.35	7.11	2.498	3.8
	9/13/2005	21.13	1.64	---	NM	11.36	**19.49**	---	---	---	---
MW-18	9/13/2005	48.11	24.32	---	32.3	7.98	**23.79**	19.3	1.517	6.79	215
MW-19	9/13/2005	59.81	dry	---	NM	---	---	---	---	---	---
MW-20	9/13/2005	40.82	20.69	---	27.20	6.51	**20.13**	19.2	0.930	6.85	71
MW-21	9/13/2005	40.37	21.23	---	24.97	3.74	**19.14**	18.6	0.860	7.05	66

Notes:

MW Elevation: Height of inner casing or PVC
DTW: Depth to Water
DTP: Depth to Product
DTB: Depth to Bottom
*: estimated DTW elevation
**: DTB taken from Well Development Form
***: DTB taken from Well Construction Logs

Table 7A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Organics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW7-GW 5/18/2005	MW12-GW 5/19/2005	MW13-GW 5/19/2005
Volatile Organic Compounds (ppb)				
Vinyl Chloride	2	0.33 U	0.33 U	0.33 U
Acetone	50*	2.3 U	2.3 U	**13 J**
Methyl tert-Butyl Ether	10*	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U
Chloroform	7	0.33 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	**3.5 J**
Naphthalene	10*	**1300 D**	**2500 D**	**48**
Benzene	1	**6100 D**	**3700 D**	**1200 D**
Toluene	5	**150 D**	**450 D**	**55**
Tetrachloroethene	5	0.48 U	0.48 U	0.48 U
Ethylbenzene	5	**1600 D**	**2400 D**	**47**
m,p-Xylene	5	**1800 D**	**3900 D**	**200**
o-Xylene	5	**310 D**	**910 D**	**25**
Isopropylbenzene	5	**180**	**190**	**96**
N-propylbenzene	5	**140 D**	**240 D**	**130**
1,3,5-Trimethylbenzene	5	**170 D**	**410 D**	**61**
1,2,4-Trimethylbenzene	5	**1300 D**	**2200 D**	**3.7 J**
sec-butylbenzene	5	0.44 U	0.44 U	**4.4 J**
p-Isoproylbenzne	5	**30**	**31**	**0.69 J**
n-butylbenzene	5	**18**	**18**	**7.2**
Base Neutral Compounds (ppb)				
Phenol	1	**22**	1.3 U	1.3 U
2-Methylphenol	^	1.6 U	1.6 U	1.6 U
3+4-Methylphenols	^	1.4 U	1.4 U	1.4 U
2,4-Dimethylphenol	1	**24**	**4.5 J**	1.2 U
Benzoic acid	^	1.2 U	1.2 U	1.2 U
Naphthalene	10	**750 D**	**1300 D**	**28**
2-Methylnaphthalene	^	**130 D**	**80 JD**	**21**
Acenaphthylene	^	**2.1 J**	1.3 U	1.3 U
Acenaphthene	20*	**29**	**17**	**2.8 J**
Dibenzofuran	^	1.3 U	**3.0 J**	1.3 U
Fluorene	50*	**13**	**5.6 J**	1.5 U
Phenanthrene	50*	**27**	**9.1 J**	1.5 U
Anthracene	50*	**4.5 J**	1.5 U	1.5 U
Di-n-butylphthalate	^	1.4 U	1.4 U	1.4 U
Fluoranthene	50*	**2.2 J**	1.3 U	1.3 U
Pyrene	50*	**5.2 J**	1.5 U	1.5 U
Butylbenzylphthalate	50*	1.5 U	1.5 U	1.5 U
bis(2-Ethylhexyl)phthalate	5	1.6 U	1.6 U	1.6 U
Benzo(a)anthracene	0.002*	1.2 U	1.2 U	1.2 U
Chrysene	0.002*	1.7 U	1.7 U	1.7 U
Benzo(b)fluoranthene	0.002*	0.780 U	0.780 U	0.780 U
Benzo(k)fluoranthene	0.002*	2.0 U	2.0 U	2.0 U
Benzo(a)pyrene	ND	1.2 U	1.2 U	1.2 U
Indeno(1,2,3-cd)pyrene	0.002*	0.860 U	0.900 U	0.860 U
Benzo(g,h,i)perylene	^	1.1 U	1.1 U	1.1 U

Table7A
New York City School Construction Authority
Metro North/Motthaven Site
Bronx, New York
Summary of Organics in Groundwater
Remedial Investigation

Notes:

General Comments

All results are in parts per billion (ppb).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedence of the Class GA Groundwater Standard.
Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).
ppb = µg/L (microgram per Liter)
NA - Not analyzed
.⇮ = Sample was used for the DUSR; only validator qualifiers were used.

Standards

^^ = NYSDEC TOGS Series 1.1.1, Ambient Groundwater Quality Standards & Guidance Values & Groundwater Effluent Limitations, Revised June 1998.
^ = No standard or guidance value available.
* = No standard available; value listed is a guidance value.
SB - Site Background
N/A - Not Available

Validator Qualifiers

U - Not detected. The compound/analyte was analyzed for, but not detected above the associated reporting limit.

J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed.

UJ - The compound/analyte was analyzed for, but no detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the "non-detect" may be inaccurate of imprecise. The non-detect result should be estimated.

Laboratory Qualifiers - Organic

U - Indicates the compound was analyzed for but was not detected.
J - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but the greater than or equal to the Instrument Detection Limit (IDL).
E - The reported value is estimated because of the presence of interference
N - Spiked sample recovery not within control limits.
* - Duplicate analysis not within control limits.
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
B = Indicates the analyte was found in the laboratory method blank as well as the sample.

Table 7B
New York City School Construction Authority
Metro North/Mott Haven
Bronx, New York
Summary of Organics in Groundwater
Supplemental Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW16-GW 09/14/05	MW16-GWD 09/14/05	MW17-GW 09/14/05	RB-091405 09/14/05	TB-091405 09/14/05
Volatile Organic Compounds (ppb)						
Methyl tert-butyl Ether	10*	**1.5 J**	**1.5 J**	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U	**2.2 J**	0.43 U
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	**1.0 J**	0.29 U	0.29 U
Base Neutral Compounds (ppb)						
Dimethylphthalate	50*	1.3 U	1.3 U	**1.4 J**	1.3 U	NA

Notes:
General Comments
All results are in parts per billion (ppb); ppb = µg/L (microgram per Liter)
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedance of the Class GA Groundwater Standard.
Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).
NA - Not analyzed
Standards
^^ = NYSDEC TOGS Series 1.1.1, Ambient Groundwater Quality Standards & Guidance Values & Groundwater Effluent Limitations, Revised June 1998.
* = No standard available; value listed is a guidance value.
SB - Site Background
Laboratory Qualifers - Organic
U - Indicates the compound was analyzed for but was not detected.
J - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL),

Table 8A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW1-GW 5/18/2005	MW2-GW 5/19/2005	MW3-GW ⇧ 5/16/2005	MW4-GW 5/17/2005	MW-5GW ⇧ 5/16/2005	MW-5GWD ⇧ 5/16/2005	MW6-GW ⇧ 5/17/2005	MW7-GW 5/18/2005	MW8-GW 5/18/2005	MW9-GW 5/18/2005
TAL Metals (ppb)											
Aluminum	^	**1240**	**245000**	85.2 UJ	**1010 N**	**828 J**	**378 J**	**581 J**	**142 J**	**701**	**3880**
Antimony	3	3.170 U	**8.280 J**	3.480 UJ	3.170 UN	3.170 U	3.170 U	3.170 UN	3.170 U	3.170 U	3.170 U
Arsenic	25	3.320 U	**28.9**	3.320 U	3.320 UN	5.160 UJ	3.560 UJ	15.0 UJ	3.320 U	**5.000 J**	**11.6**
Barium	1,000	**69.0 JN**	**3020**	**141 J**	**93.0 JN**	**105 J**	**87.4 J**	**150 J**	**212 N**	**144 JN**	**195 JN**
Beryllium	3	0.090 U	**11.3**	0.090 U	0.090 U	0.375 UJ	0.295 UJ	0.090 U	0.090 U	0.090 U	**0.185 J**
Cadmium	5	0.327 U	**5.740**	0.327 U	**4.000 JN**	0.865 UJ	0.327 U	1.000 UJ	0.327 U	0.327 U	**0.765 J**
Calcium	^	**204000**	**307000**	**138000 J**	**132000**	**151000 J**	**12700 J**	**198000**	**176000**	**180000**	**166000**
Chromium	50	**4.380 JN**	**530**	0.343 UJ	**15.0** N	1.860 UJ	1.450 UJ	0.343 UN	0.343 UN	**9.270 JN**	**11.8 N**
Cobalt	^	**3.060 J**	**328**	2.210 UJ	**12.0 JN**	1.740 UJ	**3.480 J**	0.370 UN	0.370 U	**2.900 J**	**6.300 J**
Copper	200	**38.2**	**862**	**69.0 J**	**28.0 N**	**11.6 J**	**14.8 JN**	3.640 UN	3.640 U	**9.280 J**	**36.8**
Iron	300	**2010**	**394000**	**22200**	**2650 N****	**15100**	**12300**	**9650 J**	**28400**	**16700**	**9070**
Lead	25	2.180 U	**493**	5.260 U	**65.0 N**	**63.1**	**43.7**	**45.0 N**	**20.1**	**9.640**	**22.6**
Magnesium	35000*	**74100**	**258000**	**21200**	**44600**	**46100**	**38700**	**67500**	**56700**	**44100**	**29000**
Manganese	300	**537**	**8220**	**1150**	**203**	**1930**	**1600**	**1700**	**2680**	**9120**	**1170**
Mercury	0.7	0.0300 U	**0.7000**	0.1800 UJ	**0.1300 J**	0.2400 U	0.2200 U	0.1200 UJ	0.0300 U	0.0300 U	**0.0400 J**
Nickel	100	**6.810 J**	**526**	1.560 U	**15.0 J**	1.56 U	1.950 UJ	1.560 U	1.560 U	**10.7 J**	**12.1 J**
Potassium	^	**12300**	**146000 N**	**8940 J**	**23000 N**	4010 UJ	3040 UJ	**8310 J**	**30400**	**28600**	**21600**
Selenium	10	**8.650 J**	**6.890 J**	3.040 U	**8.000 JN**	5.460 UJ	4.400 UJ	3.040 UN	8.720 J	**4.720 J**	**5.980 J**
Silver	50	1.640 U	**13.6**	1.640 U	1.640 UN	1.640 U	2.190 UJ	1.640 UN	1.640 U	1.640 U	1.640 U
Sodium	20000	**123000**	**41600**	**43200 J**	**22100**	**15400 J**	**12900 J**	**65200 J**	**196000**	**123000**	**242000**
Thallium	0.5*	3.050 U	3.050 U	3.050 U	3.050 UN	3.050 U	3.050 U	3.050 UN	3.050 U	3.050 U	3.050 U
Vanadium	^	**5.580 J**	**655**	2.060 UJ	**13.0 JN**	1.430 UJ	0.701 U	0.701 UN	0.701 U	**1.280 J**	**10.2 J**
Zinc	2000*	**28.4**	**1710**	**29.6**	**55.0 N**	**36.7**	**32.7**	**58.0 J**	**28.0**	**12.2 J**	**65.3**
Wet Chemistry (ppm)											
Cyanide	200	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Pesticides/Herbicides/PCBs (ppb)											
2,4-D	50	0.050 U	**0.58 P**	0.050 UJ	0.050 U	0.050 UJ	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U

Table 8A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Table 8A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW-9 4/19/2005	MW10-GW 4/19/2005	MW11-GW 5/17/2005	MW12-GW 5/19/2005	MW13-GW 5/19/2005	MW14-GW 5/19/2005	MW15-GW 5/19/2005	TW-SB37-GW 4/21/2005	TW-SB42-GW 4/21/2005	MW-18 9/15/2005	MW-20 9/15/2005	MW-21 9/15/2005	RB-041905 4/19/2005	RB051805 5/18/2005
TAL Metals (ppb)															
Aluminum	^	**46600**	**220 J**	**3410 N**	**70.2 J**	**701**	**242**	**365**	**6560**	**4210**	**36900**	**4290**	**1400**	**47.7 J**	5.310 U
Antimony	3	**13.5 J**	3.170 UN	**43.0 JN**	3.170 U	3.170 U	3.170 U	3.170 U	**6.120 J**	**15.3 J**	**7.7 J**	3.2 U	3.2 U	3.17 U	3.170 U
Arsenic	25	**8.490 J**	6.000 UJ	**672 N**	3.320 U	**8.650 J**	**7.640 J**	**4.880 J**	**6.290 J**	**4.160 J**	**10.8**	3.3 U	3.3 U	3.32 U	3.320 U
Barium	1,000	**585**	**57.0 J**	**219 N**	**205**	**287**	**140 J**	**227**	**332**	**366**	**651**	**54.2 J**	**131 J**	**4.1 J**	**1.44 JN**
Beryllium	3	**2.620 J**	0.090 U	0.090 U	0.090 U	0.030 U	0.090 U	0.090 U	**0.835 J**	**0.590 J**	0.09 U	0.09 U	0.09 U	**0.755 J**	0.09 U
Cadmium	5	0.327 U	0.327 UN	0.327 UN	**0.625 J**	**0.750 J**	0.327 U	0.327 U	0.327 U	0.327 U	0.33 U	0.33 U	0.33 U	**0.755 J**	0.327 U
Calcium	^	**95700**	**231000**	1.170 U	**165000**	**149000**	**129000**	**140000**	**200000**	**342000**	**40900**	**30300**	**26700**	**13.1 J**	**1350 J**
Chromium	50	**78.7**	0.343 UN	0.343 UN	**0.465 J**	**1.270 J**	0.343 U	0.343 U	**10.9 N**	**5.740 JN**	**98.5**	**37.8**	**38.2**	0.343 U	0.343 UN
Cobalt	^	**40.8 J**	1.000 UJ	0.370 UN	**0.540 J**	**0.815 J**	0.370 U	0.370 U	**11.0 JN**	**10.1 JN**	**38.5 J**	0.37 U	0.37 U	0.370 U	**1.220 J**
Copper	200	**214**	3.640 UN	3.640 UN	**16.0 J**	**20.1 J**	**10.8 J**	3.640 U	**31.2**	**43.2**	**191**	**36.5**	**10.4 J**	3.640 U	3.640 U
Iron	300	**64400 N**	**522 J**	27.0 UN	**36800**	**45100**	**11200**	**15000**	**34500 N**	**16800 N**	**64500**	**8670**	**4180**	27.0 UN	**272**
Lead	25	**223**	**3.000 J**	**24.0 N**	**195**	2.180 U	**4.760 J**	2.180 U	**63.6**	**131**	**529**	**12.8**	**5.4**	2.180 U	2.180 U
Magnesium	35000*	**30300**	**45600**	8.300 U	**44000**	**27600**	**32400**	**35600**	**59900**	**56800**	**19700**	**5180**	**10100**	8.3 U	8.300 U
Manganese	300	**1170**	**175**	0.106 U	**5550**	**5780**	**2220**	**4500**	**6200**	**3630**	**1780**	**100**	**57.0**	**0.56 J**	**1.520 J**
Mercury	0.7	**1.66**	0.0300 U	0.0300 U	**0.0700 J**	**0.0800 J**	**0.0900 J**	**0.0900 J**	**0.0700 J**	**0.1800 J**	**2.180**	0.0300 U	0.0300 U	**0.06 J**	0.0300 U
Nickel	100	**76.7**	**4.000 J**	1.560 U	**1.900 J**	**3.520 J**	**3.380 J**	1.560 U	**8.490 JN**	**11.3 JN**	**78.4**	**25.4 J**	**28.3 J**	1.56 U	**3.100 J**
Potassium	^	**30900**	**13300 J**	61.8 UN	**20300 N**	**26900 N**	**34300 N**	**16200 N**	**18700**	**32900**	**20200**	**3720 J**	**15000**	61.8 U	61.8 U
Selenium	10	3.040 U	3.040 UN	3.040 UN	**4.760 J**	**7.280 J**	3.040 U	**6.130 J**	3.040 U	3.040 U	**5.6 J**	3.0 U	3.0 U	3.04 U	3.040 U
Silver	50	1.640 UN	2.000 UJ	1.640 UN	1.640 U	1.640 U	1.640 U	1.640 U	1.640 UN	1.640 UN	**99.9**	1.6 U	1.6 U	1.64 UN	1.640 U
Sodium	20000	**165000**	**58500 J**	332 U	**339000**	**143000**	**227000**	**166000**	**47100**	**28300**	**339000**	**25800**	**35700**	332 U	**332**
Thallium	0.5*	3.050 U	3.050 UN	3.050 UN	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U	3.1 U	3.1 U	3.1 U	3.05 U	**3.540 J**
Vanadium	^	**127**	0.701 UN	0.701 UN	**2.440 J**	**3.540 J**	**5.960 J**	0.701 U	**18.2 J**	**14.0 J**	**93.7**	**7.4 J**	0.70 U	0.701 U	0.701 U
Zinc	2000*	**462**	**42.0 J**	0.611 UN	**13.5 J**	**18 J**	**19.6 J**	**9.180 J**	**45.2**	**184**	**364**	**64.1**	51.3	**2.78 J**	**22.8**
Wet Chemistry (ppm)															
Cyanide	200	NA	0.010 U	0.010 U	0.010 U	0.010 U	**0.015**	0.010 U	0.010 U	0.010 U	NA	NA	NA	0.010 U	0.010 U
Pesticides/Herbicides/PCBs (ppb)															
2,4-D	50	NA	0.050 U	0.050 U	0.050 U	**0.31 P**	**0.97 P**	**0.60 P**	NR	NR	NA	NA	NA	0.050 U	0.050 U

Table 8A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Table 8A
New York City School Construction Authority
Metro North/Motthaven Site
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Notes:

General Comments

All results are in parts per billion (ppb).
Only those parameters detected in at least one sample are reported on this table.
Bold face indicates that analyte was detected above laboratory limit.
Bold face and shaded values indicate an exceedence of the Class GA Groundwater Standard.
Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).
ppb = µg/L (microgram per Liter)
ppm = mg/L (milligram per Liter)
NA - Not analyzed
.⇮ = Sample was used for the DUSR; only validator qualifiers were used.

Standards

^^ = NYSDEC TOGS Series 1.1.1, Ambient Groundwater Quality Standards & Guidance Values & Groundwater Effluent Limitations, Revised June 1998.
^ = No standard or guidance value available.
* = No standard available; value listed is a guidance value.
SB - Site Background
N/A - Not Available

Validator Qualifiers

U - Not detected. The compound/analyte was analyzed for, but not detected above the associated reporting limit.

J - The compound/analyte was positively identified; the reported value is the estimated concentration of the constituent detected in the sample analyzed.

UJ - The compound/analyte was analyzed for, but no detected above the established reporting limit. However, review and evaluation of supporting QC data and/or sampling and analysis process have indicated that the "non-detect" may be inaccurate of imprecise. The non-detect result should be estimated.

Laboratory Qualifiers - Inorganic

U - Indicates the compound was analyzed for but was not detected.
J - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but the greater than or equal to the Instrument Detection Limit (IDL).
N = Presumptive evidence of a compound.
** = Duplicate analysis was not within control limits.
P - There is a >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported.

Table 8B
New York City School Construction Authority
Metro North/Mott Haven
Bronx, New York
Summary of Inorganics in Groundwater
Supplemental Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW16-GW 09/14/05	MW16-GWD 09/14/05	MW17-GW 09/14/05	RB-091405 09/14/05
TAL Metals (ppb)					
Aluminum	^	**3010 N**	**3410 N**	**3290 N**	**46.4 JN**
Antimony	3	3.2 U	**3.3 J**	**6.8 J**	3.2 U
Arsenic	25	3.3 U	3.3 U	3.3 U	3.3 U
Barium	1,000	**128 J**	**134 J**	**129 J**	0.72 U
Beryllium	3	0.09 U	0.09 U	0.09 U	0.09 U
Cadmium	5	0.33 U	0.33 U	0.33 U	0.33 U
Calcium	^	**104000**	**107000**	**104000**	**19.6 J**
Chromium	50	**12.9**	**13.6**	**32.6**	0.34 U
Cobalt	^	0.37 U	0.37 U	**1.6 J**	0.37 U
Copper	200	**10.8 J**	**11.3 J**	**50.9**	**6.1 J**
Iron	300	**7240 N**	**7750 N**	**6830 N**	30.0 UN
Lead	25	**21.8**	**23.8**	**72.7**	2.8 U
Magnesium	35000*	**33200**	**34400**	**26000**	8.3 U
Manganese	300	**1160**	**1200**	**1450**	0.11 U
Mercury	0.7	**0.0800 J**	**0.0800 J**	**1.0300**	0.0300 U
Nickel	100	**7.0 J**	**8.8 J**	**24.5 J**	1.6 U
Potassium	^	**7620 N**	**7970 N**	**8260 N**	61.8 UN
Selenium	10	3.0 U	3.0 U	3.0 U	3.0 U
Silver	50	1.6 U	1.6 U	1.6 U	1.6 U
Sodium	20000	**110000**	**116000**	**78900**	**415 J**
Thallium	0.5*	3.1 U	3.1 U	3.1 U	3.1 U
Vanadium	^	**1.6 J**	**2.0 J**	**3.6 J**	0.70 U
Zinc	2000*	**38.8**	**36.2**	**79.2**	**13.8 J**

Notes:

General Comments

All results are in parts per billion (ppb); ppb = µg/L (microgram per Liter)

Bold face indicates that analyte was detected above laboratory limit.

Bold face and shaded values indicate an exceedance of the Class GA Groundwater Standard.

Only 20% of samples were used for the Data Usability Study Report (DUSR, Category B Laboratory Package).

Standards

^^ = NYSDEC TOGS Series 1.1.1, Ambient Groundwater Quality Standards & Guidance Values & Groundwater Effluent Limitations, Revised June 1998.

^ = No standard or guidance value available.

* = No standard available; value listed is a guidance value.

Laboratory Qualifers - Inorganic

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

J - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but the greater than or equal to the Instrument Detection Limit (IDL).

N - Presumptive Evidence of a Compound.

Table 9A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Methane in Soil-Gas
Remedial Investigation

Compound	SG-1	SG-9	SG-9 (DUP)	SG-11	SG-19	SG-20	SG-21	SG-27	SG-28	SG-29	Dup040105
	3/31/05	3/31/05	3/31/05	3/31/05	4/1/05	4/1/05	4/1/05	4/1/05	4/1/05	4/1/05	4/1/05
Methane	**4,700**	**9,400**	**9,500**	**3.0**	**1.8**	**7.1**	**2.1**	**1.3**	**1.2**	**1.6**	**1.7**

Compound	SG37	SG38	SG45	SG46	SG47	SG54	SG49	PSGI-9	Trip Blank	Trip Blank	Trip Blank
	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05	8/17/05	3/31/05	4/1/05	4/4/05
Methane	**1.7**	**1.6**	**1.7**	**3.6**	**2.9**	**2.9**	**7.6**	**4.6**	**0.56**	**0.50 U**	**0.52**

Notes:
All analytical results expressed in parts per million by volume (ppmV).
U = The compound was not detected at the reported concentration.

Table 9B
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Methane in Soil-Gas
Supplemental Investigation

Compound	PSGI-4	PSGI-5	PSGI-6	PSGI-7	PSGI-8	Field Blank
	8/17/05	8/17/05	8/17/05	8/17/05	8/17/05	8/17/05
Methane	0.61 U	**1.1**	**0.79**	0.68 U	**8.1**	0.50 U

Notes:
All analytical results expressed in parts per million volume (ppmV).
U = The compound was not detected at the reported concentration.

Table 10A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of VOCs in Soil-Gas
Remedial Investigation

Compound	SG1	SG9	SG11	SG-19	SG-20	SG-21	SG-27	SG-28
	3/31/05	3/31/05	3/31/05	4/1/05	4/1/05	4/1/05	4/1/05	4/1/05
Volatile Organic Compounds								
Propene	71 U	700 U	**20 M**	**5.9 M**	**50 M**	**8.3 M**	**8.6**	6.7 U
Dichlorodifluoromethane (CFC 12)	71 U	700 U	2.7 U	**7.1**	**4.2**	**3.1**	**4.6**	**28**
Chloromethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Vinyl Chloride	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,3-Butadiene	71 U	700 U	2.7 U	2.7 U	0.66 U	**0.62 M**	**1.3**	6.7 U
Bromomethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Chloroethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Ethanol	710 U	7,000 U	27 U	27 U	6.6 U	**8.0**	7.0 U	67 U
Acetone	710 U	7,000 U	**71**	**60**	**320 M**	**48**	**52**	67 U
Trichlorofluoromethane	71 U	700 U	2.7 U	2.7 U	**6.4**	**4.7**	**9.5**	**63**
Isopropyl Alcohol	71 U	700 U	2.7 U	**3.9**	**15**	**0.92**	**0.90**	6.7 U
1,1-Dichloroethene	71 U	700 U	2.7 U	2.7 U	**6.6**	0.61 U	0.70 U	6.7 U
Methylene chloride	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Trichlorotrifluoroethane	71 U	700 U	2.7 U	2.7 U	**3.6**	0.61 U	**0.93**	6.7 U
Carbon Disulfide	71 U	700 U	**7.3**	**11**	**2.4**	**5.0**	**7.0**	**9.5**
trans-1,2-Dichloroethene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,1-Dichloroethane	71 U	700 U	2.7 U	2.7 U	**5.0**	0.61 U	0.70 U	6.7 U
Methyl tert-Butyl Ether	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Vinyl Acetate	140 U	1,400 U	5.4 U	5.4 U	1.3 U	1.2 U	1.4 U	13 U
2-Butanone (MEK)	71 U	700 U	2.7 U	**5.0**	**2.3**	**3.8**	**3.9**	6.7 U
cis-1,2-Dichloroethene	71 U	700 U	2.7 U	2.7 U	**15**	0.61 U	0.70 U	6.7 U
Ethyl Acetate	71 U	700 U	**3.9**	2.7 U	**3.7**	**5.0**	**0.83**	6.7 U
n-Hexane	**53,000**	**84,000**	**17**	**2.7**	**69**	**2.9**	**9.3**	6.7 U
Chloroform	71 U	700 U	**130**	2.7 U	**41**	**0.79**	**0.70**	6.7 U
Tetrahydrofuran	71 U	700 U	2.7 U	2.7 U	**3.3**	**3.5**	0.70 U	6.7 U
1,2-Dichloroethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,1,1-Trichloroethane	71 U	700 U	2.7 U	2.7 U	**39**	0.61 U	0.70 U	6.7 U
Benzene	**1,000**	700 U	**2.8**	**3.7**	**2.1**	**3.3**	**6.8**	6.7 U
Carbon Tetrachloride	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Cyclohexane	**4,000**	**9,300**	**10**	**4.9**	**17**	**7.2**	**7.0**	6.7 U
1,2-Dichloropropane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Bromodichloromethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Trichloroethene	71 U	700 U	2.7 U	2.7 U	**240**	0.61 U	0.70 U	6.7 U
1,4-Dioxane	71 U	700 U	2.7 U	2.7 U	0.66 U	**0.67 M**	0.70 U	6.7 U
n-Heptane	**7,700**	**22,000**	**13**	**4.4**	**25**	**3.9**	**8.5**	6.7 U
cis-1,3-Dichloropropene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
4-Methyl-2-pentanone	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
trans-1,3-Dichloropropene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,1,2-Trichloroethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Toluene	**210**	**700**	**11**	**12**	**11**	**8.5**	**14**	**9.6**
2-Hexanone	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Dibromochloromethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,2-Dibromoethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Tetrachloroethene	71 U	700 U	**11**	**19**	**26**	**10**	**18**	**11**
Chlorobenzene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Ethylbenzene	71 U	700 U	2.7 U	2.7 U	**4.7**	**1.5**	**2.7**	**35**
m,p-Xylenes	140 U	1,400 U	**9.7**	**7.1**	**19**	**5.6**	**8.4**	13 U
Bromoform	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Styrene	71 U	700 U	2.7 U	2.7 U	**1.1**	0.61 U	**0.75**	**47**
o-Xylene	71 U	700 U	2.7 U	2.7 U	**7.1**	**1.5**	**2.6**	6.7 U
1,1,2,2-Tetrachloroethane	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
4-Ethyltoluene	71 U	700 U	2.7 U	2.7 U	**3.5**	**1.2**	**1.4**	6.7 U
1,3,5-Trimethylbenzene	71 U	700 U	2.7 U	2.7 U	**3.6**	0.61 U	**0.96**	6.7 U
1,2,4-Trimethylbenzene	71 U	700 U	**2.8**	2.7 U	**13**	**1.7**	**2.9**	6.7 U
Benzyl Chloride	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,3-Dichlorobenzene	71 U	700 U	2.7 U	2.7 U	**1.0**	0.61 U	0.70 U	6.7 U
1,4-Dichlorobenzene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,2-Dichlorobenzene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
1,2,4-Trichlorobenzene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U
Hexachlorobutadiene	71 U	700 U	2.7 U	2.7 U	0.66 U	0.61 U	0.70 U	6.7 U

Notes:
All analytical results expressed in micrograms per cubic meter (µg/m³)
M = Matrix interference; results may be biased high.
U = Analyte not detected above laboratory reporting limit.
Duplicate 4/1/05 sample collected at SG-29.

Table 10A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of VOCs in Soil-Gas
Remedial Investigation

Compound	SG-29	Dup040105	SG37	SG38	SG45	SG46	SG47	SG54	SG49
	4/1/05	4/1/05	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05	4/4/05
Volatile Organic Compounds									
Propene	**5.6 M**	**6.2 M**	**7.1 M**	**34 M**	**7.2 M**	**24 M**	**2.9 M**	**11 M**	**27 M**
Dichlorodifluoromethane (CFC 12)	**6.8**	**7.5**	**3.7**	**5.1**	**7.5**	**5.9**	**4.1**	**2.5**	**2.3**
Chloromethane	0.64 U	**0.76**	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Vinyl Chloride	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,3-Butadiene	0.64 U	0.66 U	0.69 U	**1.1 M**	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Bromomethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Chloroethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Ethanol	**6.6**	6.6 U	**200**	**340**	**350**	**160**	**83**	**200**	**140**
Acetone	**34**	**39**	**150**	**89**	**28**	**95**	**77**	**49**	**190**
Trichlorofluoromethane	**13**	**15**	**15**	**15**	**32**	**35**	**20**	**7.9**	**1.5**
Isopropyl Alcohol	0.64 U	0.66 U	**32**	**52**	**50**	**23**	**11**	**30**	**29**
1,1-Dichloroethene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Methylene chloride	0.64 U	0.66 U	**1.4**	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Trichlorotrifluoroethane	**0.66**	0.66 U	**0.69**	0.70 U	0.67 U	0.69 U	**0.78**	0.65 U	0.69 U
Carbon Disulfide	**6.0**	**6.7**	**15**	**24**	**1.2**	**15**	**1.9**	**2.7**	**13**
trans-1,2-Dichloroethene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,1-Dichloroethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Methyl tert-Butyl Ether	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	**0.69**
Vinyl Acetate	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U	1.4 U	1.4 U	1.3 U	1.4 U
2-Butanone (MEK)	**3.1**	**5.3**	**20**	**3.4**	**1.1**	**8.4**	**2.7**	**1.3**	**10**
cis-1,2-Dichloroethene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Ethyl Acetate	**1.7**	**5.5**	0.69 U	0.70 U	0.67 U	**0.73**	**1.5**	**0.81**	**1.2**
n-Hexane	**10**	**11**	**6.2**	**12**	**1.4**	**32**	**2.9**	**20**	**3.4**
Chloroform	**0.69**	**0.76**	**1.5**	0.70 U	**3.7**	**0.84**	**3.0**	**4.1**	**1.1**
Tetrahydrofuran	**2.3**	**4.6**	0.69 U	0.70 U	0.67 U	**0.90**	**2.0**	0.65 U	**4.9**
1,2-Dichloroethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,1,1-Trichloroethane	0.64 U	0.66 U	0.69 U	0.70 U	**0.82**	**0.69**	0.69 U	0.65 U	0.69 U
Benzene	**3.5**	**3.6**	**6.0**	**5.3**	0.67 U	**2.7**	**0.73**	**0.83**	**8.2**
Carbon Tetrachloride	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Cyclohexane	**4.8**	**5.4**	**6.2**	**8.4**	**1.2**	**4.4**	**6.3**	**2.3**	**19**
1,2-Dichloropropane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Bromodichloromethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Trichloroethene	**0.91**	0.66 U	**3.2**	**1.7**	**1.6**	0.69 U	0.69 U	0.65 U	**0.92**
1,4-Dioxane	0.64 U	0.66 U	**0.75**	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
n-Heptane	**5.7**	**6.4**	**9.7**	**10**	0.67 U	**32**	**3.5**	**4.0**	**9.3**
cis-1,3-Dichloropropene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
4-Methyl-2-pentanone	0.64 U	0.66 U	**2.6**	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
trans-1,3-Dichloropropene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,1,2-Trichloroethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Toluene	**9.8**	**11**	**68**	**110**	**61**	**31**	**12**	**28**	**52**
2-Hexanone	0.64 U	0.66 U	**2.7**	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Dibromochloromethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,2-Dibromoethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Tetrachloroethene	**26**	**29**	**67**	**18**	**19**	**10**	**7.5 B**	**5.7**	**11**
Chlorobenzene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Ethylbenzene	**1.7**	**1.9**	**6.1**	**12**	**5.1**	**33**	**2.0**	**3.4**	**5.7**
m,p-Xylenes	**5.5**	**6.3**	**21**	**34**	**14**	**8.7**	**7.6**	**11**	**18**
Bromoform	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Styrene	0.64 U	0.66 U	**0.72**	**1.1**	**2.5**	**500**	0.69 U	0.65 U	**0.71**
o-Xylene	**1.7**	**1.9**	**6.8**	**11**	**4.6**	**2.7**	**2.0**	**3.9**	**5.2**
1,1,2,2-Tetrachloroethane	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
4-Ethyltoluene	**0.84**	**0.88**	**1.6**	**1.3**	0.67 U	**2.9**	**1.3**	**0.97**	**1.0**
1,3,5-Trimethylbenzene	0.64 U	0.66 U	**1.5**	0.70 U	0.67 U	0.69 U	0.69 U	**0.66**	0.69 U
1,2,4-Trimethylbenzene	**1.8**	**2.2**	**4.3**	**2.5**	**1.4**	**2.0**	**3.0**	**2.2**	**1.9**
Benzyl Chloride	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,3-Dichlorobenzene	0.64 U	0.66 U	**7.5**	**80**	**29**	**9.5**	**2.0**	**24**	**31**
1,4-Dichlorobenzene	**2.9**	**3.9**	0.69 U	0.70 U	0.67 U	**0.70**	0.69 U	**0.67**	**0.96**
1,2-Dichlorobenzene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
1,2,4-Trichlorobenzene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U
Hexachlorobutadiene	0.64 U	0.66 U	0.69 U	0.70 U	0.67 U	0.69 U	0.69 U	0.65 U	0.69 U

Notes:
All analytical results expressed in micrograms per cubic meter (µg/m³)
M = Matrix interference; results may be biased high.
U = Analyte not detected above laboratory reporting limit.
Duplicate 4/1/05 sample collected at SG-29.

Table 10A
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of VOCs in Soil-Gas
Remedial Investigation

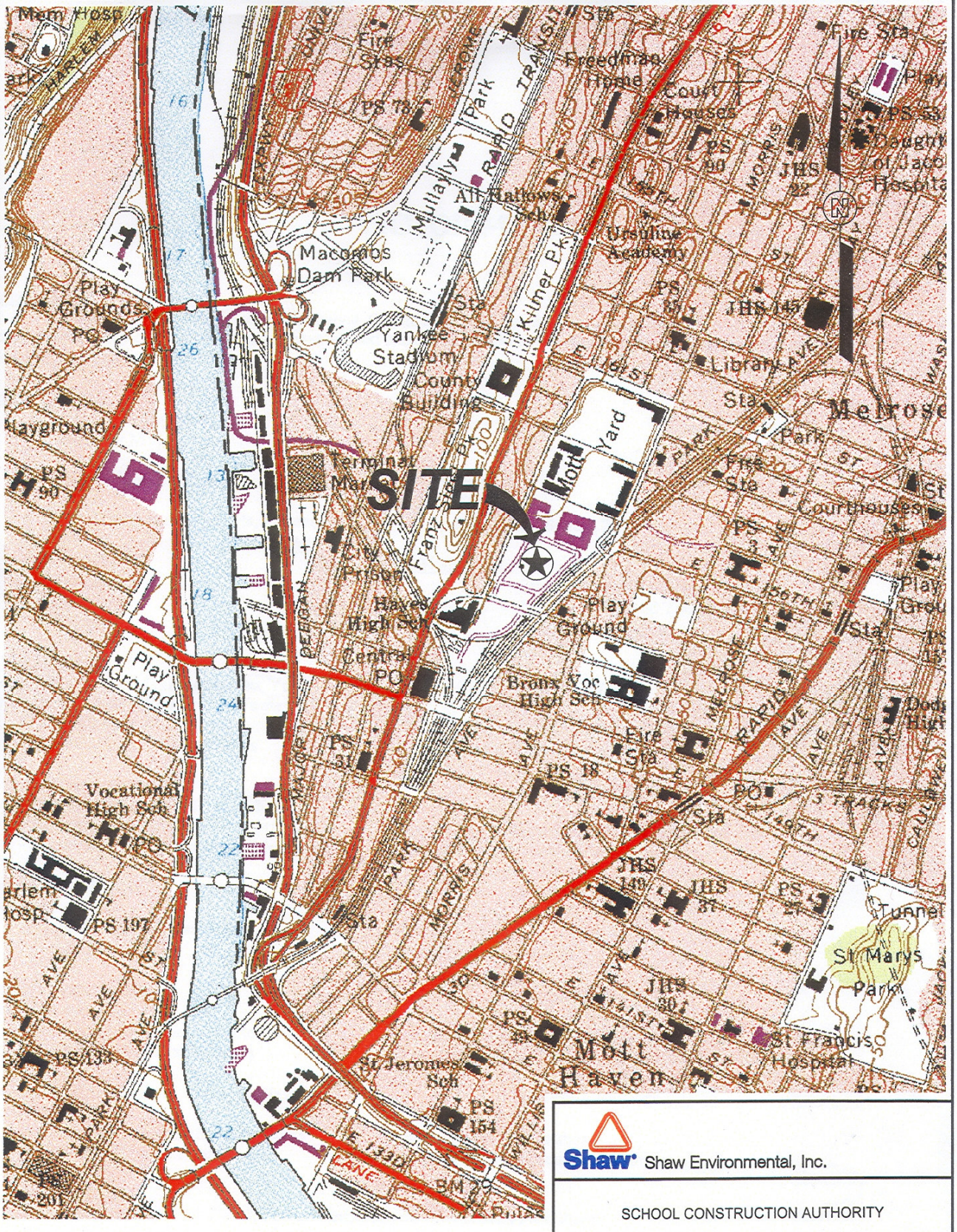
Compound	PSGI-9	PSGI-10	Trip Blank	Trip Blank	Trip Blank
	8/17/05	9/21/05	3/31/05	4/4/05	4/1/05
Volatile Organic Compounds					
Propene	**89 M**	**6.0**	0.50 U	0.50 U	0.50 U
Dichlorodifluoromethane (CFC 12)	**2.6**	**2.8**	0.50 U	0.50 U	0.50 U
Chloromethane	**1.4**	**0.71**	0.50 U	0.50 U	0.50 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Vinyl Chloride	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,3-Butadiene	**2.8 M**	0.64 U	0.50 U	0.50 U	0.50 U
Bromomethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Chloroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Ethanol	12.00 U	**120**	5.00 U	5.00 U	5.00 U
Acetone	**71**	**63**	5.00 U	5.00 U	5.00 U
Trichlorofluoromethane	**6.2**	**7.5**	0.50 U	0.50 U	0.50 U
Isopropyl Alcohol	1.20 U	**4.9**	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Methylene chloride	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Trichlorotrifluoroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Carbon Disulfide	**24**	**3.9**	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Methyl tert-Butyl Ether	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Vinyl Acetate	**9.2 M**	0.64 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	**9.2**	**9.3**	0.50 U	0.50 U	**0.84**
cis-1,2-Dichloroethene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Ethyl Acetate	1.20 U	**0.87**	0.50 U	0.50 U	0.50 U
n-Hexane	**6.4**	**3.9**	0.50 U	0.50 U	0.50 U
Chloroform	**510**	**3.2**	0.50 U	0.50 U	0.50 U
Tetrahydrofuran	1.20 U	**14**	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,1,1-Trichloroethane	**2.7**	0.64 U	0.50 U	0.50 U	0.50 U
Benzene	**4.2**	**1.2**	0.50 U	0.50 U	0.50 U
Carbon Tetrachloride	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Cyclohexane	**6.1**	**6.4**	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Bromodichloromethane	**2.3**	0.64 U	0.50 U	0.50 U	0.50 U
Trichloroethene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,4-Dioxane	1.20 U	**0.72**	0.50 U	0.50 U	0.50 U
n-Heptane	**3.0**	**1.4**	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
4-Methyl-2-pentanone	**1.6**	0.64 U	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Toluene	**11**	**28**	0.50 U	**0.56**	**0.56**
2-Hexanone	**3.1**	**8.2**	0.50 U	0.50 U	0.50 U
Dibromochloromethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	**68**	**24**	0.50 U	**0.85**	**0.85**
Chlorobenzene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Ethylbenzene	**2.5**	**3.8**	0.50 U	0.50 U	0.50 U
m,p-Xylenes	**9.2**	**15**	1.00 U	1.00 U	1.00 U
Bromoform	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Styrene	**2.7**	**1.7**	0.50 U	0.50 U	0.50 U
o-Xylene	**3.1**	**5.2**	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
4-Ethyltoluene	**1.3**	**1.4**	0.50 U	0.50 U	0.50 U
1,3,5-Trimethylbenzene	1.20 U	**1.0**	0.50 U	0.50 U	0.50 U
1,2,4-Trimethylbenzene	**4.2**	**3.5**	0.50 U	0.50 U	0.50 U
Benzyl Chloride	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,3-Dichlorobenzene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,4-Dichlorobenzene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U
Hexachlorobutadiene	1.20 U	0.64 U	0.50 U	0.50 U	0.50 U

Notes:
All analytical results expressed in micrograms per cubic meter ($\mu g/m^3$)
M = Matrix interference; results may be biased high.
U = Analyte not detected above laboratory reporting limit.
Duplicate 4/1/05 sample collected at SG-29.

Table 10B
New York City School Construction Authority
Metro North/Mott Haven Site
Bronx, New York
Summary of Volatile Organic Compounds in Soil Gas
Supplemental Investigation

Compound	PSGI-4	PSGI-5	PSGI-6	PSGI-7	PSGI-8	Field Blank
	8/17/05	8/17/05	8/17/05	8/17/05	8/17/05	8/17/05
Volatile Organic Compounds (µg/m^3)						
Propene	**1.3**	<0.70	**4.9 M**	**3.1 M**	**4.0 M**	<0.50
Dichlorodifluoromethane (CFC 12)	**4.4**	**7.7**	**4.1**	**5.6**	**2.6**	<0.50
Chloromethane	**4.6**	<0.70	**0.73**	**0.68**	**0.88**	<0.50
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Vinyl Chloride	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,3-Butadiene	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Bromomethane	**8.0**	<0.70	<0.67	<0.68	<0.68	<0.50
Chloroethane	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Ethanol	**10**	<7.0	<6.7	<6.8	<6.8	<5.0
Acetone	**17**	**15**	**45**	**9.5**	**26**	<5.0
Trichlorofluoromethane	**4.7**	**8.3**	**62**	**6.3**	**4.6**	<0.50
2-Propanol (Isopropyl Alcohol)	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,1-Dichloroethene	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Methylene chloride	0.61	<0.70	**1.2**	<0.68	**0.86**	<0.50
Trichlorotrifluoroethane	**0.64**	**0.87**	**0.86**	**0.91**	<0.68	<0.50
Carbon Disulfide	**9.6**	**7.2**	**38**	**10**	**19**	<0.50
trans-1,2-Dichloroethene	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,1-Dichloroethane	0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Methyl tert-Butyl Ether	**0.86**	<0.70	**4.2**	<0.68	**1.1**	<0.50
Vinyl Acetate	**4.5 M**	**7.4 M**	**7.3 M**	**6.8 M**	<1.4	<1.0
2-Butanone (MEK)	**3.6**	**3.3**	**8.3**	**3.1**	**5.5**	<0.50
cis-1,2-Dichloroethene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Ethyl Acetate	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
n-Hexane	**0.67**	**1.9**	**2.5**	**1.0**	**2.1**	<0.50
Chloroform	**57**	**10**	**5.6**	**2.2**	**9.4**	<0.50
Tetrahydrofuran (THF)	<0.61	<0.70	**0.68**	<0.68	<0.68	<0.50
1,2-Dichloroethane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,1,1-Trichloroethane	**3.0**	**2.1**	**1.0**	**1.1**	<0.68	<0.50
Benzene	**2.6**	**6.2**	**6.7**	**3.3**	**17**	<0.50
Carbon Tetrachloride	**1.7**	**1.1**	**1.6**	**5.1**	**0.71**	<0.50
Cyclohexane	<0.61	<0.70	**9.5**	**9.0**	**2.5**	<0.50
1,2-Dichloropropane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Bromodichloromethane	**0.99**	**0.99**	**0.93**	<0.68	**1.2**	<0.50
Trichloroethene	**2.8**	**64**	<0.67	<0.68	**31**	<0.50
1,4-Dioxane	<0.61	<0.70	<0.67	**1.4**	<0.68	<0.50
n-Heptane	**0.78**	**1.8**	**2.3**	**0.91**	**1.9**	<0.50
cis-1,3-Dichloropropene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
4-Methyl-2-pentanone	**1.0**	<0.70	**1.6**	<0.68	**1.8**	<0.50
trans-1,3-Dichloropropene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,1,2-Trichloroethane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Toluene	**15**	**11**	**25**	**12**	**34**	<0.50
2-Hexanone	**1.3**	**8.0**	**2.4**	**1.4**	**1.9**	<0.50
Dibromochloromethane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,2-Dibromoethane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Tetrachloroethene	**1,200**	**13**	**15**	**7.2**	**16**	<0.50
Chlorobenzene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Ethylbenzene	**7.1**	**5.5**	**6.9**	**4.9**	**11**	<0.50
m,p -Xylenes	**33**	**14**	**18**	**42**	**29**	<1.0
Bromoform	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Styrene	**1.2**	**3.4**	**3.9**	**3.5**	**2.3**	<0.50
o-Xylene	**16**	**4.7**	**5.4**	**18**	**11**	<0.50
1,1,2,2-Tetrachloroethane	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
4-Ethyltoluene	**4.8**	**1.3**	**1.3**	**5.3**	**3.1**	<0.50
1,3,5-Trimethylbenzene	**7.0**	**1.1**	**1.2**	**5.3**	**4.2**	<0.50
1,2,4-Trimethylbenzene	**21**	**4.3**	**3.8**	**23**	**12**	<0.50
Benzyl Chloride	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,3-Dichlorobenzene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,4-Dichlorobenzene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,2-Dichlorobenzene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
1,2,4-Trichlorobenzene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50
Hexachlorobutadiene	<0.61	<0.70	<0.67	<0.68	<0.68	<0.50

FIGURES



NOT TO SCALE

REFERENCE:

BASE MAP SOURCR: www.nysgis.state.ny.us

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	10/13/05	H. FARIELLO	S. SHKOLNIK			114926A3

Shaw Environmental, Inc.

SCHOOL CONSTRUCTION AUTHORITY

FIGURE 1
SITE VICINITY MAP

FORMER METRO NORTH PROPERTY
672 CONCOURSE VILLAGE WEST, BRONX, NY

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Plot Date/Time: 10/13/05 11:57am
Plotted by: Samuil.Shkolnik

Xref: .
Image: 040073G8

DRAWN BY:	P. WHEELER		CHECKED BY:		
DESIGNED BY:			APPROVED BY:		

Shaw

Sheet No.

1 of 1

FIGURE 2A
SITE LOCATION MAP
NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
MOTTHAVEN SITE
BOROUGH OF THE BRONX

PREPARED FOR:

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

APPROXIMATE SCALE

1 INCH = 400 FEET

Shaw E & I Engineering of New York, P.C.

	DATE	BY	CHK'D	APR'D	DESCRIPTION/ISSUE

OFFICE ALBANY, NY

DRAWING NUMBER 114926B83

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

RETAINING WALL

N

LEGEND

- DEBRIS MOUNDS
- RETAINING WALL
- MOTT HAVEN SITE BOUNDARY
- BCP AREA

SCALE
0 100 200 FEET

VERIFY SCALE 0 1"

Xref: .
Image: Site Property-scanned document

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Plot Date/Time: 11/04/05 09:57am
Plotted by: Samuil.Shkolnik

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	SITE PHYSICAL CHARACTERISTICS			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 10/26/05	SCALE: AS SHOWN	DRAWING NO. 114926B83	FIGURE 2B

OFFICE ALBANY, NY

DRAWING NUMBER 114926B56

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

PS 156

IS 151

MW-18
MW-19
MW-9
MW-15 (SB-48)
MW-14 (SB-47)
MW-7 (SB-44)
MW-8
MW-12 (SB-45)
MW-20
MW-21
MW-1
MW-10
MW-17 (PSB-19)
MW-16 (PSB-20)
MW-13 (SB-46)
MW-6
MW-5
MW-4
MW-3
MW-2
MW-11

PBSB-3
PBSB-2
PBSB-1
PBSB-4
PBSB-5
BSB-50
BSB-51
BSB-52
BSB-53
BSB-54
BSB-55

PSB-1
PSB-2
PSB-3
PSB-4
PSB-5
PSB-6
PSB-7
PSB-8
PSB-9
PSB-10
PSB-11
PSB-12
PSB-13
PSB-14
PSB-16
PSB-17
PSB-18

SB-20
SB-21
SB-22
SB-23
SB-24
SB-25
SB-25A
SB-26
SB-27
SB-28
SB-29
SB-30
SB-33
SB-34
SB-35
SB-36
SB-37
SB-41
SB-42
SB-43
SB-49

TP-11
TP-12
TP-13
TP-14
TP-15
TP-16
TP-19
TP-20
TP-21

BALLAST 1
BALLAST 2

NWSB
NWSB GRAB

LEGEND

- MONITORING WELL
- SOIL BORING
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

PS–PUBLIC SCHOOL.

IS–INTERMEDIATE SCHOOL.

SCALE
0 100 200 FEET

VERIFY SCALE 0 1"

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	SOIL BORING/MONITOR WELL LOCATIONS MAP FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/22/05	SCALE: AS SHOWN	DRAWING NO. 114926B56	FIGURE 3A

Xref: .
Image: .

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Plot Date/Time: 10/22/05 02:01 pm
Plotted by: Samuil.Shkolnik

OFFICE ALBANY, NY

DRAWING NUMBER 114926B57

VERIFY SCALE 0 1"

EAST 156th STREET

E. 156th STREET

PS 156

IS 151

PSGI-4

PSGI-5

PSGI-6

PSGI-7

PSGI-8

PSGI-9

PSGI-10

SG-1

SG-9

SG-11

SG-19

SG-20

SG-21

SG-27

SG-28

SG-29

SG-37

SG-38

SG-45

SG-46

SG-47

SG-49

SG-54

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

N

LEGEND

SOIL GAS POINT

SG-49 SAMPLE IDENTIFICATION

PROPOSED FOOTPRINT OF SCHOOL

SCALE

0 100 200 FEET

DRAFT

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SOIL GAS LOCATION MAP
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/22/05	AS SHOWN	114926B57	3B

Xref:
Images:

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Plot Date/Time: 10/28/05 1:40pm
Plotted by: SamuilShkolnik

OFFICE ALBANY, NY

DRAWING NUMBER 114926B58

VERIFY SCALE 0 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

PS 156

IS 151

MW-18 MW-19 MW-9 PBSB-2 MW-15 (SB-48) MW-7 (SB-44) MW-8 MW-12 (SB-45) MW-20 MW-21 MW-1 MW-10 MW-14 (SB-47) MW-16 (PSB-20) MW-17 (PSB-19) MW-13 (SB-46) MW-6 MW-5 MW-4 MW-3 MW-2 MW-11

PBSB-1 PBSB-3 PBSB-4 PBSB-5

PSB-1 PSB-2 PSB-3 PSB-4 PSB-5 PSB-6 PSB-7 PSB-8 PSB-9 PSB-10 PSB-11 PSB-12 PSB-13 PSB-14 PSB-16 PSB-17 PSB-18

SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-25A SB-26 SB-27 SB-28 SB-29 SB-30 SB-33 SB-34 SB-35 SB-36 SB-37 SB-41 SB-42 SB-43 SB-49

B-11 B-12 B-13 B-14 B-15 B-17 B-19 B-20 B-21 B-23 B-25 B-26 B-27 B-28 B-31 B-33 B-36 B-37 B-43 B-45 B-47 B-50 B-52 B-54 B-56 B-59 B-62 B-65 B-67 B-70 B-71 B-75 B-76 B-78 B-91 B-92 B-93 B-94 B-95

NWSB BALLAST 2 BALLAST 1

TP-11 TP-12 TP-13 TP-14 TP-15 TP-16 TP-19 TP-20 TP-21

A A' B B' C C' D D' E E' F F' G G' H H'

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

New York Central Transportation Company

Land Now Or Formerly Of Pennsylvania

LEGEND

- GEOTECHNICAL SOIL BORINGS
- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- GEOTECHNICAL BORINGS (BY LANGAN ENGINEERING)
- BEDROCK SOIL BORING
- PROPOSED FOOTPRINT OF SCHOOL

SCALE 0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

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REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	CROSS SECTION LOCATIONS			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 10/22/05	SCALE: AS SHOWN	DRAWING NO. 114926B58	FIGURE 4

Xref: .
Image: .

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Plot Date/Time: 10/22/05 02:22pm
Plotted by: Samuil.Shkolnik

OFFICE ALBANY, NY

DRAWING NUMBER 114926B20

A

A'

SB-48/MW-15
SB-47/MW-14
SB-44/MW-7
B-11
B-20
MW5B
B-28
SB-45/MW-12
B-22
B-47
B-54
B-25
B-59
B-65
B-25A
MW-1
B-75
SB-29

0
10
20
30
40
50
60
70
80

LEGEND

- ORGANIC SILT
- SAND
- FILL
- DECOMPOSED BEDROCK
- SILT
- CLAY
- BEDROCK
- SILT + SAND

DRAFT

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 10 20 FEET

VERIFY SCALE 0 1"

Xref: .
Images: .

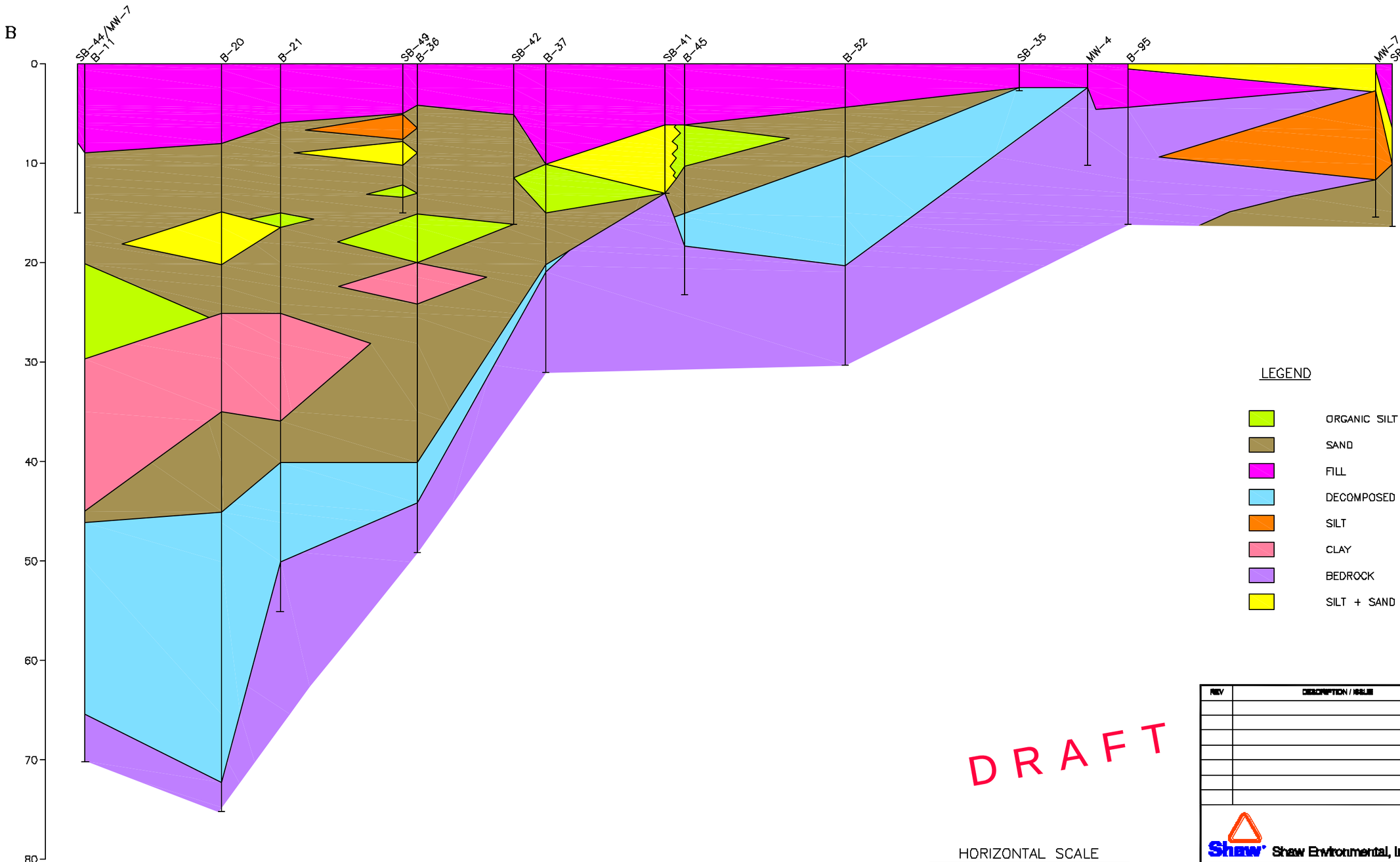
L:\project\114926\114926B20.dwg
Plot Date/Time: 10/22/05 02:27pm
Plotted by: Samuel.Shkarnik

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	A-A' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 09/13/05	SCALE: AS SHOWN	DRAWING NO. 114926B20	FIGURE 4A

B



B'

DRAFT

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 10 20 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	B-B' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 09/09/05	SCALE: AS SHOWN	DRAWING NO. 114926B17	FIGURE 4B

OFFICE ALBANY, NY
DRAWING NUMBER 114926B17

VERIFY SCALE 0 1"

Xref: ,
Image: .

L:\project\114926\114926B17.dwg
Plot Date/Time: 10/22/05 02:32pm
Plotted by: SamuilShkarik

C

C'

SB-44 B-11 B-12 B-13 B-14 B-15 SB-20 B-17 B-19 B-27 B-91 MW-6 B-92 SB-21

0 10 20 30 40 50 60 70 80

LEGEND

- ORGANIC SILT
- SAND
- FILL
- DECOMPOSED BEDROCK
- SILT
- CLAY
- BEDROCK
- SILT + SAND

DRAFT

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 10 20 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	C-C' CROSS SECTION MAP
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	09/09/05	AS SHOWN	114926B18	4C

OFFICE ALBANY, NY

DRAWING NUMBER 114926B18

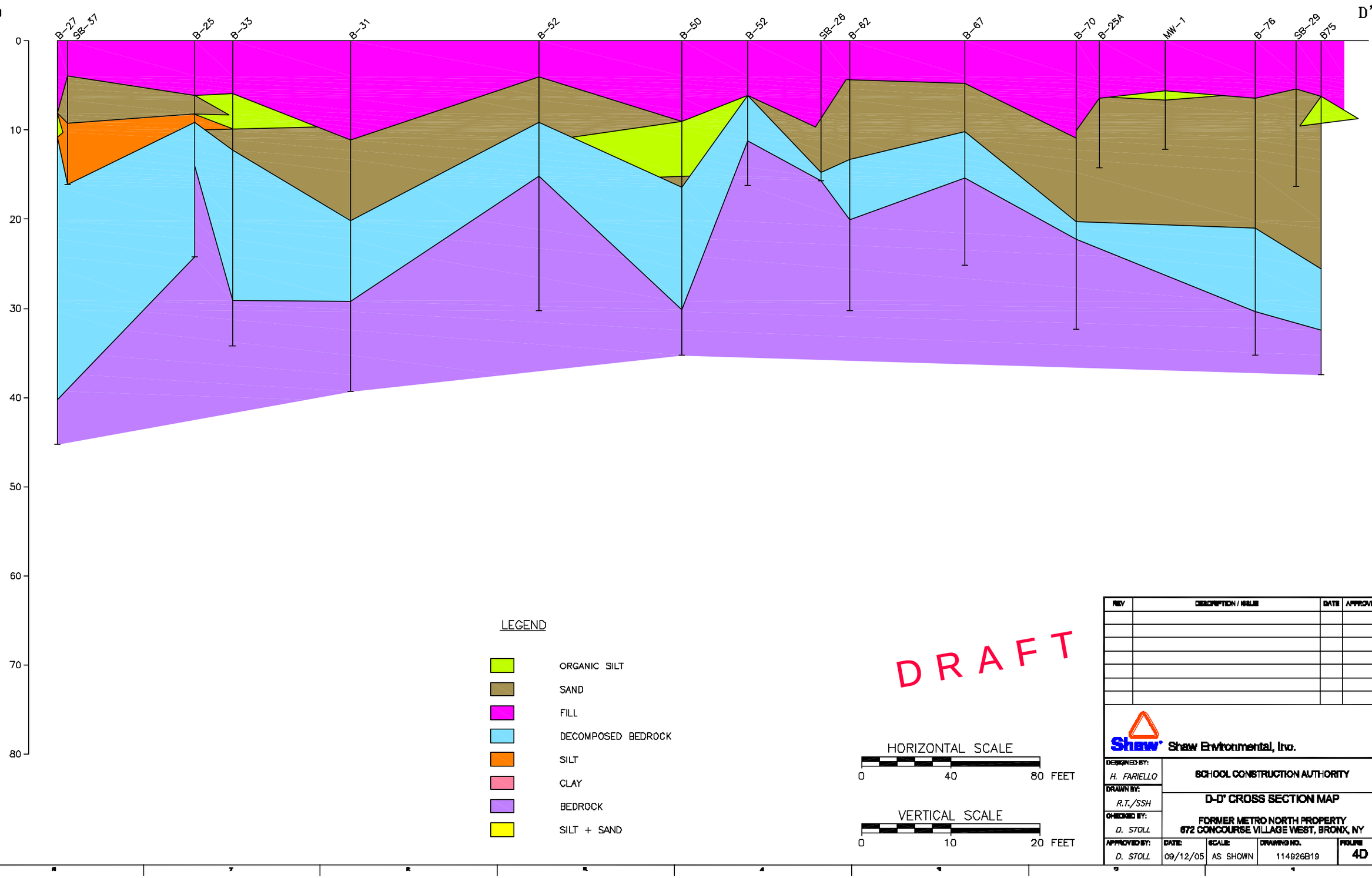
VERIFY SCALE 1"

Xref: ,
Images: ,

L:\project\114926\114926B18.dwg
Plot Date/Time: 10/22/05 02:29pm
Plotted by: SamuilShkolnik

D

D'



LEGEND

- ORGANIC SILT
- SAND
- FILL
- DECOMPOSED BEDROCK
- SILT
- CLAY
- BEDROCK
- SILT + SAND

DRAFT

HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 10 20 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	D-D' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 09/12/05	SCALE: AS SHOWN	DRAWING NO. 114926B19	FIGURE 4D

OFFICE ALBANY, NY

DRAWING NUMBER 114926B19

VERIFY SCALE 1"

Xref:
Images:

L:\projects\114926\114926B19.dwg
Plot Date/Time: 10/21/05 02:29pm
Plotted by: SamuilShkolnik

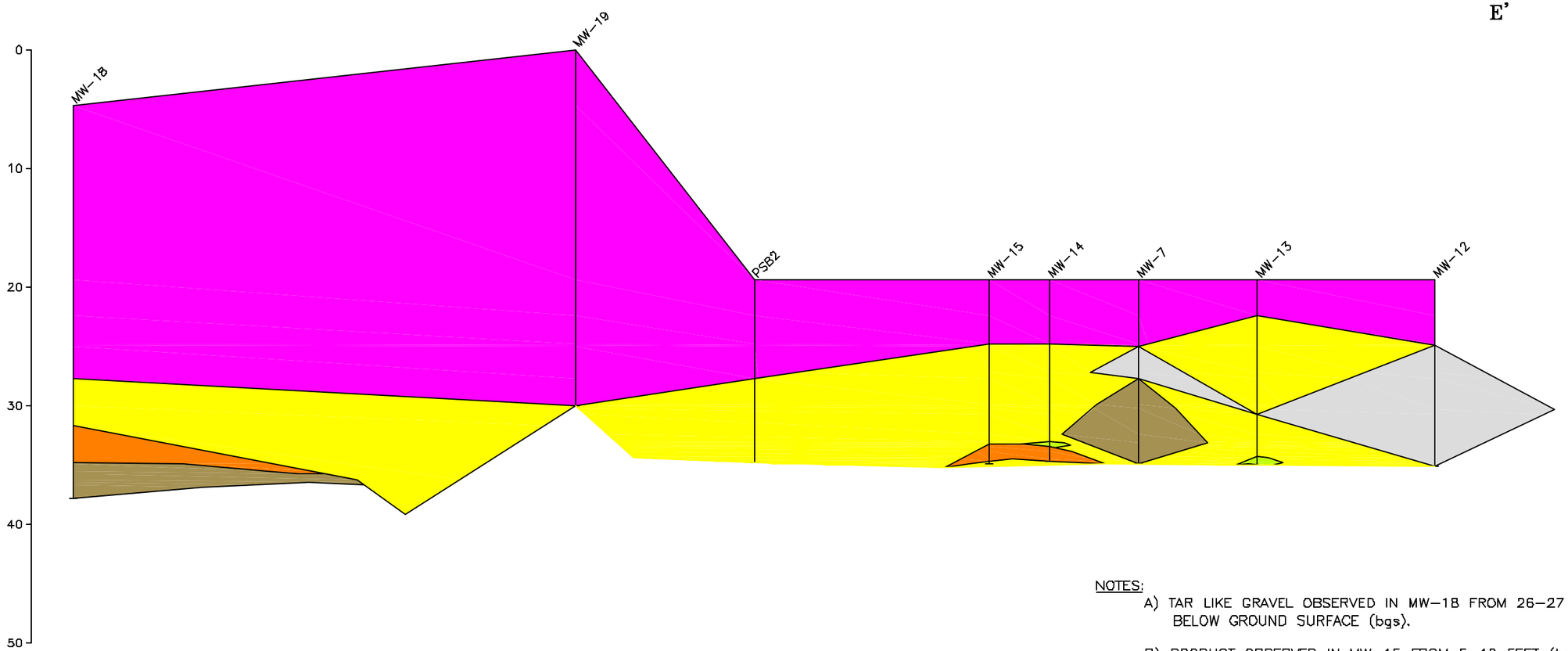
DRAWING NUMBER 114926B37

OFFICE ALBANY, NY

VERIFY SCALE 1"

E

E'



NOTES:

A) TAR LIKE GRAVEL OBSERVED IN MW-18 FROM 26-27 FEET BELOW GROUND SURFACE (bgs).

B) PRODUCT OBSERVED IN MW-15 FROM 5-10 FEET (bgs).

LEGEND

- ORGANIC SILT
- SAND
- FILL
- GRAVEL, SILT + SAND
- SILT
- SILT + SAND

DRAFT

HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 10 20 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	E-E' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 09/28/05	SCALE: AS SHOWN	DRAWING NO. 114926B37	FIGURE 4E

Xref: .
Images: .

L:\projects\114926\114926B37.dwg
Plot Date/Time: 10/22/05 02:31pm
Plotted by: Samuil.Shkolnik

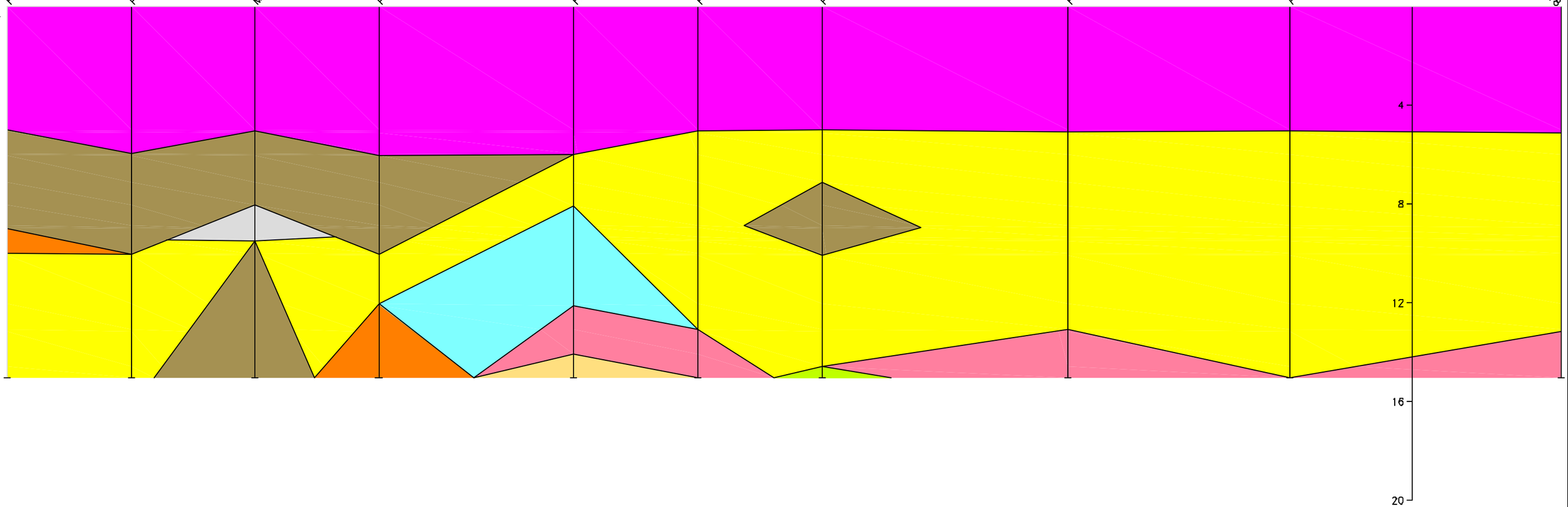
DRAWING NUMBER 114926859

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

F

F'



LEGEND

- ORGANIC SILT
- SAND
- FILL
- SILT
- SILT + SAND
- CLAY
- SAND + GRAVEL
- CLAY + SILT
- SAND + SILT + CLAY

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 4 8 FEET

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: JN/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: S. SHKOLNIK	F-F' CROSS SECTION MAP
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/22/05 · SCALE: AS SHOWN · DRAWING NO.: 114926859 · FIGURE: 4F

Xref: . Images: .

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Plot Date/Time: 10/22/05 02:11pm
Plotted by: Samuil.Shkolnik

DRAWING NUMBER 114926B60

OFFICE ALBANY, NY

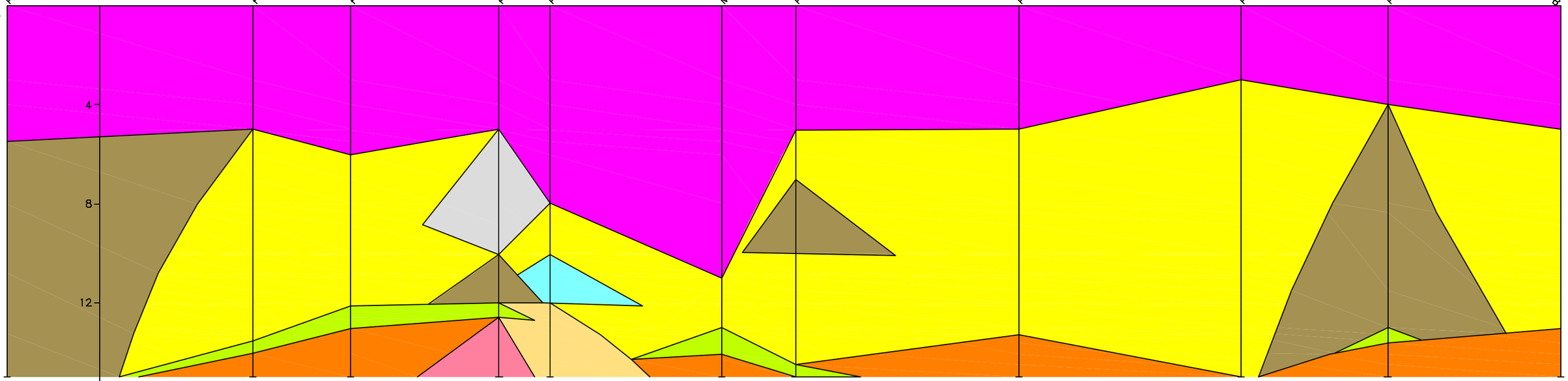
VERIFY SCALE 1"

G

G'

PBSB-3 PSB-5 PSB-6 PSB-10 PBSB-4 MW-17 PSB-11 PSB-13 PSB-16 PSB-17 PSB-18

4
8
12
16
20



LEGEND

- ORGANIC SILT
- SAND
- FILL
- SILT
- SILT + SAND
- CLAY
- GRAVEL
- CLAY + SILT
- SAND + SILT + CLAY

DRAFT

APPROXIMATE HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 4 8 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: JN/SC	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: S. SHKOLNIK	G-G' CROSS SECTION MAP
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/22/05 · SCALE: AS SHOWN · DRAWING NO. 114926B60 · FIGURE 4G

Xref: . Images: .

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Plot Date/Time: 10/22/05 02:13pm
Plotted by: Samuil Shkolnik

DRAWING NUMBER 114926B61

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

H

H'

PBSB-1 PSB-1 PSB-17 PSB-8 PSB-9 PSB-11 PSB13 PSB-14 PSB-16 PSB-17

4
8
12
16
20

LEGEND

- ORGANIC SILT
- SAND
- FILL
- SILT
- SILT + SAND
- CLAY
- DECOMPOSED BEDROCK

DRAFT

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 4 8 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: J. NAFUS	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: S. SHKOLNIK	H-H' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 10/22/05	SCALE: AS SHOWN	DRAWING NO. 114926B61	FIGURE 4H

Xref: .
Image: .

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Plot Date/Time: 10/22/05 02:19pm
Added by: SamuilShkolnik

DRAWING NUMBER 114926B46

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

MW-18 23.79
MW-19 NS
MW-9 22.53
MW-20 20.13
MW-21 19.14
MW-1 15.70
MW-10 12.94
MW-11 9.42
MW-2 11.04
MW-3 10.08
MW-4 13.32
MW-5 13.28
MW-6 11.14
MW-7 (SB-44) 19.28
MW-8 19.96
MW-12 (SB-45) 19.23
MW-13 (SB-46) 18.21
MW-14 (SB-47) 19.35
MW-15 (SB-48) 19.49
MW-16 (PSB-20) 18.50
MW-17 (PSB-19) 12.34

23 22 21 20 19 18 17 16 15 14 13 12 11 10

N

LEGEND

- MONITORING WELL (MW)
- 11.14 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR (DASHED WERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- NS NOT SAMPLED

SCALE
0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: H. FARIELLO	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	GROUNDWATER CONTOUR MAP
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/06/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B46 · FIGURE: 5

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Plot Date/Time: 10/22/05 02:35pm
Plotted by: SamuilShkarik

Xref: .
Images: .

DRAWING NUMBER 114926B62

OFFICE ALBANY, NY

VERIFY SCALE 0" 1"

Xref:

Images:

L:\projects\114926\SR & RAP\114926B62.dwg
Plot Date/Time: 10/24/05 08:19am
Plotted by: SamuilShkarik

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS
LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005.
SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED
BY SHAW IN MAY 2005.

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE EAST

Land Now Or Formerly New York & Harlem Railroad

Land Now Or Formerly City of New York

MW-18

MW-18(27-29)	
27-29	
08/23/05	
Acetone	1600 J
Benzene	150 J
Ethylbenzene	1100
m/p-Xylenes	1000 J
o-Xylenes	830 J
Isopropylbenzene	250 J
n-Propylbenzene	220 J
1,3,5-Trimethylbenzene	1200
1,2,4-Trimethylbenzene	2500
Naphthalene	220000 D

SB48			
2-4		8-9	14-15
04/28/05		04/28/05	04/28/05
Acetone	21 J	550 U	45
Methylene Chloride	2.9 J	180 JB	2.8 J
Benzene	0.47 U	730 J	0.58 U
Ethylbenzene	0.42 U	7100	0.51 U
m/p-Xylenes	2.2 J	2600	1.3 U
o-Xylenes	4.4 J	1800	0.56 U
Naphthalene	59	120000 D	0.85 U

SB47		SB47	SB47
2-4		7-8	13-15
04/28/05		04/28/05	04/28/05
Acetone	540 U	550 U	31 J
Benzene	91 J	830 J	0.51 U
Toluene	370 J	310 J	0.51 U
Ethylbenzene	1300	9200	0.45 U
m/p-Xylenes	3900	6800	1.1 U
o-Xylenes	2300	3900	0.49 U
Naphthalene	31000	180000 D	9.2

SB44			SB44 DUP	SB44
3-5		5-7	5-7	14-15
04/27/05		04/27/05	04/27/05	04/27/05
Benzene	0.49 U	4300 J	8600 J	5.9 J
Toluene	0.49 U	1100 J	3400 J	18
Ethylbenzene	2.3 J	14000	23000	160
m/p-Xylenes	11	18000	35000	340
o-Xylenes	2.5 J	2500 J	7800 J	25
Naphthalene	5.4 J	33000 J	91000 J	62

SB46			
3-5		8-10	13-14
04/28/05		04/28/05	04/28/05
Acetone	25 J	4.0 U	4.1 U
Benzene	0.47 U	5.5 J	52
Toluene	0.48 U	0.48 U	3.6 J
m/p-Xylenes	1.0 U	1.0 U	28
o-Xylenes	0.45 U	0.45 U	5.5 J
Naphthalene	0.69 U	4.8 J	15

NWSB
NA
04/06/05
Toluene 760 J
Ethylbenzene 19000
m/p-Xylenes 50000
o-Xylenes 6400
Naphthalene 27000

SB45		SB45DL	SB45	
2-4		2-4	5-7	14-15
04/27/05		04/27/05	04/27/05	04/27/05
Acetone	4.0 U	880 JD	510 U	4.0 U
Benzene	12	35 UD	37 U	2.2 J
Toluene	70	57 UD	7700	0.49 U
Ethylbenzene	530 E	60 UD	61000 D	5.7 J
m/p-Xylenes	1600 E	140 D	130000 D	26
o-Xylenes	300 E	54 D	30000	6.0
Naphthalene	3800 D	3800 D	220000 D	3.6 J

SB22			
3-5		6-8	10-11
04/27/05		04/27/05	04/27/05
Acetone	12 JB	560 U	11 JB
Methylene Chloride	3.3 JB	110 U	2.3 U
Benzene	0.50 U	23000	0.51 U
Toluene	0.51 U	9600	0.51 U
Ethylbenzene	0.44 U	43000 D	0.45 U
m/p-Xylenes	1.1 U	45000	1.1 U
o-Xylenes	0.48 U	3300	0.49 U
Naphthalene	9.4	32000	4.1 J

SB25			
2-4		6-8	14-16
04/15/05		04/15/05	04/15/05
Acetone	130	50	22 J
Methylene Chloride	3.8 J	4.0 J	4.0 J
Toluene	2.0 J	0.48 U	0.47 U
Naphthalene	60	6.3	27

SB25A		
4-6		6-8
04/15/05		04/15/05
Acetone	81	140
Methylene Chloride	2.7 J	3.6 J
Naphthalene	3.2 J	5.7 J

SB27	SB27DUP
14-16	14-16
04/19/05	04/19/05
No VOC* Detections	

SB-30			
0-2		6-8	12-14
04/14/05		04/14/05	04/14/05
Acetone	3.8 U	24 JB	4.0 U
Methylene Chloride	2.9 J	2.2 U	3.9 J
m/p-Xylenes	0.97 U	1.5 J	1.0 U
o-Xylenes	0.43 U	1.3 J	0.46 U
Naphthalene	0.66 U	7900 D	0.70 U

TP19	TP19 DUP
3-4	5-6
04/19/05	04/18/05
No VOC* Detections	

TP12	
4-5	
04/19/05	
Naphthalene	1.2 J

NWTPGRAB	
NA	
04/06/05	
Toluene	300 J
Ethylbenzene	6900
m/p-Xylenes	25000
o-Xylenes	4600
Naphthalene	7100

SB20	
14-16	
04/19/05	
Benzene	29 J
Toluene	2.3 J
Ethylbenzene	2.3 J
m/p-Xylenes	14
o-Xylenes	4.5 J
Naphthalene	4.7 J

MW-15 (SB-48)
MW-14 (SB-47)
MW-7 (SB-44)
MW-13 (SB-46)
SB-20
SB-37
NWSB
NWSB GRAB
MW-12 (SB-45)
SB-49
SB-42
SB-23
TP-14
TP-16
TP-15
SB-21
SB-24
SB-41
SB-22
MW-20
SB-26
SB-25
MW-21
SB-25A
BALLAST 2
SB-29
TP-20
TP-21
SB-28
TP-13
SB-30
TP-19
SB-43
SB-35
SB-36
SB-27
TP-11
TP-12
SB-33
SB-34
BALLAST 1

DRAFT

SCALE
0 100 200 FEET

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

TP12
4-5
04/19/05
Naphthalene 1.2 J

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

SB27	SB27DUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

MW-8, MW-9 and MW-19 not shown because they were not sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY:	SCHOOL CONSTRUCTION AUTHORITY			
HF/SG				
DRAWN BY:	VOC COMPOUNDS DETECTED IN SOIL (FIGURE 1 OF 4)			
R.T./SSH	FORMER METRO NORTH PROPERTY			
CHECKED BY:	672 CONCOURSE VILLAGE WEST, BRONX, NY			
D. STOLL				
APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B62	6A

DRAWING NUMBER 114926B63

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

Xref: .
Images: .

L:\projects\114926\SR & RR\114926B63.dwg
Plot Date/Time: 10/24/05 08:19am
Plotted by: Samuil.Shkolnik

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Now Or Formerly Of New York & Harlem Railroad

MW-18
MW-19 NS
MW-9 NS
MW-15 (SB-48)
MW-14 (SB-47)
MW-7 (SB-44)
MW-13 (SB-46)
MW-8 NS
NWSB
NWSB GRAB
MW-12 (SB-45)
MW-20
MW-21

SB-20
SB-37
SB-49
SB-42
SB-23
SB-22
SB-41
SB-26
SB-25
SB-35
SB-36
SB-43
SB-24
SB-27
SB-21
SB-28
SB-30
SB-25A
SB-29
SB-33
SB-34

TP-14
TP-15
TP-16
TP-20
TP-21
TP-13
TP-19
TP-11
TP-12

BALLAST 1
BALLAST 2

SB49		SB49 DUP	SB49
3-5	8-10	8-10	13-15
04/29/05	04/29/05	04/29/05	04/29/05
Acetone	78 JB	4.2 U	4.1 U	26 UJ
Methylene Chloride	54 B	8.9 U	13 U	15 U
Benzene	2.2 U	17	5.5 U	0.47 U
m/p-Xylenes	4.8 U	6.4	6.2	1.0 U
Naphthalene	22 J	16 J	28 J	2.3 J

SB42	
4-6	
04/20/05	
Acetone	6.1 JB
Methylene Chloride	2.5 JB
Toluene	1.5 J
Naphthalene	38

SB41	
4-6	
04/15/05	
Acetone	6.5 J
Methylene Chloride	4.1 J
Naphthalene	6.8

MW-20		MW-20
17-19		19-21
8/24/2005		08/23/05
Methylene Chloride	3.5 J	8.6
Naphthalene	16	3.8 J

MW-21 (5-7)	
5-7	
08/23/05	
Acetone	21 J
Methylene Chloride	3.1 J
m/p-Xylenes	2.0 J
o-Xylenes	2.6 J
Isopropylbenzene	1.8 J
n-Propylbenzene	4.6 J
1,3,5-Trimenthylbenzene	39
1,2,4-Trimethylbenzene	120
Sec-butylbenzene	10
p-Isopropyltoluene	30
n-Butylbenzene	24
Naphthalene	96

SB26	
10-12	
04/15/05	
Acetone	11 J
Methylene Chloride	3.5 J

SB35	
0-2	
04/20/05	
Acetone	6.0 J
Naphthalene	2.5 J

SB37	
4-6	
04/20/05	
Acetone	40

TP14	
3-4	
04/19/05	
Methylene Chloride	2.5 JB
m/p-Xylenes	2.3 J

TP16	
3-4	
04/19/05	
Methylene Chloride	2.6 JB

TP15	
3-4	
04/19/05	
Methylene Chloride	2.8 JB
m/p-Xylenes	2.8 J

SB23	
6-8	
04/15/05	
Methylene Chloride	4.0 J

SB24	
6-8	
04/18/05	
Acetone	30 J

SB43
2-4
04/19/05
No VOC* Detections

SB21
4-6
4/18/2005
No VOC* Detections

TP20
4-5
4/18/2005
No VOC* Detections

SB-28	
4-6	
04/14/05	
Methylene Chloride	2.9 J

SB-36	
2-4	
04/14/05	
Methylene Chloride	5.6

BALLAST-2
NA
04/20/05
NO VOC DETECTIONS

TP21	
4-5	
04/18/05	
m/p-Xylenes	1.6 J

TP13	
3-4	
4/18/2005	
Methylene Chloride	2.8 J

TP11
3-4
04/19/05
No VOC* Detections

SB-29	
4-6	
04/13/05	
Methylene Chloride	4.9 J
m/p-Xylenes	1.7 J
Naphthalene	1.2 J

SB-33	
0-4	
04/14/05	
Methylene Chloride	4.5 J

SB-34	
6-8	
04/13/05	

BALLAST-1
NA
04/20/05
No VOC* Detections

RB-41905(A)	RB-41905(B)	RB-42005	TB-42005
-------	-------	-------	-------
4/19/2005	4/19/2005	4/20/2005	4/20/2005
No VOC* Detections			

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

TP13
3-4
4/18/2005
Methylene Chloride	2.8 J

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

TP-19	TP-19DUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

DRAFT

SCALE
0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	VOC COMPOUNDS DETECTED IN SOIL (FIGURE 2 OF 4) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B63 · FIGURE: 6A

DRAWING NUMBER 114926B64

OFFICE ALBANY, NY

PSB3		PSB3	PSB3
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Acetone	600 U	110 U	**25 J**
Methylene Chloride	110 U	**96 JB**	**5.0 JB**
Benzene	**100 J**	**170**	**3.2 J**
Toluene	70 U	13 U	**7.5**
Ethylbenzene	74 U	**470**	**55**
m/p-Xylenes	170 U	**880**	**160**
o-Xylenes	66 U	**66 J**	**110**
Isopropylbenzene	**670 J**	**89 J**	**15**
n-Propylbenzene	**610 J**	**140 J**	**27**
1,3,5-Trimenthylbenzene	67 U	16 U	**18**
1,2,4-Trimethylbenzene	**220 J**	**510**	**87**
Sec-butylbenzene	77 U	13 U	**1.8 J**
p-Isopropyltoluene	66 U	14 U	**1.9 J**
n-Butylbenzene	85 U	11 U	**4.9 J**
Naphthalene	**4700**	**160 J**	**38**

PSB4	
10-12	
08/18/05	
Methylene Chloride	**5.8 J**
Naphthalene	**1.4 J**

PSB10		PSB-10RE
4-6		4-6
08/22/05		08/22/05
Acetone	**140**	**930**
Methylene Chloride	**2.4 J**	**70 J**
2-Butanone	**18 J**	**120 J**
Isopropylbenzene	**58**	**470**
n-Propylbenzene	**83**	**780**
Sec-butylbenzene	**70**	**810**
n-Butylbenzene	**22**	**260**
Naphthalene	**19**	**340**

PSB11	
6-7	
8/19/2005	
Methylene Chloride	**4.3 J**

PSB-9	
7-9	
8/24/2005	
Methylene Chloride	**2.9 J**
2-Butanone	**3.3 J**

PSB2		PSB2	PSB2
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Acetone	**120**	450 U	4.1 U
2-Butanone	**25 J**	370 U	3.4 U
Benzene	**4.2 J**	**1000**	0.49 U
Toluene	0.50 U	**400 J**	0.49 U
Ethylbenzene	0.44 U	**3800**	0.43 U
m/p-Xylenes	**1.3 J**	**9200**	1.1 U
o-Xylenes	**2.0 J**	**1900**	0.47 U
Isopropylbenzene	0.51 U	**14000**	0.51 U
n-Propylbenzene	0.66 U	**20000**	0.65 U
1,3,5-Trimenthylbenzene	0.61 U	**460 J**	0.60 U
1,2,4-Trimethylbenzene	**1.9 J**	**850**	0.46 U
Sec-butylbenzene	0.52 U	**2400**	0.51 U
p-Isopropyltoluene	0.52 U	**290 J**	0.52 U
n-Butylbenzene	0.42 U	**2500**	0.41 U
Naphthalene	0.72 U	**800**	0.71 U

PSB1		PSB1	PSB1
2-3		6-7	14-15
08/17/05		08/17/05	08/17/05
Acetone	4.7 U	**1100 J**	**48**
Carbon Disulfide	0.52 U	49 U	**2.4 J**
Methylene Chloride	**2.9 JB**	**2000 B**	**2.3 JB**
2-Butanone	4.0 U	370 U	**7.1 J**
1,1-Dichloropropene	0.35 U	0.52 U	0.98 U
cis-1,2-Dichloroethene	0.46 U	0.43 U	0.40 U
Benzene	0.56 U	**1100**	0.49 U
m/p-Xylenes	1.2 U	**150 J**	1.1 U
o-Xylenes	0.54 U	51 U	0.47 U
Isopropylbenzene	0.58 U	**130 J**	0.51 U
n-Propylbenzene	0.75 U	**180 J**	0.65 U
1,2,4-Trimethylbenzene	0.53 U	**290 J**	0.46 U
Naphthalene	0.82 U	**2400**	0.71 U

PSB5	
6-7	
08/19/05	
Acetone	**70**
Carbon Disulfide	**2.0 J**
Methylene Chloride	**6.4**
2-Butanone	**13 J**

PSB7	
9-10	
08/18/05	
Acetone	**1300**
Carbon Disulfide	**260**
Methylene Chloride	**180**
1,2,4-Trimethylbenzene	**39 J**
n-Butylbenzene	**81 J**
Naphthalene	**150 J**

PSB12	
11-12	
08/19/05	
Acetone	**44**
Methylene Chloride	**5.7 J**
TOC	**3700**

PSB-18		DUPLICATE
11-13		—
8/25/2005		08/25/05
Acetone	**90**	**140**
Carbon Disulfide	**3.9 J**	**4.1 J**
Methylene Chloride	**13 B**	**9.2 B**
2-Butanone	**14 J**	**26 J**
Trichloroethene	**3.1 J**	**7.7**
Tetrachloroethene	**5.5 J**	**18**

PSB6	
11-12	
08/19/05	
Acetone	**39**
Methylene Chloride	**6.5**
2-Butanone	**8.1 J**
TOC	**2800**

TRIPBLANK		TRIPBLANK	TRIPBLANK	TRIPBLANK	FIELDBLANK-8-23-05
—		—	—	—	—
08/22/05		08/23/05	8/24/2005	08/25/05	8/23/2005
Methylene Chloride	0.43 U	0.43 U	**2.5 J**	0.43 U	0.43 U

PSB-1, PSB-2, PSB-3, PSB-4, PSB-5, PSB-6, PSB-7, PSB-8, PSB-9, PSB-10, PSB-11, PSB-12, PSB-13, PSB-14, PSB-16, PSB-17, PSB-18, MW-16 (PSB-20), MW-17 (PSB-19), PSBSB-1, PSBSB-2, PSBSB-3, PSBSB-4, PSBSB-5

N

SCALE
0 100 200 FEET

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

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Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

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REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	VOC COMPOUNDS DETECTED IN SOIL (3 OF 4) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B64	6A

VERIFY SCALE 0 1"

Xref: .
Image: .

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Plot Date/Time: 10/24/05 08:18am
Plotted by: Samuil.Shkolnik

OFFICE ALBANY, NY

DRAWING NUMBER 114926B65

VERIFY SCALE 0 1"

PSBSB3	
6-7	
8/18/2005	
Acetone	18 J
Methylene Chloride	8.2

PSB19	
11-12	
8/19/2005	
Acetone	33
Methylene Chloride	3.9 J
2-Butanone	6.0 J

PSB-14	
7-8	
8/22/2005	
Methylene Chloride	5.0 J

PSB20	
6-7	
8/17/2005	
Acetone	14 J
Methylene Chloride	3.6 JB
Benzene	1.8 J

PSB-17	
5-10	
8/22/2005	
Acetone	10 J

PSB16	
6-7	
8/19/2005	
Acetone	14 J
Methylene Chloride	3.5 JB
TOC	5200

PSB8	
6-7	
08/19/05	
Acetone	150
Methylene Chloride	9.6
2-Butanone	27 J
TOC	>19,000

PSB-13	
9-11	
8/25/2005	
Methylene Chloride	8.9 B

PSBS-4	
4-6	
8/18/2005	
Acetone	200
Methylene Chloride	11
2-Butanone	30
Naphthalene	13

PSBS-5	
13-15	
8/24/2005	
Acetone	13 J
Methylene Chloride	6.1 J

PBSB2		PBSB2	PBSB2D	PBSB2
3-4		5-7	5-7	14-15
8/15/2005		08/15/05	08/15/05	08/15/05
Acetone	4.2 U	4.3 U	13 J	11 J
Benzene	2.5 J	0.77 J	1.6 J	0.48 U
Toluene	0.51 U	1.6 J	3.4 J	0.49 U
Ethylbenzene	0.44 U	19	6.9	6.1
m/p-Xylenes	1.1 U	41	24	27
o-Xylenes	0.48 U	26	11	12
Isopropylbenzene	14	4.9 J	1.9 J	0.83 J
n-Propylbenzene	36	11	5.1 J	1.4 J
1,3,5-Trimenthylbenzene	1.5 J	4.5 J	5.0 J	3.4 J
1,2,4-Trimethylbenzene	0.85 J	53	13	13
Sec-butylbenzene	3.8 J	1.4 J	0.54 U	0.50 U
p-Isopropyltoluene	0.65 J	0.54 U	0.54 U	0.51 U
n-Butylbenzene	4.8 J	0.43 U	0.43 U	0.41 U
Naphthalene	0.73 U	11	6.1 J	5.1 J

PBSB1		PBSB1	PBSB1
2-3		6-7	13-14
8/16/2005		08/16/05	08/16/05
Carbon Disulfide	0.45 U	0.44 U	36 J
Methylene Chloride	2.2 U	6.4 B	72 J
Benzene	0.49 U	4500 D	390
Toluene	0.50 U	14	12 U
Ethylbenzene	0.43 U	2700 D	250
m/p-Xylenes	1.1 U	64	65 J
o-Xylenes	0.47 U	110	35 J
Isopropylbenzene	0.51 U	15	13 U
n-Propylbenzene	0.66 U	13	16 U
1,3,5-Trimenthylbenzene	0.61 U	21	15 U
1,2,4-Trimethylbenzene	0.47 U	76	94 J
p-Isopropyltoluene	0.52 U	6.0 J	13 U
Naphthalene	0.72 U	2900 D	5800

PSB-1 PSB-2 PSB-3 PSB-4 PSB-5 PSB-6 PSB-7 PSB-8 PSB-9 PSB-10 PSB-11 PSB-12 PSB-13 PSB-14 PSB-16 PSB-17 PSB-18 PBSB-1 PBSB-2 PBSB-3 PBSB-4 PBSB-5 MW-16 (PSB-20) MW-17 (PSB-19)

SCALE 0 100 200 FEET

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

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REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	VOC COMPOUNDS DETECTED IN SOIL (4 OF 4) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B65	6A

Xref: .
Image: .

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Plot Date/Time: 10/24/05 08:17am
Plotted by: Samuil.Shkolnik

DRAWING NUMBER 114926B66

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

MW-18

MW-19 NS

MW-9 NS

MW-8 NS

MW-15 (SB-48)

MW-14 (SB-47)

MW-7 (SB-44)

MW-13 (SB-46)

SB-20

SB-37

NWSB

NWSB GRAB

MW-12 (SB-45)

SB-49

SB-42

SB-23

TP-14

TP-16

TP-15

SB-21

SB-24

SB-24

SB-22

MW-20

SB-41

SB-35

SB-43

SB-26

SB-36

SB-27

SB-25

MW-21

SB-25A

TP-21

TP-20

SB-28

SB-30

TP-13

TP-19

SB-29

BALLAST 2

TP-11

TP-12

SB-33

SB-34

BALLAST 1

Formerly Of The City Of New York Or Formerly Of New York & Harlem Railroad

NWSB	
NA	
04/06/05	
Naphthalene	96000 D
2-Methylnaphthalene	57000 D
Dibenzofuran	7100
Phenanthrene	40000 D
Fluoranthene	24000 D
Pyrene	28000 D
Benzo(a)anthracene	7400 D
Chrysene	6700 D
Benzo(b) fluoranthene	6600
Benzo(k)fluoranthene	2200
Benzo(a)pyrene	5100
Indeno (1,2,3-cd)pyrene	1500
Dibenz(a,h)anthracene	190 J

NWTPGRAB	
NA	
04/06/05	
Naphthalene	1500
2-Methylnaphthalene	770 J
Dibenzofuran	120 J
Phenanthrene	2400
Fluoranthene	2500
Pyrene	2400
Benzo(a)anthracene	970 J
Chrysene	1100 J
Benzo(b) fluoranthene	1100
Benzo(k)fluoranthene	380 J
Benzo(a)pyrene	900 J
Indeno (1,2,3-cd)pyrene	360 J

SB22			
3-5		6-8	10-11
04/27/05		04/27/05	04/27/05
Naphthalene	700 U	840	70 U
2-Methylnaphthalene	690 U	510	69 U
Phenanthrene	4700	240 J	66 U
Fluoranthene	6400	510	61 U
Pyrene	7800	1200	73 U
Benzo(a)anthracene	3000 J	360 J	58 U
Chrysene	2900 J	450	74 U
Benzo(b) fluoranthene	3800 J	460	45 U
Benzo(k)fluoranthene	1600 J	140 J	91 U
Benzo(a)pyrene	3000 J	460	66 U
Indeno (1,2,3-cd)pyrene	1500 J	160 J	52 U

SB20
14-16
04/19/05
No SVOCs* Detected

SB21	
4-6	
04/18/05	
Fluoranthene	75 J
Pyrene	65 J
Benzo(b) fluoranthene	62 J

SB23
6-8
04/15/05
No SVOCs* Detected

SB24
6-8
04/18/2005
No SVOCs* Detected

SB35	
0-2	
04/20/05	
Phenanthrene	6200
Fluoranthene	20000
Pyrene	18000
Benzo(a)anthracene	9300
Chrysene	10000
Benzo(b) fluoranthene	14000
Benzo(k)fluoranthene	4100
Benzo(a)pyrene	9600
Indeno (1,2,3-cd)pyrene	5700
Dibenz(a,h)anthracene	510 J

SB25			
2-4		6-8	14-16
04/15/05		04/15/05	04/15/05
Naphthalene	150 J	69 J	65 U
2-Methylnaphthalene	150 J	66 J	64 U
Dibenzofuran	770	120 J	75 J
Phenanthrene	8100 D	1000	680
Fluoranthene	9800 D	1100	630
Pyrene	7700 D	820	420
Butylbenzylphthalate	1500	63 U	62 U
Benzo(a)anthracene	3300	310 J	150 J
Chrysene	3400	300 J	140 J
Benzo(b) fluoranthene	4100	260 J	110 J
Benzo(k)fluoranthene	1400	99 J	84 U
Benzo(a)pyrene	2400	160 J	74 J
Indeno (1,2,3-cd)pyrene	530 J	81 J	49 U
Dibenz(a,h)anthracene	96 J	49 U	48 U

BALLAST-2	
NA	
04/20/05	
Fluoranthene	1700 J
Pyrene	1700 J
Benzo(a)anthracene	920 J
Chrysene	750 J
Benzo(b) fluoranthene	1200 J
Benzo(a)pyrene	840 J
Indeno (1,2,3-cd)pyrene	680 J

BALLAST-1	
NA	
04/20/05	
Dibenzofuran	620 J
Phenanthrene	12000
Fluoranthene	17000
Pyrene	17000
Benzo(a)anthracene	9500
Chrysene	9400
Benzo(b) fluoranthene	16000 J
Benzo(k)fluoranthene	5100 J
Benzo(a)pyrene	8400 J
	1300 J

SB-34	
6-8	
04/13/05	
Phenanthrene	240 J
Fluoranthene	800
Pyrene	690
Benzo(a)anthracene	380 J
Chrysene	410
Benzo(b) fluoranthene	500
Benzo(k)fluoranthene	160 J
Benzo(a)pyrene	360 J
Indeno (1,2,3-cd)pyrene	170 J

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

SB24
6-8
4/18/2005
No SVOCs* Detected

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

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* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

SCALE
0 100 200 FEET

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 1 OF 6)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B66 · FIGURE: 6B

Xref: .
Images: .
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Plot Date/Time: 10/24/05 08:47 am
Plotted by: SamuilShotnik

DRAWING NUMBER 114926B67

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 156th STREET

MW-18

SB44		SB44 DUP	SB44
3-5	5-7	5-7	14-15
04/27/05	04/27/05	04/27/05	04/27/05
Naphthalene 140 U	40000 J	7,000 JD	230 J
2-Methylnaphthalene 130 U	19000 J	3000 JD	81 J
Phenanthrene 1000	36000 J	6400 J	110 J
Fluoranthene 680 J	13000 J	2400 J	60 U
Pyrene 630 J	29000 J	4900 J	110 J
Butylbenzylphthalate 790 J	330 U	68 U	65 U
Benzo(a)anthracene 360 J	7400 J	1300 J	57 U
Chrysene 590 J	7100 J	1400 J	73 U
Benzo(b) fluoranthene 610 J	6100 J	1200 J	45 U
Benzo(k)fluoranthene 240 J	1700 J	380 J	89 U
Benzo(a)pyrene 400 J	8400 J	1700 J	65 U
Indeno (1,2,3-cd)pyrene 130 J	1600 J	310 J	51 U
Dibenz(a,h)anthracene 100 U	380 J	65 J	51 U

SB42	
4-6	
4/20/2005	
Dibenzofuran	1400 J
Phenanthrene	19000
Fluoranthene	17000
Pyrene	13000
Benzo(a)anthracene	4900
Chrysene	5700
Benzo(b) fluoranthene	5200
Benzo(k)fluoranthene	1500 J
Benzo(a)pyrene	3500 J
Indeno (1,2,3-cd)pyrene	1700 J

SB37
4-6
4/20/2005
No SVOCs* Detected

SB45			
2-4		5-7	14-15
04/27/05		04/27/05	04/27/05
Naphthalene	3100	50000 D	120 J
2-Methylnaphthalene	2600 D	21000	66 U
Dibenzofuran	64 U	950 J	65 U
Phenanthrene	3000	10000	63 U
Fluoranthene	780	4000 J	59 U
Pyrene	1800	7900	70 U
Butylbenzylphthalate	63 U	660 U	64 U
Benzo(a)anthracene	500	2400 J	55 U
Chrysene	440	2300 J	71 U
Benzo(b) fluoranthene	390	2400 J	43 U
Benzo(k)fluoranthene	150 J	890 U	87 U
Benzo(a)pyrene	590	2500 J	63 U
Indeno (1,2,3-cd)pyrene	200 J	910 J	50 U
Dibenz(a,h)anthracene	49 U	510 U	50 U

SB41	
4-6	
04/15/05	
Naphthalene	87 J
Phenanthrene	670
Fluoranthene	790
Pyrene	660
Benzo(a)anthracene	250 J
Chrysene	280 J
Benzo(b) fluoranthene	290 J
Benzo(k)fluoranthene	100 J
Benzo(a)pyrene	230 J
Indeno (1,2,3-cd)pyrene	150 J

SB25A		
4-6		6-8
04/15/05		04/15/05
Phenanthrene	2500	100 J
Fluoranthene	3900	99 J
Pyrene	4400	80 J
Butylbenzylphthalate	25000 D	67 U
Benzo(a)anthracene	1700	58 U
Chrysene	2000	74 U
Benzo(b) fluoranthene	2400	46 U
Benzo(k)fluoranthene	700 J	91 U
Benzo(a)pyrene	1500	66 U
Indeno (1,2,3-cd)pyrene	260 J	53 U

SB26
10-12
04/15/05
No SVOCs* Detected

SB28
4-6
4/14/2005
No SVOCs* Detected

SB29	
4-6	
04/13/05	
Phenanthrene	560
Fluoranthene	840
Pyrene	710
Benzo(a)anthracene	320 J
Chrysene	370 J
Benzo(b) fluoranthene	390
Benzo(k)fluoranthene	130 J
Benzo(a)pyrene	270 J
Indeno (1,2,3-cd)pyrene	100 J

SB36	
2-4	
04/14/05	
Phenanthrene	93 J
Fluoranthene	240 J
Pyrene	200 J
Benzo(a)anthracene	110 J
Chrysene	150 J
Benzo(b) fluoranthene	170 J
Benzo(a)pyrene	100 J
Indeno (1,2,3-cd)pyrene	58 J

SB43	
2-4	
04/19/05	
Fluoranthene	1600 J
Pyrene	1500 J
Benzo(a)anthracene	860 J
Chrysene	980 J
Benzo(b) fluoranthene	1200 J
Benzo(a)pyrene	780 J

SB27	SB27DUP
14-16	14-16
04/19/05	04/19/05
No SVOCs* Detected	

SB30		SB30	SB30
0-2		6-8	12-14
4/14/2005		04/14/05	04/14/05
Phenanthrene	5500	94 J	62 U
Fluoranthene	14000	83 J	58 U
Pyrene	13000	70 U	69 U
Benzo(a)anthracene	8300	55 U	55 U
Chrysene	8700	71 U	70 U
Benzo(b) fluoranthene	14000	43 U	43 U
Benzo(k)fluoranthene	4500	87 U	86 U
Benzo(a)pyrene	9500	63 U	63 U
Indeno (1,2,3-cd)pyrene	2800 J	50 U	50 U

SB33	
0-4	
04/14/05	
Phenanthrene	1800
Fluoranthene	4000
Pyrene	3500
Benzo(a)anthracene	1900
Chrysene	2200
Benzo(b) fluoranthene	2700
Benzo(k)fluoranthene	870 J
Benzo(a)pyrene	1700
Indeno (1,2,3-cd)pyrene	560 J

MW-15 (SB-48)
MW-14 (SB-47)
MW-7 (SB-44)
MW-13 (SB-46)
SB-20
SB-37
NWSB
NWSB GRAB
TP-16
TP-15
TP-14
SB-49
SB-42
SB-23
MW-12 (SB-45)
SB-22
MW-20
SB-41
SB-24
SB-43
SB-26
SB-35
SB-36
SB-25
SB-27
MW-21
SB-25A
SB-28
SB-30
TP-21
TP-20
TP-13
TP-19
BALLAST 2
SB-29
TP-11
TP-12
SB-33
SB-34
BALLAST 1
SB-21

VILLAGE WEST
CONCOURSE VILLAGE EAST
CONCOURSE
New York City Transit Authority Railroad
Bronx Terminal Freight Line

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

SB28
4-6
4/14/2005
No SVOCs* Detected

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

MW-8, MW-9 and MW-19 not shown because they were not sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA, SG AND MW LOCATIONS
LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005.
SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED
BY SHAW IN MAY 2005.

DRAFT

SCALE
0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 2 OF 6)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY
	672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B67	6B

Xref: . Image: .

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Plot Date/Time: 10/24/05 08:59am
Added by: SamuliSworik

DRAWING NUMBER 114926B68

OFFICE ALBANY, NY

VERIFY SCALE 1"

MW-18	
27-29	
08/23/05	
Naphthalene	37000 D
2-Methylnaphthalene	12000 D
Phenanthrene	41000 D
Fluoranthene	15000 D
Pyrene	21000 D
Butylbenzylphthalate	140
Benzo(a)anthracene	6800 JD
Chrysene	6000
Benzo(b)fluoranthene	6900
Benzo(k)fluoranthene	3300
Benzo(a)pyrene	6600 JD
Indeno(1,2,3-cd)pyrene	1400 JD
Dibenz(a,h)anthracene	500 J

MW-20		MW-20
17-19		19-21
8/24/2005		38588
Dibenzofuran	64 J	64 U
Phenanthrene	120 J	110 J
Fluoranthene	130 J	57 U
Pyrene	87 J	69 J
Butylbenzylphthalate	87 J	62 U
bis(2-Ethylhexyl)phthalate	280 J	74 U

MW-21	
5-7	
08/23/05	
Fluorene	620
Phenanthrene	1500 J
Fluoranthene	2200 J
Pyrene	1700 J
Benzo(a)anthracene	820 J
Chrysene	890 J
Benzo(b)fluoranthene	940 J
Benzo(a)pyrene	690 J

SB49		SB49	SB49 DUP	SB49
3-5		8-10	8-10	13-15
04/29/05		04/29/05	04/29/05	04/29/05
Naphthalene	540	69 U	69 U	66 U
2-Methylnaphthalene	200 J	68 U	68 U	65 U
Dibenzofuran	400	67 U	67 U	64 U
Phenanthrene	610	64 U	65 U	62 U
Fluoranthene	910	60 U	60 U	57 U
Pyrene	1100	72 U	72 U	68 U
Benzo(a)anthracene	530	57 U	57 U	54 U
Chrysene	550	73 U	73 U	69 U
Benzo(b) fluoranthene	850	44 U	45 U	43 U
Benzo(k)fluoranthene	380	89 U	90 U	85 U
Benzo(a)pyrene	580	65 U	65 U	62 U
Indeno(1,2,3-cd)pyrene	130 J	51 UJ	52 UJ	49 UJ

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

MW-18, MW-19 NS, MW-9 NS, MW-8 NS, MW-20, MW-21, MW-15 (SB-48), MW-14 (SB-47), MW-7 (SB-44), MW-13 (SB-46), MW-12 (SB-45), NWSB, NWSB GRAB, SB-20, SB-37, SB-21, TP-16, TP-15, TP-14, SB-49, SB-42, SB-23, SB-24, SB-22, SB-41, SB-26, SB-43, SB-35, SB-36, SB-27, SB-25, SB-25A, TP-21, TP-20, SB-28, TP-13, SB-30, TP-19, BALLAST 2, SB-29, TP-11, TP-12, SB-34, SB-33, BALLAST 1

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

MW-21
5-7
08/23/05
Fluorene 620

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

SB49 | SB49 DUP — SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

SCALE
0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 3 OF 6)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B68 · FIGURE: 6B

Xref:
Image:

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Plot Date/Time: 10/24/05 08:53am
Plotted by: SamuilShkolnik

DRAWING NUMBER 114926869

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

MW-18

MW-15 (SB-48)

MW-14 (SB-47)

MW-7 (SB-44)

MW-13 (SB-46)

SB-20

SB-37

NWSB

NWSB GRAB

TP-14

SB-49

MW-12 (SB-45)

SB-42

SB-23

SB-22

MW-20

SB-41

SB-26

SB-25

SB-43

SB-35

SB-36

MW-21

SB-25A

TP-20

TP-21

SB-28

TP-13

SB-30

TP-19

BALLAST 2

SB-29

TP-11

SB-33

SB-34

TP-12

BALLAST 1

TP-16

TP-15

SB-21

SB-24

SB-27

Harlem River Railroad

Lafarge Former Cement Plant

SB47			
2-4		7-8	13-15
04/28/05		04/28/05	04/28/05
Naphthalene	13000	150000 D	130 J
2-Methylnaphthalene	9200	66000	84 J
Phenanthrene	19000 D	150000 D	190 J
Fluoranthene	8600	45000	68 J
Pyrene	13000	69000	100 J
Benzo(a)anthracene	4500	26000	58 U
Chrysene	4600	24000	74 U
Benzo(b) fluoranthene	4700	22000	45 U
Benzo(k)fluoranthene	1700 J	9300	91 U
Benzo(a)pyrene	4100	27000	66 U
Indeno (1,2,3-cd)pyrene	540 J	2200 J	52 U
Dibenz(a,h)anthracene	450 J	2100 J	52 U

SB48			
2-4		8-9	14-15
04/28/05		04/28/05	04/28/05
Naphthalene	2400	9400 D	81 U
2-Methylnaphthalene	710 J	3400	80 U
Phenanthrene	2700	6800 D	76 U
Fluoranthene	2500	1900	71 U
Pyrene	3600	2600	84 U
Benzo(a)anthracene	1400	910	67 U
Chrysene	1400	940	85 U
Benzo(b) fluoranthene	1800	810	52 U
Benzo(k)fluoranthene	700 J	320 J	100 U
Benzo(a)pyrene	1700	1000	76 U
Indeno (1,2,3-cd)pyrene	200 J	130 J	60 U
Dibenz(a,h)anthracene	98 U	64 J	60 U

SB46			
3-5		8-10	13-14
04/28/05		04/28/05	04/28/05
Naphthalene	110 J	66 U	68 U
Phenanthrene	560	61 U	64 U
Fluoranthene	640	57 U	60 U
Pyrene	540	68 U	71 U
Benzo(a)anthracene	270 J	54 U	56 U
Chrysene	300 J	69 U	72 U
Benzo(b) fluoranthene	420	42 U	44 U
Benzo(k)fluoranthene	150 J	85 U	88 U
Benzo(a)pyrene	280 J	61 U	64 U
Indeno (1,2,3-cd)pyrene	54 J	49 U	51 U

TP16	
3-4	
04/19/05	
Phenanthrene	3300
Fluoranthene	5800
Pyrene	5500
Benzo(a)anthracene	2900
Chrysene	3100
Benzo(b) fluoranthene	4200
Benzo(k)fluoranthene	1300 J
Benzo(a)pyrene	2600
Indeno (1,2,3-cd)pyrene	580 J

TP15	
3-4	
04/19/05	
Phenanthrene	760 J
Fluoranthene	2200
Pyrene	2200
Benzo(a)anthracene	1300 J
Chrysene	1400 J
Benzo(b) fluoranthene	1900
Benzo(k)fluoranthene	730 J
Benzo(a)pyrene	1400 J
Indeno (1,2,3-cd)pyrene	690 J

TP14	
3-4	
04/19/05	
Phenanthrene	4800
Fluoranthene	13000
Pyrene	11000
Butylbenzylphthalate	2300 J
Benzo(a)anthracene	6100
Chrysene	7500
Benzo(b) fluoranthene	8800
Benzo(k)fluoranthene	2900 J
Benzo(a)pyrene	5600
Indeno (1,2,3-cd)pyrene	2200 J

TP20	
4-5	
04/18/05	
Phenanthrene	1800 J
Fluoranthene	3300 J
Pyrene	2700 J
Butylbenzylphthalate	53000 D
Benzo(a)anthracene	1400 J
Chrysene	1500 J
Benzo(b) fluoranthene	2500 J
Benzo(a)pyrene	1800 J
Indeno (1,2,3-cd)pyrene	660 J

TP21	
4-5	
04/18/05	
Phenanthrene	1700
Fluoranthene	3300
Pyrene	3900
Benzo(a)anthracene	1800
Chrysene	1800
Benzo(b) fluoranthene	1900
Benzo(k)fluoranthene	690 J
Benzo(a)pyrene	1500 J
Indeno (1,2,3-cd)pyrene	340 J

TP11	
3-4	
04/19/05	
Phenanthrene	8000
Fluoranthene	13000
Pyrene	12000
Benzo(a)anthracene	6400
Chrysene	6900
Benzo(b) fluoranthene	8100
Benzo(k)fluoranthene	2200 J
Benzo(a)pyrene	5500

TP13	
3-4	
04/18/05	
Fluoranthene	2000 J
Pyrene	1800 J
Benzo(a)anthracene	1100 J
Benzo(b) fluoranthene	1600 J

TP12	
4-5	
04/19/05	
Phenanthrene	3500
Fluoranthene	5700
Pyrene	4900
Benzo(a)anthracene	2700
Chrysene	2900
Benzo(b) fluoranthene	3100
Benzo(k)fluoranthene	120 J
Benzo(a)pyrene	2400
Indeno (1,2,3-cd)pyrene	1000 J

TP19		TP19 DUP
5-6		5-6
04/18/05		04/18/05
Naphthalene	4600 J	1400 U
2-Methylnaphthalene	2400 J	1400 U
Dibenzofuran	6800 J	2200 J
Phenanthrene	65000 J	33000 J
Fluoranthene	79000 D	45000
Pyrene	63000 J	37000 J
Benzo(a)anthracene	31000	19000
Chrysene	31000	19000
Benzo(b) fluoranthene	34000	23000
Benzo(k)fluoranthene	11000	7000 J
Benzo(a)pyrene	23000	15000
Indeno (1,2,3-cd)pyrene	7900 J	4700 J
Dibenz(a,h)anthracene	1100 J	1100 U

RB-41905(A)	RB-41905(B)	RB-42005
-------	-------	-------
4/19/2005	4/19/2005	4/20/2005
No SVOCs* Detected		

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

TP13
3-4
04/18/05
Fluoranthene 2000 J

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

RB-41905(A)	RB-41905(B)

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

MW-8, MW-9 and MW-19 not shown because they were not sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

SCALE 0 100 200 FEET

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 4 OF 6) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926869 · FIGURE: 6B

REFERENCE:
BASEMAP PROVIDED BY NYCSCA, SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

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Plot Date/Time: 10/24/05 08:55am
Added by: SamuliSiitonk

Xref: , Images: .

DRAWING NUMBER 114926B70

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

PSB4	
10-12	
08/18/05	
No SVOCs* Detected	

PSB11	
6-7	
08/22/05	
Phenanthrene	63 J
Fluoranthene	60 J

PSB19	
11-12	
8/19/2005	
No SVOCs* Detected	

PSB17	
5-10	
8/22/2005	
No SVOCs* Detected	

PSB3		PSB3	PSB3
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Naphthalene	1900	70 U	66 U
Fluoranthene	91 J	61 U	58 U
bis(2-Ethylhexyl)phthalate	91 U	100 J	75 U

PSB5	
6-7	
8/19/2005	
No SVOCs* Detected	

PSB16	
6-7	
8/19/2005	
No SVOCs* Detected	

PSB2		PSB2	PSB2
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Naphthalene	69 U	370 J	69 U
Diethylphthalate	70 U	77 U	88 J
Phenanthrene	65 U	92 J	64 U
Fluoranthene	79 J	250 J	60 U
Pyrene	72 U	210 J	71 U
Benzo(a)anthracene	57 U	120 J	56 U
Chrysene	73 U	150 J	72 U
bis(2-Ethylhexyl)phthalate	78 U	130 J	77 U
Benzo(b) fluoranthene	45 U	230 J	44 U
Benzo(k)fluoranthene	90 U	140 J	89 U
Benzo(a)pyrene	65 U	160 J	64 U

PSB10	
4-6	
08/22/05	
2-Methylnaphthalene	670
Phenanthrene	680
Anthracene	130 J
Fluoranthene	930
Pyrene	520
Benzo(a)anthracene	270 J
Chrysene	290 J
Benzo(b) fluoranthene	380
Benzo(k)fluoranthene	140 J
Benzo(a)pyrene	210 J
Indeno (1,2,3-cd)pyrene	82 J
Benzo(g,h,i)perylene	99 J

PSB20	
6-7	
8/17/2005	
Naphthalene	74 J
Acenaphthylene	77 J
Phenanthrene	190 J
Anthracene	64 J
Fluoranthene	500
Pyrene	510
Benzo(a)anthracene	250 J
Chrysene	300 J
Benzo(b) fluoranthene	390 J
Benzo(k)fluoranthene	330 J
Benzo(a)pyrene	280 J
Benzo(g,h,i)perylene	130 J

PSB6	
11-12	
8/19/2005	
No SVOCs* Detected	

PSB7	
9-10	
08/18/05	
Naphthalene	260 J
Acenaphthylene	220 J
Acenaphthene	400 J
Dibenzofuran	150 J
Fluorene	210 J
Phenanthrene	1100
Anthracene	560 J
Fluoranthene	1500
Pyrene	2000
Benzo(a)anthracene	1200
Chrysene	1400
Benzo(b) fluoranthene	1500
Benzo(k)fluoranthene	480 J
Benzo(a)pyrene	1100
Indeno (1,2,3-cd)pyrene	580 J
Benzo(g,h,i)perylene	490 J

PSB9	
7-9	
8/24/2005	
Benzo(g,h,i)perylene	63 J

PSB12	
11-12	
08/19/05	
bis(2-Ethylhexyl)phthalate	150 J

PSB18		DUPLICATE
11-13		—
08/25/05		08/25/05
Acenaphthylene	67 U	160 J
Anthracene	62 U	82 J
Fluoranthene	120 J	1600
Pyrene	370 J	2800 D
Benzo(a)anthracene	200 J	1300
Chrysene	230 J	1300
bis(2-Ethylhexyl)phthalate	79 U	79 J
Benzo(b) fluoranthene	180 J	870
Benzo(k)fluoranthene	91 U	290 J
Benzo(a)pyrene	260 J	1300
Indeno (1,2,3-cd)pyrene	52 U	530
Benzo(g,h,i)perylene	200 J	710

PSB1		PSB1	PSB1
2-3		6-7	14-15
08/17/05		08/17/05	08/17/05
Phenanthrene	130 J	66 U	64 U
Fluoranthene	310 J	62 U	60 U
Pyrene	260 J	74 U	71 U
Benzo(a)anthracene	170 J	58 U	56 U
Chrysene	180 J	75 U	72 U
bis(2-Ethylhexyl)phthalate	160 J	100 J	77 U
Benzo(b) fluoranthene	270 J	46 U	44 U
Benzo(k)fluoranthene	160 J	92 U	88 U
Benzo(a)pyrene	180 J	67 U	64 U
Benzo(g,h,i)perylene	80 J	69 U	66 U

FIELDBLANK-8-23-05		RB-081905
—		—
8/23/2005		8/19/2005
Acenaphthylene	1.3 J	1.3 U
Di-n-butylphthalate	1.4 U	1.6 J
bis(2-Ethylhexyl)phthalate	2.6 J	1.6 U

PBSB-3, PSB-5, PSB-10, MW-17 (PSB-19), PSB-14, PSB-17, PSB-4, PSB-6, PBSB-4, MW-16 (PSB-20), PSB-11, PSB-13, PSB-16, PSB-3, PSB-2, PSB-7, PSB-9, PSB-18, PBSB-1, PSB-8, PBSB-5, PSB-12, PBSB-2, PSB-1

N

SCALE 0 100 200 FEET

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

RB – Rinse Blank

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 5 OF 6) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B70	FIGURE 6B

Xref: .. Image: ..

L:\project\114926\SIR & RIR\114926B70.dwg
Plot Date/Time: 10/24/05 08:57am
Plotted by: Samuil.Shotnik

OFFICE ALBANY, NY

DRAWING NUMBER 114926B71

VERIFY SCALE 0 1"

PBSB3
6-7
8/18/2005
No SVOCs* Detected

PSB-14
7-8
8/22/2005
No SVOCs* Detected

PBSB2		PBSB2	PBSB2D	PBSB2
3-4		5-7	5-7	14-15
8/15/2005		8/15/2005	8/15/2005	8/15/2005
Naphthalene	72 J	72 U	72 U	91 J
Acenaphthene	180 J	75 U	75 U	71 U
Fluoranthene	270 J	63 U	63 U	59 U
Pyrene	1000	75 U	75 U	70 U
Benzo(a)anthracene	200 J	59 U	59 U	56 U
Chrysene	260 J	76 U	76 U	71 U
Benzo(b) fluoranthene	510	46 U	47 U	44 U
Benzo(k)fluoranthene	140 J	93 U	93 U	87 U
Benzo(a)pyrene	760	67 U	68 U	63 U
Indeno (1,2,3-cd)pyrene	650	54 U	54 U	50 U
Benzo(g,h,i)perylene	850	70 U	70 U	66 U

PBSB1		PBSB1	PBSB1
2-3		6-7	13-14
08/16/05		08/16/05	08/16/05
Naphthalene	1100 J	1300	410
2-Methylnaphthalene	670 U	130 J	68 J
Acenaphthylene	1100 J	65 U	66 U
Phenanthrene	2600 J	190 J	78 J
Anthracene	1000 J	60 U	61 U
Fluoranthene	5300	96 J	70 J
Pyrene	11000	210 J	89 J
Benzo(a)anthracene	4000 J	63 J	57 U
Chrysene	5100	71 U	73 U
bis(2-Ethylhexyl)phthalate	770 U	120 J	81 J
Benzo(b) fluoranthene	5100	54 J	45 U
Benzo(k)fluoranthene	1600 J	88 U	89 U
Benzo(a)pyrene	6600	77 J	65 U
Indeno (1,2,3-cd)pyrene	4000	51 U	52 U
Benzo(g,h,i)perylene	4900	66 U	67 U

PSB8
6-7
08/19/05
Naphthalene 210 J
Acenaphthylene 97 J
Dibenzofuran 67 J
Phenanthrene 390
Anthracene 96 J
Fluoranthene 650
Pyrene 480
Benzo(a)anthracene 300 J
Chrysene 360 J
bis(2-Ethylhexyl)phthalate 92 JB
Benzo(b) fluoranthene 410
Benzo(k)fluoranthene 180 J
Benzo(a)pyrene 290 J
Indeno (1,2,3-cd)pyrene 160 J
Benzo(g,h,i)perylene 170 J

PBSB-4
4-6
8/23/2005
Naphthalene 3600
2-Methylnaphthalene 1500
Acenaphthylene 690 J
Acenaphthene 930
Dibenzofuran 700 J
Fluorene 1500
Phenanthrene 7300 D
Anthracene 1300
Fluoranthene 4200
Pyrene 4200
Benzo(a)anthracene 1700
Chrysene 1600
bis(2-Ethylhexyl)phthalate 260 J
Benzo(b) fluoranthene 1600
Benzo(k)fluoranthene 930
Benzo(a)pyrene 1400
Indeno (1,2,3-cd)pyrene 320 J
Benzo(g,h,i)perylene 590 J

PSB-13
9-11
8/25/2005
Pyrene 120 J
Benzo(a)anthracene 87 J
Chrysene 92 J
bis(2-Ethylhexyl)phthalate 210 J
Benzo(b) fluoranthene 56 J
Benzo(a)pyrene 93 J
Indeno (1,2,3-cd)pyrene 64 J

PBSB-5
13-15
8/24/2005
Fluorene 70

PBSB-3, PSB-5, PSB-10, MW-17 (PSB-19), PSB-14, PSB-17, PSB-4, PSB-6, PSB-11, PSB-13, PSB-16, MW-16 (PSB-20), PSB-3, PBSB-4, PSB-9, PBSB-2, PSB-2, PSB-7, PSB-18, PBSB-1, PSB-8, PBSB-5, PSB-12, PSB-1

N

SCALE 0 100 200 FEET

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

Notes:

All results are in parts per billion (ppb) or microgram per kilogram (ug/kg)

B – Analyte was found in the blank as well as the sample.

D – Analysis at a secondary dilution factor.

U – Analyte not detected

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 6 OF 6) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B71	FIGURE 6B

Xref: .
Image: .

L:\project\114926\SIR & RIR\114926B71.dwg
Plot Date/Time: 10/24/05 08:59am
Plotted by: Samuil.Shkolnik

DRAWING NUMBER 114926B72

OFFICE ALBANY, NY

VERIFY SCALE 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Consolidated Rail Corporation

New York Central Railroad

MW-18

MW-19 NS

MW-9 NS

MW-15 (SB-48)

MW-7 (SB-44)

MW-14 (SB-47)

MW-13 (SB-46)

MW-8 NS

NWSB

MW-12 (SB-45)

MW-20

MW-21

SB-20

SB-37

SB-49

SB-42

SB-23

SB-22

SB-41

SB-26

SB-25

SB-43

SB-35

SB-36

SB-27

SB-21

SB-24

SB-25A

SB-28

SB-30

TP-16

TP-15

TP-14

TP-20

TP-21

TP-13

TP-19

BALLAST 2

SB-29

TP-11

TP-12

SB-33

SB-34

BALLAST 1

NWSB	
NA	
04/06/05	
Arsenic	27.6 N
Beryllium	0.237 JN
Chromium	34.9 N
Copper	309 N
Iron	51500
Mercury	0.423
Nickel	19.9 N
Zinc	218 N

SB46			
3-5		8-10	13-14
04/28/05		04/28/05	04/28/05
Beryllium	0.238 J	0.249 J	0.193 J
Chromium	8.290	15.5	8.150
Copper	98.6	16.0	10.7
Iron	16800	10500	9850
Mercury	0.539	0.008 J	0.007 J
Zinc	96.3	71.3	52.6

SB20	
14-16	
04/19/05	
Barium	385
Beryllium	0.256 J
Chromium	11.9
Iron	10100
Zinc	227

SB21	
4-6	
04/18/05	
Beryllium	0.486 J
Chromium	11.5 J
Copper	166
Iron	17600
Mercury	0.102
Nickel	13.2
Zinc	82.1

SB22			
3-5		6-8	10-11
04/27/05		04/27/05	04/27/05
Arsenic	3.860	7.960	0.628 J
Barium	1120	891	23.2 J
Beryllium	0.477 J	0.497 J	0.321 J
Cadmium	0.041 U	3.350	0.041 U
Chromium	21.8 N	17.2 N	8.930 N
Copper	44.6	627	21.8
Iron	15000	22300	12100
Mercury	0.274 N	0.583 N	0.009 JN
Nickel	17.1	28.4	9.780
Zinc	731	1250	46.7

SB23	
6-8	
04/15/05	
Beryllium	0.456 J
Chromium	11.4 N
Iron	12900
Mercury	0.643 N
Zinc	42.0 N

SB24	
6-8	
04/18/05	
Beryllium	0.497 J
Chromium	20.4 J
Copper	28.6
Iron	15800
Mercury	0.232
Nickel	17.1
Zinc	72.7

SB26	
10-12	
04/15/05	
Iron	5490
Zinc	23.5

SB25			
2-4		6-8	14-16
04/15/05		04/15/05	04/15/05
Arsenic	8.600	1.560	0.423 J
Barium	336	88.9	84.6
Beryllium	0.311 J	0.308 J	0.286 J
Chromium	17.1 N	13.9 N	14.0 N
Copper	93.0	27.8	16.8
Iron	15700	10700	10700
Mercury	0.450 N	0.097 N	0.007 UN
Nickel	19.0	13.2	13.5
Zinc	558	127 N	54.5 N

SB27	SB27DUP
14-16	14-16
04/19/05	04/19/05
Beryllium	0.529 J	0.383 UJ
Chromium	16.7	14.1
Copper	14.9 J	62.4 J
Iron	10600	11900
Nickel	14.4 J	25.1 J
Zinc	86.5	65.5

SB28	
4-6	
04/14/05	
Beryllium	0.264 J
Chromium	10.9 N
Iron	10400
Zinc	98.9

SB30			
0-2		6-8	12-14
04/14/05		04/14/05	04/14/05
Arsenic	39.2	1.410	0.560 J
Beryllium	0.253 J	0.429 J	0.907
Cadmium	1.020	0.039 U	0.039 U
Chromium	41.5 N	14.5 N	14.3
Copper	228	13.6	16.5
Iron	59000	19300	13500
Mercury	0.317	0.132	0.007 U
Nickel	36.0 N	12.7 N	39.3 N
Zinc	239	47.8	94.7

NWTPGRAB	
NA	
04/06/05	
Barium	1040 N
Beryllium	0.486 JN
Cadmium	1.250 N
Chromium	23.5 N
Copper	90.2 N
Iron	16200
Mercury	0.520
Nickel	27.3 N
Zinc	901 N

SB25A		
4-6		6-8
04/15/05		04/15/05
Arsenic	9.330	2.760
Barium	553	125
Beryllium	0.373 J	0.355 J
Chromium	20.4 N	14.5 N
Copper	141	29.8
Iron	29200	9530
Mercury	0.310 N	0.063 N
Nickel	24.7	13.5
Zinc	445 N	112 N

SB34	
6-8	
04/13/05	
Beryllium	0.397 J
Chromium	17.3 N
Iron	6200
Zinc	30.3

SB29	
4-6	
04/13/05	
Beryllium	0.499 J
Chromium	14.4 N
Iron	12400
Nickel	14.1 N
Zinc	125

BALLAST-1	
NA	
04/20/05	
Arsenic	72.7
Beryllium	0.349 J
Chromium	53.2
Copper	299
Iron	71400
Mercury	0.540
Nickel	54.0
Zinc	364

SB33	
0-4	
04/14/05	
Arsenic	16.2
Beryllium	0.384 J
Chromium	14.7 N
Copper	170
Iron	17900
Mercury	0.809 D
Nickel	16.5 N
Zinc	338

BALLAST-2	
NA	
04/20/05	
Arsenic	15.3
Beryllium	0.957
Chromium	21.9
Copper	155
Iron	34400
Mercury	0.120 N
Nickel	17.1
Zinc	302

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

SB26
10-12
04/15/05
Iron 5490

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

SB-27	SB-27DUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per million (ppm) or milligram per kilogram (mg/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM GA Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA, SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

Xref: ,
Images: .

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Plot Date/Time: 10/24/05 08:17 am
Plotted by: SamuilSikorik

DRAFT

SCALE
0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN SOIL (FIGURE 1 OF 5)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B72 · FIGURE: 6C

DRAWING NUMBER 114926B73

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Former New York Central Transportation Company

Formerly Of Pennsylvania Railroad

New York Connecting Railroad

Land Now Or Formerly Of

MW-18

MW-19 NS

MW-9 NS

MW-15 (SB-48)

MW-14 (SB-47)

MW-7 (SB-44)

MW-13 (SB-46)

SB-20

SB-37

MW-8 NS

NWSB

MW-12 (SB-45)

SB-49

SB-42

SB-23

SB-22

MW-20

SB-41

SB-26

SB-25

SB-35

SB-36

MW-21

SB-25A

SB-28

TP-20

TP-21

TP-13

BALLAST 2

SB-29

TP-11

TP-12

SB-33

SB-34

BALLAST 1

TP-14

TP-16

TP-15

SB-21

SB-24

SB-43

SB-27

SB-30

TP-19

SB48			
	2-4	8-9	14-15
	04/28/05	04/28/05	04/28/05
Arsenic	3.880	0.517 U	9.880
Barium	479	25.6 J	30.1
Beryllium	0.348 J	0.217 J	0.283 J
Chromium	31.9	10.5	10.6
Copper	58.0	9.240	15.2
Iron	14200	8900	14700
Mercury	0.870 D	0.008 U	0.011 J
Zinc	159	31.0	42.8

TP14	
3-4	
04/19/05	
Arsenic	9.710
Barium	469
Beryllium	0.382 J
Chromium	19.8
Copper	79.5
Iron	17200
Mercury	0.584 N
Nickel	17.4
Zinc	391

SB37	
4-6	
04/20/05	
Beryllium	0.429 J
Chromium	17.7
Copper	42.6
Iron	16800
Nickel	15.9
Zinc	68.7

TP16	
3-4	
04/19/05	
Arsenic	21.4
Beryllium	0.498 J
Chromium	24.7
Copper	150
Iron	41900
Mercury	0.407 N
Nickel	24.5
Zinc	197

TP15	
3-4	
04/19/05	
Arsenic	11.9
Beryllium	0.529 J
Chromium	16.5
Copper	125
Iron	29000
Mercury	0.429 N
Nickel	20.4
Zinc	122

SB42	
4-6	
04/20/05	
Arsenic	9.400
Beryllium	0.542 J
Chromium	20.8
Copper	103
Iron	42200
Mercury	0.888 ND
Nickel	27.5
Zinc	487

SB35	
0-2	
04/20/05	
Arsenic	70.3
Beryllium	0.388 J
Chromium	28.2
Copper	178
Iron	42100
Mercury	0.552 ND
Nickel	29.2
Zinc	239

SB43	
2-4	
04/19/05	
Beryllium	0.425 J
Chromium	17.0
Copper	130
Iron	16400
Mercury	1.1 ND
Nickel	18.8
Zinc	492

SB41	
4-6	
04/15/05	
Beryllium	0.454 J
Chromium	14.0 N
Iron	14200
Mercury	0.161 N
Nickel	13.7
Zinc	89.7 N

SB-36	
2-4	
04/14/05	
Beryllium	0.385 J
Chromium	23.5 N
Copper	38.2
Iron	19500
Mercury	0.101
Nickel	21.7 N
Zinc	92.7

TP20	
4-5	
04/18/05	
Barium	693
Beryllium	0.384 J
Cadmium	1.120
Chromium	18.0 J
Copper	46.8
Iron	14900
Mercury	0.276
Nickel	13.9
Zinc	597

TP21	
4-5	
04/18/05	
Beryllium	0.566 J
Chromium	13.7 N
Copper	52.2
Iron	13500
Mercury	0.301
Zinc	134

TP13	
3-4	
04/18/05	
Beryllium	0.247 J
Chromium	12.4 N
Copper	58.8
Iron	12200
Mercury	0.271
Nickel	13.8
Zinc	223

TP19	TP19 DUP
5-6	5-6
04/18/05	04/18/05
Arsenic 22.7	22.9
Beryllium 0.461 J	0.317 J
Cadmium 2.150	1.420
Chromium 40.7 J	31.4 J
Copper 467 J	231 J
Iron 43400	52700
Mercury 0.726 D	1.1 D
Nickel 35.1	25.8
Zinc 995 J	328 J

RB-41905A	RB-41905B	RB-42005
---	---	---
4/19/2005	4/19/2005	4/19/2005
Beryllium 0.145 J	0.170 J	0.160 J

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

SB37
4-6
04/20/05
Beryllium 0.429 J

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

TP-19	TP-19DUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per million (ppm) or milligram per kilogram (mg/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN SOIL (FIGURE 2 OF 5)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B73	6C

SCALE 0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

L:\project\114926\SR & RR\114926B73.dwg
Plot Date/Time: 10/24/05 08:19am
Added by: SamuliSiitonk

Xref: ,
Images: .

DRAWING NUMBER 114926B74

OFFICE ALBANY, NY

VERIFY SCALE 1" D

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Now Or Formerly Of The City Of New York And Now Or Formerly Of New York & Harlem Railroad Company

Now Or Formerly Of Pennsylvania New York Central Transportation Company

MW-18

MW-18	
27-29	
8/22/2005	
Arsenic	1.730
Barium	102 N
Beryllium	0.321 J
Chromium	12.2
Copper	35
Iron	14600
Mercury	0.144
Nickel	8.840
Selenium	0.897 J
Zinc	44.3

MW-19 NS

MW-9 NS

MW-8 NS

MW-20

MW-21

MW-15 (SB-48)

MW-14 (SB-47)

MW-7 (SB-44)

MW-13 (SB-46)

MW-12 (SB-45)

NWSB

SB47			
2-4		7-8	13-15
04/28/05		04/28/05	04/28/05
Beryllium	0.375 J	0.227 J	0.309 J
Chromium	14.9	12.6	11.9
Copper	34.4	14.0	16.4
Iron	11500	10300	12900
Mercury	0.249	0.025	0.010 J
Nickel	12.7	10.6	15.1
Zinc	180	38.9	46.5

SB44		SB44 DUP	SB44
3-5		5-7	14-15
04/27/05		04/27/05	04/27/05
Arsenic	9.690	3.580	2.730	1.020 J
Barium	338 J	40.3 J	31.8 J	13.5 J
Chromium	9.140 J	10.5 J	7.640 J	13.6 J
Copper	7.710	42.3 J	12.7 J	11.6
Iron	7350	12200	8910	9040
Mercury	0.132 N	0.056 N	0.046 N	0.007 UN
Zinc	265 J	77.9 J	54.7 J	38.5 J

SB45			
2-4		5-7	14-15
04/27/05		04/27/05	04/27/05
Arsenic	4.090	14.6	0.758 J
Beryllium	0.455 J	0.251 J	0.398 J
Chromium	7.460 N	8.88 N	14.9 N
Copper	4.330	144	11.7
Iron	6940	12400	10200
Nickel	2.810 J	7.870	13.7
Zinc	10.1	108	42.0

SB49		SB49 DUP	SB49
3-5	8-10	8-10	13-15
04/29/05	04/29/05	04/29/05	04/29/05
Beryllium	0.179 UJ	0.431 J	0.243 UJ	0.135 UJ
Chromium	20.6 J	16.0 J	8.850 J	9.810 J
Copper	67.3	20.6	8.000	4.450
Iron	19600	11700	8130	6520
Mercury	0.125	0.014 U	0.007 U	0.007 U
Nickel	14.8	16.8	10.2	4.750
Zinc	35.7	57.2	32.3	44.8

MW-20	MW-20
17-19	19-21
08/23/05	08/23/05
Arsenic	1.010 J	1.930
Barium	23.7	28.8 N
Beryllium	0.249 J	0.233 J
Chromium	6.78	7.520
Copper	10	11.2
Iron	11500	12500
Mercury	0.007 U	0.016
Nickel	8.25	8.100
Zinc	35.6	32.9

MW-21 (5-7)	
5-7	
8/24/2005	
Arsenic	3.450
Barium	136
Beryllium	0.325 J
Chromium	17.6
Copper	109
Iron	14500
Mercury	0.202
Nickel	15.7
Zinc	223

TP11	
3-4	
04/19/05	
Arsenic	21.5
Barium	531
Beryllium	0.343 J
Cadmium	1.450
Chromium	28.6
Copper	199
Iron	25900
Mercury	0.927 ND
Nickel	23.1
Zinc	504

TP12	
4-5	
04/19/05	
Arsenic	19.7
Beryllium	0.348 J
Chromium	20.7
Copper	198
Iron	34200
Mercury	0.465 N
Nickel	21.9
Zinc	162

SB-37, SB-20, SB-21, TP-16, TP-15, TP-14, SB-49, SB-42, SB-23, SB-24, SB-22, SB-41, SB-43, SB-26, SB-35, SB-36, SB-25, SB-27, SB-25A, TP-20, TP-21, SB-28, TP-13, SB-30, TP-19, BALLAST 2, SB-29, TP-11, SB-33, SB-34, TP-12, BALLAST 1

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

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Plot Date/Time: 10/24/05 0921am
Plotted by: SamuiShkolnik

Xref:
Images:

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

tp12
4-6
04/19/05
Arsenic	19.7

SAMPLE IDENTIFICATION
DEPTH IN FEET
SAMPLE DATE
ANALYTICAL RESULT

SB44	SB44DUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per million (ppm) or milligram per kilogram (mg/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

* Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

DRAFT

SCALE
0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SC	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN SOIL (FIGURE 3 OF 5)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B74	6C

OFFICE ALBANY, NY | DRAWING NUMBER 114926B75

PSB5	
6-7	
08/19/05	
Beryllium	0.587 J
Cadmium	1.010
Chromium	19.3
Cobalt	10.2
Copper	23.5 N
Iron	18400
Mercury	0.019
Nickel	17.0
Zinc	39.9 N

PSB6	
11-12	
08/19/05	
Beryllium	0.168 J
Cadmium	0.211 J
Chromium	7.730
Cobalt	5.820 J
Copper	12.0 N
Iron	8940
Nickel	10.6
Zinc	32.5 N

PSB4	
10-12	
08/18/05	
Beryllium	0.275 J
Cadmium	0.303 J
Chromium	10
Cobalt	5.610 J
Copper	12.3
Iron	9750
Mercury	0.011 J
Nickel	12.6
Selenium	1.050 J
Zinc	35.2

PSB3		PSB3	PSB3
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Arsenic	0.79 J	0.91 J	1.4
Chromium	11.8	10.6	9.6
Cobalt	2.1 J	3.6 J	4.2 J
Copper	9.7	8.9	9.9
Iron	10100	12400	11600
Mercury	0.259	0.007 U	0.011 J
Nickel	5.8	8.7	10.1
Zinc	43.8	30.2	33.8

PSB1		PSB1	PSB1
2-3		6-7	14-15
08/17/05		08/17/05	08/17/05
Arsenic	1.6	0.49 U	0.48 U
Chromium	11.8	12.2	9.5
Cobalt	4.9 J	3.8 J	5.5 J
Copper	25.5	8.3	13.3
Iron	13100	11800	11100
Mercury	0.244	0.015	0.007 U
Nickel	12.6	11.8	11.9
Zinc	56.1	38.9	87.2

PSB2		PSB2	PSB2
4-5		7-8	14-15
08/17/05		08/17/05	08/17/05
Arsenic	3.0	11.4	0.48 U
Beryllium	0.06 J	0.11 J	0.01 U
Cadmium	0.04 U	1.0	0.04 U
Chromium	15.1	29.6	9.3
Cobalt	6.1 J	6.7 J	3.7 J
Copper	84.6	319	10.5
Iron	18600	28000	9680
Mercury	0.226	0.701	0.010 J
Nickel	14.9	17.5	9.5
Zinc	123	245	34.3

PSB8	
6-7	
08/19/05	
Arsenic	8.000
Beryllium	0.512 J
Cadmium	1.770
Chromium	27.7
Cobalt	8.430
Copper	116 N
Iron	24400
Mercury	0.250 *
Nickel	19.9
Selenium	0.473 J
Zinc	140 N

PSB-9	
7-9	
8/24/2005	
Arsenic	1.070 J
Beryllium	0.438 J
Chromium	20.0
Cobalt	12.6
Copper	26.8
Iron	22800
Mercury	0.028
Nickel	23
Zinc	87.6

PSB7	
9-10	
08/18/05	
Arsenic	7.300
Beryllium	0.389 J
Cadmium	2.780
Chromium	50.2
Cobalt	37.4
Copper	83.6
Iron	22200
Mercury	0.412
Nickel	14.7
Selenium	2.720
Zinc	227

PSB12	
11-12	
08/19/05	
Beryllium	0.323 J
Cadmium	0.593 J
Chromium	12.9
Cobalt	7.340
Copper	16.1 N
Iron	15000
Mercury	0.064
Nickel	13.6
Zinc	41.4 N

RB-081905	
—	
8/19/2005	
Beryllium	1.120 J
Chromium	1.060 J
Mercury	0.1000 J

PSB-14	
7-8	
8/22/2005	
Arsenic	5.890
Beryllium	0.189 J
Chromium	12.7
Cobalt	8.270
Copper	34.7
Iron	18100
Mercury	0.087
Nickel	19.4
Selenium	0.669 J
Zinc	128

PSB-10	
4-6	
08/22/05	
Beryllium	0.211 J
Chromium	15.8
Cobalt	7.460
Copper	18.4
Iron	17300
Mercury	0.040
Nickel	17.0
Selenium	0.787 J
Zinc	50.4

PSB11	
6-7	
08/19/05	
Arsenic	1.950
Beryllium	0.307 J
Cadmium	0.681
Chromium	12.6
Cobalt	7.400
Copper	74.3 N
Iron	15400
Mercury	0.536
Nickel	14.3
Zinc	55.3 N

PBSB-3, PSB-5, PSB-10, MW-17 (PSB-19), PSB-14, PSB-17, PSB-4, PSB-6, PSBSB-4, PSB-11, PSB-13, MW-16 (PSB-20), PSB-16, PSB-3, PSBSB-2, PSB-2, PSB-9, PSB-18, PSB-7, PBSB-1, PSB-8, PSB-12, PSB-1, PBSB-5

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

SCALE 0 100 200 FEET

Notes:

All results are in parts per million (ppm) or milogram per kilogram (mg/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

RB – Rinse blank

* Duplicate analysis not within control limits.

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

** Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY		
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN SOIL (FIGURE 4 OF 5) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY		
CHECKED BY: D. STOLL			
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B75	FIGURE 6C

VERIFY SCALE 0 1"

Xref: .
Image: .

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Plot Date/Time: 10/27/05 09:36am
Plotted by: Samuli.Sikainik

OFFICE ALBANY, NY | DRAWING NUMBER 114926B76

PSB19	
11-12	
08/19/05	
Arsenic	3.000
Beryllium	0.262 J
Cadmium	0.317 J
Chromium	10.4
Cobalt	5.010 J
Copper	11.2 N
Iron	11100
Mercury	0.013
Nickel	11.4
Zinc	38.4 N

PBSB3	
6-7	
08/18/05	
Beryllium	0.328 J
Cadmium	0.353 J
Chromium	12.2
Cobalt	4.180 J
Copper	9.200
Iron	8340
Nickel	10.7
Zinc	33.4

PSB-17	
5-10	
8/22/2005	
Beryllium	0.769
Chromium	4.050
Cobalt	1.070 J
Copper	4.430
Iron	7670
Mercury	0.041
Nickel	1.640 J
Zinc	26.6

PSB16	
6-7	
08/19/05	
Arsenic	0.786 J
Beryllium	0.457 J
Cadmium	0.760
Chromium	21.0
Cobalt	8.650
Copper	21.0 N
Iron	17100
Mercury	0.039
Nickel	13.5
Zinc	39.7 N

PSB2		PSB2	PSB2-(5-7)D	PSB2
3-4		5-7	5-7	14-15
08/15/05		08/15/05	08/15/05	08/15/05
Arsenic	2.460	2.770	2.180	0.470 U
Beryllium	0.539 J	0.556 J	0.486 J	0.466 J
Cadmium	1.790	2.430 N	1.930 N	1.520 N
Chromium	11.7	15.8	12.8	12.6
Cobalt	5.480 J	7.130	4.990 J	5.410 J
Copper	14.2	14.5	10.2	12.2
Iron	10800	15900	13300	9210
Mercury	0.320	0.048	0.048	0.011 J
Nickel	11.7	11.7	10.3	13.3
Selenium	0.426 U	0.439 J	0.675 J	0.409 U
Zinc	53.6	39.6	38.0	39.1

PSB-18		DUPLICATE
11-13		—
08/25/05		08/25/05
Beryllium	0.341 J	0.296 J
Chromium	2.820	1.740
Cobalt	0.136 J	0.111 U
Copper	8.000	2.940
Iron	5360	4120
Mercury	0.048	0.021
Zinc	129 N	58.1

PSB1		PSB1	PSB1
2-3		6-7	13-14
08/16/05		08/16/05	08/16/05
Arsenic	18.3	0.473 U	0.477 U
Beryllium	0.371 J	0.214 J	0.189 J
Cadmium	5.320	0.317 J	0.371 J
Chromium	56.9	10.1	11.4
Cobalt	11.3	4.070 J	4.320 J
Copper	248	8.760	10.5
Iron	51500	8400	8710
Mercury	0.426	0.012 J	0.010 J
Nickel	53.6	11.6	11.3
Selenium	2.800	0.649 J	0.527 J
Zinc	259	28.8	33.2

PSB20	
6-7	
08/17/05	
Arsenic	1.7
Beryllium	0.42 J
Chromium	24.2
Cobalt	9.4
Copper	38.7
Iron	21600
Mercury	0.101
Nickel	18.0
Zinc	76.5

PBSB-4	
4-6	
08/23/05	
Arsenic	2.660
Beryllium	0.325 J
Chromium	12.1
Cobalt	5.660 J
Copper	38.1
Iron	17800
Mercury	0.267
Nickel	11.6
Zinc	71.9

PBSB-5	
13-15	
8/24/2005	
Beryllium	0.282 J
Chromium	8.790
Cobalt	4.140 J
Copper	12.8
Iron	10400
Mercury	0.011 J
Nickel	1030
Zinc	47.7

PSB-13	
9-11	
08/25/05	
Arsenic	1.030 J
Beryllium	0.508 J
Chromium	17.7
Cobalt	8.650
Copper	35.5
Iron	15600
Mercury	0.179
Nickel	18.6
Zinc	191 N

PBSB-3, PSB-5, PSB-10, MW-17 (PSB-19), PSB-14, PSB-17, PSB-4, PSB-6, PBSB-4, PSB-11, PSB-13, MW-16 (PSB-20), PSB-16, PSB-3, PSB-2, PSB-9, PSB-18, PSB-7, PSB-8, PBSB-1, PBSB-5, PSB-12, PSB-1

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

SCALE
0 100 200 FEET

VERIFY SCALE 0 1"

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

Notes:

All results are in parts per million (ppm) or milogram per kilogram (mg/kg)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

* Duplicate analysis not within control limits.

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TAGM Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable TAGM Standard.

** Only analytes that exceeded their TAGM Standards in at least one well are included on this figure.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY		
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN SOIL (FIGURE 5 OF 5) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY		
CHECKED BY: D. STOLL			
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B76 — FIGURE 6C

Xref: .
Image: .

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Plot Date/Time: 10/27/05 09:40am
Plotted by: Samuil.Shkolnik

DRAWING NUMBER 114926B77

OFFICE ALBANY, NY

VERIFY SCALE 0" 1"

MW9-GW 5/18/2005		MW-9 4/19/2005
Acetone	2.3 U	61
Naphthalene	170 D	130
Benzene	23	13
Toluene	1400 D	170
Ethylbenzene	870 D	580 D
m,p-Xylene	3700 D	3200 D
o-Xylene	1800 D	1400 D
Isopropylbenzene	110	100
N-propylbenzene	200	160
1,3,5-Trimethylbenzene	350 D	560 D
1,2,4-Trimethylbenzene	1400 D	1900 D
sec-butylbenzene	19	21
p-Isopropylbenzne	34	41
n-butylbenzene	14	22

MW7-GW 5/18/2005	
Naphthalene	1300 D
Benzene	6100 D
Toluene	150 D
Ethylbenzene	1600 D
m,p-Xylene	1800 D
o-Xylene	310 D
Isopropylbenzene	180
N-propylbenzene	140 D
1,3,5-Trimethylbenzene	170 D
1,2,4-Trimethylbenzene	1300 D
p-Isoproylbenzne	30
n-butylbenzene	18

MW8-GW 5/18/2005	
Naphthalene	270 D
Benzene	170
Toluene	14000 D
Ethylbenzene	1600 D
m,p-Xylene	9800 D
o-Xylene	4700 D
Isopropylbenzene	110
N-propylbenzene	140 D
1,3,5-Trimethylbenzene	360 D
1,2,4-Trimethylbenzene	1500 JD
sec-butylbenzene	18
p-Isoproylbenzne	32
n-butylbenzene	16

MW-20 9/15/2005
No VOCs Detected *

MW-21 9/15/2005
No VOCs Detected *

MW-18 9/15/2005	
Acetone	13 JB
Naphthalene	1400 D
Benzene	8.0
m,p-Xylene	17
o-Xylene	26
Isopropylbenzene	2.9 J
N-propylbenzene	1.1 J
1,3,5-Trimethylbenzene	9.1
1,2,4-Trimethylbenzene	16
p-Isoproylbenzne	1.7 J

Compound	MW16-GW 09/14/05	MW16-GWD 09/14/05
Methyl tert-butyl Ether	1.5 J	1.5 J

Compound	MW17-GW 09/14/05
cis-1,2-Dichloroethene	1.0 J
Dimethylphthalate	1.4 J

MW15-GW 5/19/2005	
cis-1,2-Dichloroethene	8.0
Naphthalene	1600 D
Benzene	1400 D
Toluene	39
Ethylbenzene	470 D
m,p-Xylene	200
o-Xylene	140
Isopropylbenzene	64
N-propylbenzene	77
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	120
p-Isoproylbenzne	7.2
n-butylbenzene	3.2 J

MW14-GW 5/19/2005	
Acetone	29
cis-1,2-Dichloroethene	4.4 J
Naphthalene	950 D
Benzene	470 D
Toluene	230 D
Ethylbenzene	280 D
m,p-Xylene	450 D
o-Xylene	240 D
Isopropylbenzene	46
N-propylbenzene	50
1,3,5-Trimethylbenzene	61
1,2,4-Trimethylbenzene	150 D
sec-butylbenzene	4.3 J
p-Isoproylbenzne	9.7
n-butylbenzene	3.8 J

MW13-GW 5/19/2005	
Acetone	13 J
cis-1,2-Dichloroethene	3.5 J
Naphthalene	48
Benzene	1200 D
Toluene	55
Ethylbenzene	47
m,p-Xylene	200
o-Xylene	25
Isopropylbenzene	96
N-propylbenzene	130
1,3,5-Trimethylbenzene	61
1,2,4-Trimethylbenzene	3.7 J
sec-butylbenzene	4.4 J
p-Isoproylbenzne	0.69 J
n-butylbenzene	7.2

MW12-GW 5/19/2005	
Naphthalene	2500 D
Benzene	3700 D
Toluene	450 D
Ethylbenzene	2400 D
m,p-Xylene	3900 D
o-Xylene	910 D
Isopropylbenzene	190
N-propylbenzene	240 D
1,3,5-Trimethylbenzene	410 D
1,2,4-Trimethylbenzene	2200 D
p-Isoproylbenzne	31
n-butylbenzene	18

MW6-GW 5/17/2005	
Methyl tert-Butyl Ether	0.73 J

MW5-GW 5/16/2005	MW5-GWDUP 5/16/2005
No VOC Detections *	

MW3-GW 5/16/2005
No VOC Detections *

MW4-GW 5/17/2005
No VOC Detections *

MW2-GW 5/19/2005	
cis-1,2-Dichloroethene	2.2 J

MW1-GW 5/18/2005	
Acetone	84
Methyl tert-Butyl Ether	1.6 J
Tetrachloroethene	9.1
m,p-Xylene	1.4 J
o-Xylene	0.68 J

MW10-GW 5/17/2005	
Vinyl Chloride	9.4
Methyl tert-Butyl Ether	1.5 J
cis-1,2-Dichloroethene	13

MW11-GW 5/17/2005
No VOC Detections *

RB041905 4/19/2005	RB051805 5/18/2005
No VOC Detections	

MW-18, MW-19 NS, MW-9, MW-7 (SB-44), MW-8, MW-20, MW-21, MW-15 (SB-48), MW-14 (SB-47), MW-13 (SB-46), MW-12 (SB-45), MW-1, MW-10, MW-11, MW-16 (PSB-20), MW-17 (PSB-19), MW-6, MW-5, MW-4, MW-3, MW-2

EAST 156th STREET

58th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York / Land Now Or Formerly Of New York & Harlem Railroad

New York Central Transportation Company

Land Now Or Formerly of Pennsylvania

SCALE 0 100 200 FEET

DRAFT

LEGEND

MONITORING WELL

PROPOSED FOOTPRINT OF SCHOOL

MW3-GW 5/16/2005
No VOC Detections *

SAMPLE IDENTIFICATION
SAMPLE DATE
ANALYTICAL RESULT

MW5-GW	MW5-GWDUP

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or micrograms per liter (ug/L)

D – This flag identifies all compounds identified in an analysis at a secondary dilution factor.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TOGS class GA Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable GA groundwater standard.

* Only analytes that exceeded their class GA Groundwater Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

L:\projects\114926\SR & RR\114926B77.dwg
Plot Date/Time: 10/24/05 10:08am
Plotted by: SamuilShkirlik

Xref:
Image:

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	10/24/05	AS SHOWN	114926B77	7A

DRAWING NUMBER 114926B78

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 158th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

New York Central Transportation Company

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

DRAFT

MW-18	
9/15/2005	
Naphthalene	56
2-Methylnaphthalene	41
Acenaphthylene	35
Acenaphthene	15 J
Fluorene	36
Phenanthrene	190 D
Anthracene	38
Fluoranthene	94
Pyrene	140
Benzo(a)Anthracene	42
Chrysene	41
Benzo(b)Fluoranthene	45
Benzo(k)Fluoranthene	9.0 J
Benzo(a) pyrene	50
Indeno(1,2,3-cd)pyrene	27
Benzo(g,h,i)perylene	41

MW9-GW		MW-9
5/18/2005		4/19/2005
2,4-Dimethylphenol	9.0 J	1.2 U
Naphthalene	80	1.5 U
2-Methylnaphthalene	22	1.1 U
Butylbenzylphthalate	64	1.5 U
bis(2-Ethylhexyl)phthalate	3.5 J	2.0 J

MW7-GW	
5/18/2005	
Phenol	22
2,4-Dimethylphenol	24
Naphthalene	750 D
2-Methylnaphthalene	130 D
Acenaphthylene	2.1 J
Acenaphthene	29
Fluorene	13
Phenanthrene	27
Anthracene	4.5 J
Fluoranthene	2.2 J
Pyrene	5.2 J

MW8-GW	
5/18/2005	
2-Methylphenol	7.9 J
2,4-Dimethylphenol	6.7 J
Naphthalene	220 D
2-Methylnaphthalene	45
Di-n-butylphthalate	1.4 J
Butylbenzylphthalate	37
bis(2-Ethylhexyl)phthalate	14

MW-20
9/15/2005
No SVOCs Detected*

MW-21	
9/15/2005	
bis(2-Ethylhexyl)phthalate	2.1 J

MW1-GW	
5/18/2005	
Butylbenzylphthalate	38
bis(2-Ethylhexyl)phthalate	8.5 J

MW10-GW	
5/17/2005	
Butylbenzylphthalate	41
bis(2-Ethylhexyl)phthalate	4.6 J

MW11-GW	
5/17/2005	
Butylbenzylphthalate	49
bis(2-Ethylhexyl)phthalate	41

MW12-GW	
5/19/2005	
2,4-Dimethylphenol	4.5 J
Naphthalene	1300 D
2-Methylnaphthalene	80 JD
Acenaphthene	17
Dibenzofuran	3.0 J
Fluorene	5.6 J
Phenanthrene	9.1 J

MW13-GW	
5/19/2005	
Naphthalene	28
2-Methylnaphthalene	21
Acenaphthene	2.8 J

MW2-GW	
5/19/2005	
Butylbenzylphthalate	41
bis(2-Ethylhexyl)phthalate	19

MW4-GW	
5/17/2005	
Butylbenzylphthalate	18
bis(2-Ethylhexyl)phthalate	2.9 J

MW3-GW	
5/16/2005	
Butylbenzylphthalate	12

MW-5GW	MW-5GWD
5/16/2005	5/16/2005
Butylbenzylphthalate 20	19

MW6-GW	
5/17/2005	
Butylbenzylphthalate	23
bis(2-Ethylhexyl)phthalate	3.5 J

MW15-GW	
5/19/2005	
Naphthalene	750 D
2-Methylnaphthalene	78 JD
Acenaphthene	8.6 J
Fluorene	7.4 J
Phenanthrene	16

MW14-GW	
5/19/2005	
Phenol	8.0 J
3+4-Methylphenols	5.4 J
2,4-Dimethylphenol	2.4 J
Naphthalene	310 D
2-Methylnaphthalene	60
Acenaphthene	19
Fluorene	6.3 J
Phenanthrene	10 J

Compound	MW16-GW	MW16-GWD
	09/14/05	09/14/05
No Detection	-	-

Compound	MW17-GW
	09/14/05
Dimethylphthalate	1.4 J

RB041905	RB051805
4/19/2005	5/18/2005
bis(2-Ethylhexyl)phthalate 1.8 J	1.6 U

MW-18, MW-19 NS, MW-9, MW-7 (SB-44), MW-8, MW-20, MW-21, MW-1, MW-10, MW-12 (SB-45), MW-11, MW-13 (SB-46), MW-14 (SB-47), MW-15 (SB-48), MW-16 (PSB-20), MW-17 (PSB-19), MW-6, MW-5, MW-4, MW-3, MW-2

SCALE 0 100 200 FEET

LEGEND

MONITORING WELL

PROPOSED FOOTPRINT OF SCHOOL

MW3-GW
5/16/2005
Butylbenzylphthalate 12

SAMPLE IDENTIFICATION
SAMPLE DATE
ANALYTICAL RESULT

MW5-GW	MW5-GWD

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or micrograms per liter (ug/L)

D – This flag identifies all compounds identified in an analysis at a secondary dilution factor.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not sampled

Red **Bold face** values indicate analyte detected above laboratory detection limit and result exceeds TOGS class GA Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable GA groundwater standard.

* Only analytes that exceeded their class GA Groundwater Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	SEMI VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY
APPROVED BY: D. STOLL	672 CONCOURSE VILLAGE WEST, BRONX, NY

DATE:	SCALE:	DRAWING NO.	FIGURE
10/24/05	AS SHOWN	114926B78	7B

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R4 Date/Time: 10/24/05 10:08am
Added by: SamuilShkirik

Xref:

Image:

DRAWING NUMBER 114926879

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

Xref: .
Image: .

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Plot Date/Time: 10/24/05 10:28am
Plotted by: Samuil.Shkolnik

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

EAST 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Formerly The City Of New York & Harlem Railroad

Formerly Of New York

Land Transfer

MW-18

MW-19 NS

MW-9

MW-15 (SB-48)

MW-14 (SB-47)

MW-7 (SB-44)

MW-13 (SB-46)

MW-6

MW-8

MW-12 (SB-45)

MW-5

MW-20

MW-3

MW-4

MW-21

MW-2

MW-1

MW-10

MW-11

MW9-GW 5/18/2005		MW-9 4/19/2005
Aluminum	3880	46600
Antimony	3.170 U	13.5 J
Arsenic	11.6	8.490 J
Barium	195 JN	585
Beryllium	0.185 J	2.620 J
Cadmium	0.765 J	0.327 U
Calcium	166000	95700
Chromium	11.8 N	78.7
Cobalt	6.300 J	40.8 J
Copper	36.8	214
Iron	9070	64400 N
Lead	22.6	223
Magnesium	29000	30300
Manganese	1170	1170
Mercury	0.0400 J	1.66
Nickel	12.1 J	76.7
Potassium	21600	30900
Selenium	5.980 J	3.040 U
Sodium	242000	165000
Vanadium	10.2 J	127
Zinc	65.3	462

MW15-GW 5/19/2005	
Aluminum	365
Arsenic	4.880 J
Barium	227
Calcium	140000
Iron	15000
Magnesium	35600
Manganese	4500
Mercury	0.0900 J
Potassium	16200 N
Selenium	6.130 J
Sodium	166000
Zinc	9.180 J

MW14-GW 5/19/2005	
Aluminum	242
Arsenic	7.640 J
Barium	140 J
Calcium	129000
Copper	10.8 J
Iron	11200
Lead	4.760 J
Magnesium	32400
Manganese	2220
Mercury	0.0900 J
Nickel	3.380 J
Potassium	34300 N
Sodium	227000
Vanadium	5.960 J
Zinc	19.6 J

MW-18 9/15/2005	
Aluminum	36900
Antimony	7.7 J
Arsenic	10.8
Barium	651
Calcium	40900
Chromium	98.5
Cobalt	38.5 J
Copper	191
Iron	64500
Lead	529
Magnesium	19700
Manganese	1780
Mercury	2.180
Nickel	78.4
Potassium	20200
Selenium	5.6 J
Silver	99.9
Sodium	339000
Vanadium	93.7
Zinc	364

MW6-GW 5/17/2005	
Aluminum	581 J
Barium	150 J
Calcium	198000
Iron	9650 J
Lead	45.0 N
Magnesium	67500
Manganese	1700
Potassium	8310 J
Sodium	65200 J
Zinc	58.0 J

MW7-GW 5/18/2005	
Aluminum	142 J
Barium	212 N
Calcium	176000
Iron	28400
Lead	20.1
Magnesium	56700
Manganese	2680
Potassium	30400
Sodium	196000
Zinc	28.0

MW13-GW 5/19/2005	
Aluminum	701
Arsenic	8.650 J
Barium	287
Cadmium	0.750 J
Calcium	149000
Chromium	1.270 J
Cobalt	0.815 J
Copper	20.1 J
Iron	45100
Magnesium	27600
Manganese	5780
Mercury	0.0800 J
Nickel	3.520 J
Potassium	26900 N
Selenium	7.280 J
Sodium	143000
Vanadium	3.540 J
Zinc	18 J

MW12-GW 5/19/2005	
Aluminum	70.2 J
Barium	205
Cadmium	0.625 J
Calcium	165000
Chromium	0.465 J
Cobalt	0.540 J
Copper	16.0 J
Iron	36800
Lead	195
Magnesium	44000
Manganese	5550
Mercury	0.0700 J
Nickel	1.900 J
Potassium	20300 N
Selenium	4.760 J
Sodium	339000
Vanadium	2.440 J
Zinc	13.5 J

MW-5GW 5/16/2005		MW-5GWD 5/16/2005
Aluminum	828 J	378 J
Barium	105 J	87.4 J
Calcium	151000 J	12700 J
Cobalt	1.740 UJ	3.480 J
Copper	11.6 J	14.8 JN
Iron	15100	12300
Lead	63.1	43.7
Magnesium	46100	38700
Manganese	1930	1600
Sodium	15400 J	12900 J
Zinc	36.7	32.7

MW8-GW 5/18/2005	
Aluminum	701
Arsenic	5.000 J
Barium	144 JN
Calcium	180000
Chromium	9.270 JN
Cobalt	2.900 J
Copper	9.280 J
Iron	16700
Lead	9.640
Magnesium	44100
Manganese	9120
Nickel	10.7 J
Potassium	28600
Selenium	4.720 J
Sodium	123000
Vanadium	1.280 J
Zinc	12.2 J

MW1-GW 5/18/2005	
Aluminum	1240
Barium	69.0 JN
Calcium	204000
Chromium	4.380 JN
Cobalt	3.060 J
Copper	38.2
Iron	2010
Magnesium	74100
Manganese	537
Nickel	6.810 J
Potassium	12300
Selenium	8.650 J
Sodium	123000
Vanadium	5.580 J
Zinc	28.4

MW4-GW 5/17/2005	
Aluminum	1010 N
Barium	93.0 JN
Cadmium	4.000 JN
Calcium	132000
Chromium	15.0 N
Cobalt	12.0 JN
Copper	28.0 N
Iron	2650 N**
Lead	65.0 N
Magnesium	44600
Manganese	203
Mercury	0.1300 J
Nickel	15.0 J
Potassium	23000 N
Selenium	8.000 JN
Sodium	22100
Vanadium	13.0 JN
Zinc	55.0 N

MW3-GW 5/16/2005	
Barium	141 J
Calcium	138000 J
Copper	69.0 J
Iron	22200
Magnesium	21200
Manganese	1150
Potassium	8940 J
Sodium	43200 J
Zinc	29.6

MW-20 9/15/2005	
Aluminum	4290
Barium	54.2 J
Calcium	30300
Chromium	37.8
Copper	36.5
Iron	8670
Lead	12.8
Magnesium	5180
Manganese	100
Nickel	25.4 J
Potassium	3720 J
Sodium	25800
Vanadium	7.4 J
Zinc	64.1

MW2-GW 5/19/2005	
Aluminum	245000
Antimony	8.280 J
Arsenic	28.9
Barium	3020
Beryllium	11.3
Cadmium	5.740
Calcium	307000
Chromium	530
Cobalt	328
Copper	862
Iron	394000
Lead	493
Magnesium	258000
Manganese	8220
Mercury	0.7000
Nickel	526
Potassium	146000 N
Selenium	6.890 J
Silver	13.6
Sodium	41600
Vanadium	655
Zinc	1710

MW-21 9/15/2005	
Aluminum	1400
Barium	131 J
Calcium	26700
Chromium	38.2
Copper	10.4 J
Iron	4180
Lead	5.4
Magnesium	10100
Manganese	57.0
Nickel	28.3 J
Potassium	15000
Sodium	35700

MW10-GW 5/17/2005	
Aluminum	220 J
Barium	57.0 J
Calcium	231000
Iron	522 J
Lead	3.000 J
Magnesium	45600
Manganese	175
Nickel	4.000 J
Potassium	13300 J
Sodium	58500 J
Zinc	42.0 J

MW11-GW 5/17/2005	
Aluminum	3410 N
Antimony	43.0 JN
Arsenic	672 N
Barium	219 N
Lead	24.0 N

RB-041905 4/19/2005		RB051805 5/18/2005
Aluminum	47.7 J	5.310 U
Barium	4.1 J	1.44 JN
Beryllium	0.755 J	0.09 U
Cadmium	0.755 J	0.327 U
Calcium	13.1 J	1350 J
Cobalt	0.370 U	1.220 J
Iron	27.0 UN	272
Manganese	0.56 J	1.520 J
Mercury	0.06 J	0.0300 U
Nickel	1.56 U	3.100 J
Sodium	332 U	332
Thallium	3.05 U	3.540 J
Zinc	2.78 J	22.8

DRAFT

LEGEND

MONITORING WELL

PROPOSED FOOTPRINT OF SCHOOL

MW11-GW 5/17/2005	
Aluminum	3410 N

SAMPLE IDENTIFICATION
SAMPLE DATE
ANALYTICAL RESULT

MW5GW	MW-5GWD

SAMPLE IDENTIFICATION, DUPLICATE SAMPLE

Notes:

All results are in parts per billion (ppb) or micrograms per liter (ug/L)

D – This flag identifies all compounds identified in an analysis at a secondary dilution factor.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

N – Presumptive evidence of a compound.

** – Duplicate analysis was not within control limits.

NS – Not sampled

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TOGS class GA Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable ga groundwater standard.

SCALE
0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

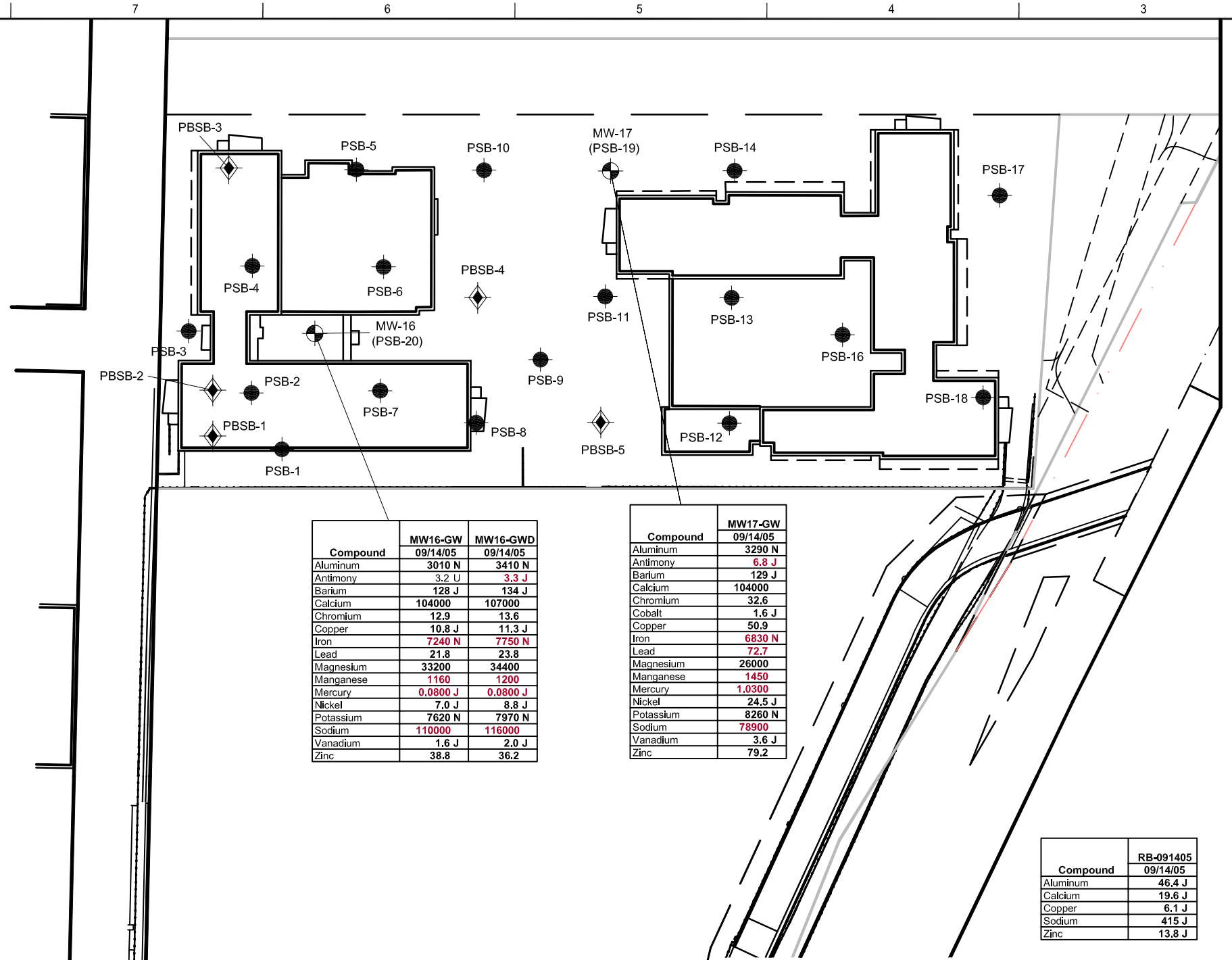
Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN GROUNDWATER (FIGURE 1 OF 2)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926879 · FIGURE: 7C

OFFICE ALBANY, NY

DRAWING NUMBER 114926B80

VERIFY SCALE 0 1"



Compound	MW16-GW 09/14/05	MW16-GWD 09/14/05
Aluminum	3010 N	3410 N
Antimony	3.2 U	3.3 J
Barium	128 J	134 J
Calcium	104000	107000
Chromium	12.9	13.6
Copper	10.8 J	11.3 J
Iron	7240 N	7750 N
Lead	21.8	23.8
Magnesium	33200	34400
Manganese	1160	1200
Mercury	0.0800 J	0.0800 J
Nickel	7.0 J	8.8 J
Potassium	7620 N	7970 N
Sodium	110000	116000
Vanadium	1.6 J	2.0 J
Zinc	38.8	36.2

Compound	MW17-GW 09/14/05
Aluminum	3290 N
Antimony	6.8 J
Barium	129 J
Calcium	104000
Chromium	32.6
Cobalt	1.6 J
Copper	50.9
Iron	6830 N
Lead	72.7
Magnesium	26000
Manganese	1450
Mercury	1.0300
Nickel	24.5 J
Potassium	8260 N
Sodium	78900
Vanadium	3.6 J
Zinc	79.2

Compound	RB-091405 09/14/05
Aluminum	46.4 J
Calcium	19.6 J
Copper	6.1 J
Sodium	415 J
Zinc	13.8 J

LEGEND

- MONITORING WELL (MW)
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)

SCALE

0 100 200 FEET

Notes:

All results are in parts per billion (ppb) or microgram per liter (ug/L)

D – Analysis at a secondary dilution factor.

U – Analyte not detected

N – Spiked sample recovery was not within control limits.

J – Indicates an estimated value. This flag is used when the mass spectral data indicated the identification; however, the result was less than the specified detection limit but greater than zero.

NS – Not Sampled

RB – Rinse blank

Red Bold face values indicate analyte detected above laboratory detection limit and result exceeds TOGS class GA Standard.

Bold face values indicate analyte was detected above laboratory limit but result does not exceed the applicable GA Groundwater Standard.

Only analytes that exceeded their class GA Groundwater Standards in at least one well are included on this figure.

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

DRAFT

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	INORGANICS DETECTED IN GROUNDWATER (FIGURE 2 OF 2) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B80	FIGURE 7C

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Plot Date/Time: 10/24/05 10:27am
Plotted by: Samuli.Sikoinik

Xref: .
Image: .

DRAWING NUMBER 114926B81

OFFICE ALBANY, NY

VERIFY SCALE 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

PSGI-10 341.6

PSGI-4 1446.14

PSGI-5 204.16

PSGI-7 192.6

PSGI-8 256.65

PSGI-6 291.9

PSGI-9 856.8

SG-1 65,910

SG-11 309.50

116,000 SG-9

SG-21 139.70

146.70 SG-19

960.60 SG-20

SG-29 155.60 (174.80)

SG-27 173.57

SG-28 203.10

SG-38 870.90

SG-37 668.26

SG-47 260.71

SG-49 588.98

SG-45 622.32

SG-46 1041.06

SG-54 416.94

LEGEND

✦	SOIL GAS POINT
SG-49	SAMPLE IDENTIFICATION
588.98	ANALYTICAL RESULT
(174.80)	DUPLICATE SAMPLE ANALYTICAL RESULT
- - - - - - -	PROPOSED FOOTPRINT OF SCHOOL

Note: All analytical results expressed in micrograms per cubic meter (ug/m^3)

DRAFT

SCALE
0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	TOTAL VOC CONCENTRATIONS IN SOIL GAS
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/24/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B81 · FIGURE: 8A

Xref:
Image:

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Plot Date/Time: 10/28/05 01:54pm
Plotted by: SamuilShkolnik

DRAWING NUMBER 114926B82

OFFICE ALBANY, NY

VERIFY SCALE 0 1"

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

PSGI-10 NS

PSGI-4 0.61U

PSGI-5 1.1

PSGI-7 0.68U

PSGI-8 8.1

PSGI-6 0.79

PSGI-9 4.6

SG-1 4,400

SG-9 9,400/9,500

SG-11 3.0

SG-19 1.8

SG-20 7.1

SG-21 2.1

SG-27 1.3

SG-28 1.2

SG-29 1.6

SG-37 1.7

SG-38 1.6

SG-45 1.7

SG-46 3.6

SG-47 2.9

SG-49 7.6

SG-54 2.9

N

LEGEND

✦	SOIL GAS POINT
SG-49	SAMPLE IDENTIFICATION
7.6	ANALYTICAL RESULT
NS	NOT SAMPLED
- - - - - - -	PROPOSED FOOTPRINT OF SCHOOL

Note: All analytical results expressed in parts per million volume (ppmv)

SCALE
0 100 200 FEET

DRAFT

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	METHANE CONCENTRATIONS DETECTED IN SOIL GAS FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/24/05	SCALE: AS SHOWN	DRAWING NO. 114926B82	FIGURE 8B

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Plot Date/Time: 10/28/05 10:16am
Plotted by: SamuilShkolnik

Xref:

Images:

OFFICE ALBANY, NY
DRAWING NUMBER 114926B54

STRONG COAL TAR ODOR TAR-LIKE GRAVEL

MW-18

EAST 156th STREET

PBSB-3 PSB-5 PSB-10 MW-17 (PSB-19) PSB-14 PSB-17

PSB-4 PSB-6 PBSB-4

MW-19

PBSB-2 PSB-3 MW-16 (PSB-20) PSB-11 PSB-13 PSB-16

E. 156th STREET

MW-9

COAL TAR ODOR

PSB-2 PSB-7 PSB-9 PSB-18

COAL TAR ODOR 1 MM DIAMETER COAL TAR GLOBULES

MW-15 (SB-48) PBSB-1 PSB-8 PBSB-5 PSB-12

MW-14 (SB-47) PSB-1

STRONG COAL TAR ODOR SHEEN IN SATURATED SOIL

SB-37 MW-6 SB-21

MW-7 (SB-44) MW-13 (SB-46) SB-20

SLIGHT COAL TAR ODOR

MW-8 NWSB GRAB NWSB

STRONG COAL TAR ODOR COAL TAR IN STAIN

MW-12 (SB-45) SB-49 SB-42 SB-23 MW-5

SLIGHT COAL TAR ODOR

SB-24

SB-22 SB-41

STRONG COAL TAR ODOR SHEEN IN SATURATED SOIL

MW-20

SLIGHT COAL TAR ODOR

SLIGHT COAL TAR ODOR

SB-43

SB-26 0.8 SB-35 MW-4 MW-3

SB-25 44.9 SB-36 SB-27

VERY SLIGHT COAL TAR ODOR

MW-21

SB-25A

MW-2

MW-1 SB-28 SB-30

SLIGHT COAL TAR ODOR

BALLAST 2

SB-29

SB-33 SB-34 BALLAST 1

MW-10 MW-11

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

CONCOURSE VILLAGE EAST

VERIFY SCALE 0 1"

LEGEND

- MONITORING WELL
- SOIL BORING
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL

Note:
Absence of any coal tar related field observations at any given sampling point indicates there was no visual or odor evidence of coal tar contamination.

SCALE
0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	COAL TAR RELATED FIELD OBSERVATYIONS FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 10/21/05	SCALE: AS SHOWN	DRAWING NO. 114926B54	FIGURE 9

Xref: .
Image: .
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Plot Date/Time: 11/04/05 09:13am
Plotted by: Samuli.Sikoinik

OFFICE ALBANY, NY
DRAWING NUMBER 114926B55

EAST 156th STREET
E. 156th STREET
CONCOURSE VILLAGE EAST
CONCOURSE VILLAGE WEST
CONCOURSE VILLAGE EAST
Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

MW-18 220000
MW-19
MW-9
MW-15 (SB-48) 120000
MW-14 (SB-47) 180000
MW-8
MW-12 (SB-45) 220000
MW-20 16
MW-21 96
MW-1
MW-7 (SB-44) 27000
NWSB
NWSB GRAB 7100
MW-13 (SB-46) 15
SB-20 4.7
SB-37 0
MW-6
SB-21 0
MW-5
SB-24 0
MW-3
SB-27
SB-49 28
SB-42 38
SB-23 0
SB-22 32000
SB-41 6.8
SB-26 0
SB-25 27
SB-43 0
SB-35 2.5
MW-4
SB-36 0
SB-25A 5.7
SB-28 0
SB-30
MW-2 7900
BALLAST 2
SB-29 1.2
SB-33 0
MW-10
SB-34 0
MW-11
BALLAST 1

PBSB-3 0
PSB-5 0
PSB-10 19
PSB-4 1.4
PSB-6 0
PBSB-2 4700
PSB-3 91
MW-16 (PSB-20) 7.4
PBSB-4 3600
PSB-2 800
PSB-7 250
PSB-9 0
PBSB-1 5800
2400
PSB-8 210
PSB-1
PBSB-5 0
MW-17 (PSB-19) 0
PSB-14 0
PSB-17 0
PSB-11 0
PSB-13 0
PSB-16 0
PSB-12 0
PSB-18 0

LEGEND
- MONITORING WELL
- SOIL BORING
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)
- TEST PIT/BALLAST PILE
- PROPOSED FOOTPRINT OF SCHOOL
- 250 NAPHTHALENE CONCENTRATION
- NAPHTHALENE CONTOUR (ppb) (DASHED WERE INFERRED)

5000
10000

VERIFY SCALE 0 1"

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

SCALE 0 100 200 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	NAPHTHALENE IN SOIL
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/21/05 · SCALE: AS SHOWN · DRAWING NO.: 114926B55 · FIGURE: 10

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Plot Date/Time: 11/09/05 02:20pm
Plotted by: Samuil.Shkolnik
Xref: .
Image: .

DRAWING NUMBER 114926B53

OFFICE ALBANY, NY

VERIFY SCALE 1"

APPROXIMATE LOCATION OF FORMER GASOLINE STATION

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad

MW-18 51
MW-19
MW-17 (PSB-19) 0
MW-16 (PSB-20) 0
MW-9 7793
MW-15 (SB-48) 2249
MW-14 (SB-47) 1670
MW-7 (SB-44) 9960
MW-13 (SB-46) 1527
MW-6 0
MW-8 30270
MW-12 (SB-45) 11360
MW-5 0
MW-20 0
MW-4 0
MW-3 0
MW-21 0
MW-2 0
MW-1 2
MW-10 0
MW-11 0

10000
5000
1000

LEGEND

- MONITORING WELL
- 1527 BTEX CONCENTRATION
- BTEX CONTOUR (ppb) (DASHED WERE INFERRED)
- PROPOSED FOOTPRINT OF SCHOOL

SCALE
0 100 200 FEET

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	BTEX IN GROUNDWATER			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 10/21/05	SCALE: AS SHOWN	DRAWING NO. 114926B53	FIGURE 11

Xref: .
Image: .

A:\114926\114926B53.dwg
Plot Date/Time: 11/04/05 08:34am
Plotted by: SamuilShkolnik

PROPERTY REFERENCE GUIDE

1. LOCATION OF FORMER GAS STATION AND AUTO REPAIR SHOP
GAS STATION WAS PRESENT ON THE 1935 SANBORN MAP ONLY
ONLY THE AUTO REPAIR SHOP WAS PRESENT ON THE 1977 SANBORN MAP
AUTO REPAIR WAS PRESENT ON THE 1996 SANBORN MAP

2. CURRENTLY AAC AUTO REPAIRS;
A GASOLINE STATION WAS PRESENT IN THIS VICINITY FROM APPROXIMATELY 1935 THROUGH 1991 ACCORDING TO SANBORN MAPS

3. LOCATION OF FORMER MORGAN STREAM LAUNDRY PRESENT ON 1935 AND 1947 SANBORN MAPS

4. 676 GRAND CONCOURSE - CURRENTLY CUTGLASS ENTERPRISES AND CANDLEWOOD AUTOMALL

5. LOCATION OF FORMER AUTO AND LAUNDRY BUILT IN 1956.
WAS PRESENT ON 1977 SANBORN MAP

DRAWN BY:	P. WHEELER		CHECKED BY:		
DESIGNED BY:			APPROVED BY:		

Shaw

Sheet No.
1 of 1

FIGURE 12
SITE RECONNAISSANCE MAP
NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
MOTTHAVEN SITE
BOROUGH OF THE BRONX

PREPARED FOR:

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

APPROXIMATE SCALE

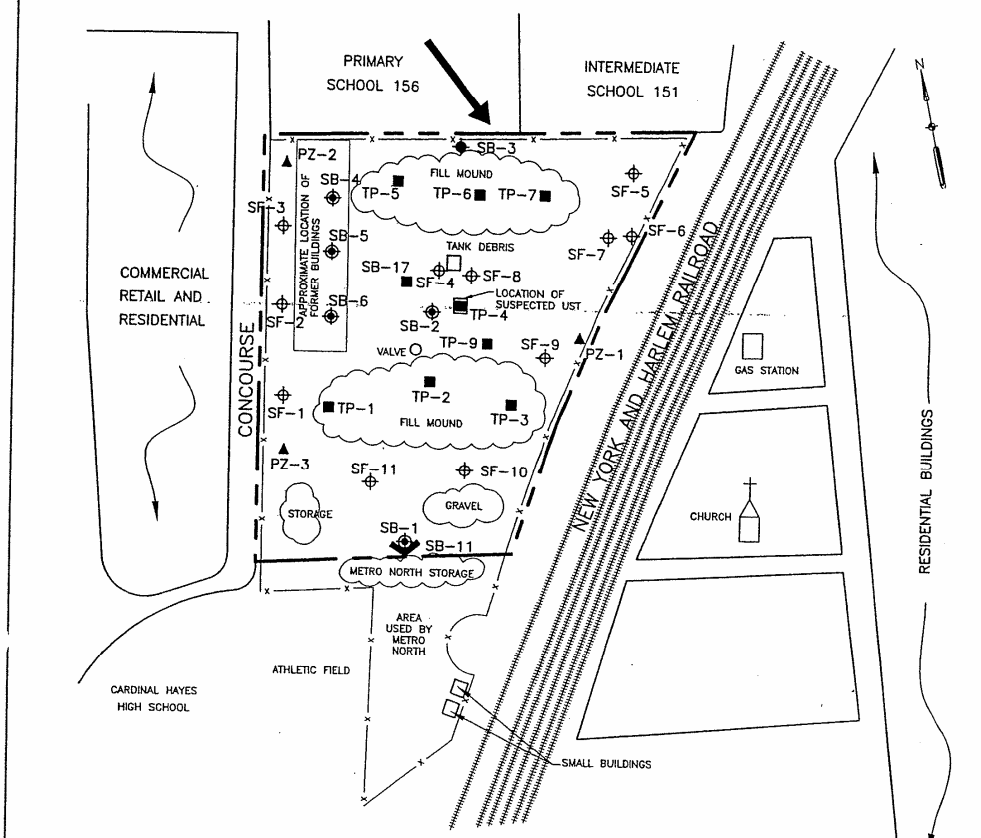
1 INCH = 400 FEET

Shaw E & I Engineering of New York, P.C.

	DATE	BY	CHK'D	APR'D	DESCRIPTION/ISSUE

APPENDIX A
URS SAMPLE LOCATION MAP

all sampling locations investigated



LEGEND

- PROPERTY LINE
- SOIL AND GROUNDWATER SAMPLE LOCATION
- SURFACE SOIL SAMPLE LOCATION
- SUBSURFACE SOIL SAMPLE LOCATION
- TEMPORARY PIEZOMETER LOCATION
- TEST PIT LOCATION
- DIRECTION OF GROUNDWATER FLOW

PHASE II SAMPLING LOCATION PLAN

0 100 200 400

SCALE (FEET)

CLIENT:	SCHOOL CONSTRUCTION AUTHORITY
SITE:	FORMER METRO NORTH PROPERTY BLOCK 2443 LOT 78 BRONX, NY 10451
PROJECT #:	47-01E04046.00/00018

URS
WAYNE, NEW JERSEY

SCALE: AS SHOWN
DRAWN BY: J.L.

FIGURE 4

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APPENDIX B
BORING LOGS

Shaw

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-49
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/6/05	Date Completed: 4/6/05
Total Depth (ft bgs): 10	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Jessica Ferngren	Checked by: Curt Kraemer

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 2.5 ft bgs: Brick and silt, moist, Fill.				GM	
	S-1	2.5	2.5 - 5 ft bgs: Brown, Sand, Silt, and Gravel,some brick, moist, staining, strong coal tar odor.	Staining and strong coal tar odor		>2000	SM	
5			5 - 6.0 ft bgs: Same as above, saturated. moist.	Staining and strong coal tar odor		>2000	SM	
	S-2	3.0	6.0 - 10 ft bgs: Light brown, fine Sand and Silt, saturated.	Slight coal tar odor			SM	
10								
15								

Shaw

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven				Boring Number: SB-20	
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/19/05		Date Completed: 4/19/05	
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA		Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen		Checked by:	

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	15-29-39-	0 -4 ft bgs: Dark brown, Silt and Sand, with wood and			0	ML	
2		50+/ 0.5	brick, moist.					
	S-2	30-50+/				0	ML	
4		0.5						
	S-3	22-10-13-	4 - 6 ft bgs: Brown grading to black, Sand and Silt,			1.1	SM	
6		14/1.1	moist.					
	S-4	17-19-9-7/	6 - 16 ft bgs: Gray, fine to medium Sand and Silt, wet.			0.3	SM	
8		1.5						
	S-5	9-23-20-	Some root fibers between 8 - 10 ft bgs.			0	SM	
10		18/1.7						
	S-6	6-7-15-14/				0	SM	
12		2.0						
	S-7	12-14-15-				0	SM	
14		31/2.0						
	S-8	17-8-15-				0	SM	
16		47/2.0						

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-21
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/18/05	Date Completed: 4/18/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	11-16-31-	0 - 2 ft bgs: Brown, Sand and Silt, some gravel, moist.			0.2	SM	
		30/1.1						
2	S-2	24-40-43-	2 - 5 ft bgs: Dark brown, fine Sand and Silt, some			0.2	SM	
		50+/1.2	gravel, some cinders, wet @ 3 ft bgs.					
4	S-3	21-15-27-				1.2	SM	
		48/1.7	5 - 13 ft bgs: Orange-brown, Sand, some silt, wet.					
6	S-4	38-26-15-				1.7		
		20/0.6						
8	S-5	10-16-21-				1.3	SM	
		25/0.7						
10	S-6	27-14-21-				1.3	SM	
		25/1.8						
12	S-7	7-22-29-	13 - 15 ft bgs: Dark gray, Sand and Silt, wet.			0.9	SM	
		14/1.1						
14	S-8	27-16-14-				0.3	SM	
		33/1.2	15 - 16 ft bgs: Dark gray, Silt, little clay.				ML	
16								

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-22
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/27/05	Date Completed: 4/27/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 5 ft bgs: Dark brown, Silt and fine Sand, with brick and gravel, moist.	No Coal tar odor		1.1	ML	
	S-1	3.0						
5			5 - 6 ft bgs: Dark brown, Silt and fine Sand, with gravel, wet.	No coal tar odor			ML	
	S-2	5.0	6 - 8.5 ft bgs: Dark brown, Gravel, Sand and Silt, wet.	Slight coal tar odor.		50	SM	
			8.5 - 10 ft bgs: Gray/brown, Sand and Silt, wet.	Slight coal tar odor.		8		
10			10 - 15 ft bgs: Gray/brown, Sand and Silt, wet.	No coal tar odor		3	SM	
	S-3	5.0						
15								

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-23
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/15/05	Date Completed: 4/15/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	10-12-11-	0 - 6 ft bgs: Dark brown, Silt and fine Sand,			0.0	ML	
2		13/0.2	some gravel, moist (wet @ 5.5 ft bgs).					
	S-2	5-10-14-				0.7	ML	
4		15/0.3						
	S-3	6-2-3-4/				0.2	ML	
6		0.7						
	S-4	1-0-1-0/	6 - 9 ft bgs: Dark brown, Silt and fine Sand, some			0.2	ML	
8		0.8	clay, wet, slightly plastic.					
	S-5	2-4-3-5/				0.0	ML	
10		1.1	9 - 12 ft bgs Gray, Silt, little fine sand, wet.					
	S-6	5-7-12-13/				0.0	ML	
12		1.3						
	S-7	4-3-5-7/	12 - 16 ft bgs: Gray grading to dark gray, fine Sand			0.4	SM	
14		1.0	and Silt, wet.					
	S-8	9-11-10-				0.4	SM	
16		14/0.7						

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-24
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/18/05	Date Completed: 4/18/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	50+/0.5	0 - 2 ft bgs: Brown, Gravel, some sand, little silt, moist			0.0	GM	
2	S-2	50-60-32-	2 - 5 ft bgs: Dark brown, fine Sand and Silt, some gravel, moist.			0.7	SM	
		54/1.3						
4	S-3	64-37-28-				1.1	SM	
		24/0.6	5 - 8 ft bgs: Orange-brown, Sand and Silt, wet.					
6	S-4	23-11-13-				0.1	SM	
		14/1.0						
8	S-5	7-11-19-	8 - 10 ft bgs: Dark gray, Silt and Sand, little clay, wet.			0.9	ML	
		24/0.3						
10	S-6	5-9-9-32/	10-15 ft bgs: Gray, Sand and Silt, wet.			0.0	SM	
		1.8						
12	S-7	31-11-4-	13 - 15.5 ft bgs: Dark gray, Sand and Silt, wet.			0.3	SM	
		8/0.8						
14	S-8	11-15-17-				0.0	SM	
		19/1.9	15.5 - 16 ft bgs: Dark brown. Organic Silt, root fibers.				OL	
16								

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven				Boring Number: SB-25
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/15/05		Date Completed: 4/15/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA		Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen		Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	42-50-49-	0 - 1 ft bgs: Brown, Gravel, Sand and Silt, moist.			1.8	GM	
2		59/2.0	1 - 4 ft bgs: Dark brown, Sand and Silt, some gravel,					
	S-2	25-18-8-	moist.			30.7	SM	
4		10/0.5						
	S-3	10-48-28-	4 - 6 ft bgs: No recovery.					
6		46/0.0						
	S-4	26-22-53	No Recovery from 6 -8 ft bgs.	Very slight odor -		44.9		
8		0.9		possible coal tar				
	S-5	6-10-21-	8 - 16 ft bgs: Gray/brown, Sand and Silt, wet.			30.7	SM	
10		29/1.4						
	S-6	7-11-22-				7.7	SM	
12		38/0.0						
	S-7	20-16-24-				1.7	SM	
14		37/1.1						
	S-8	18/39/40-				2.0	SM	
16		56/1.8						

Shaw

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-25A
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/15/05	Date Completed: 4/15/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	43-37-47-	0 - 2 ft bgs: No recovery.					
		50+/0.0						
2	S-2	17-18-35-	2- 6 ft bgs: Dark brown, Sand and Silt, some cinders,			1.2	SM	
		21/0.3	moist.					
4	S-3	8-7-18-40/				3.0	SM	
		0.9						
6	S-4	21-20-22-	6-8 ft bgs: Dark gray grading to light gray, fine Sand			8.3	SM	
		22/1.0	and silt, trace clay, moist.					
8	S-5	8-17-50+/	8 - 16 ft bgs: Gray/brown, Sand and Silt, wet.			2.3	SM	
		0.4						
10	S-6	7-26-10-				1.0	SM	
		12/1.2						
12	S-7	20-23-34-				2.3	SM	
		47/1.3						
14	S-8	21-31-50+/	Grading to orange-brown @ 14 ft bgs.			0.4	SM	
		1.2						
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-26
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/15/05	Date Completed: 4/15/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	13-18-11-	0 - 6 ft bgs: Dark brown, Silt and fine Sand,			0.0	ML	
		9/0.2	with wood, brick and concrete pieces, moist.					
2	S-2	4-4-5-6/				0.5	ML	
		0.4						
4	S-3	1-0-50+/				0.8	ML	
		0.5						
6			Augered from 5 to 9 ft bgs to go through very hard					
			material (concrete rubble).					
8								
	S-4	3-5/0.1	9 - 16 ft bgs Gray, fine to medium Sand, some silt,			0.7	SM	
10	S-5	4-4-3-4/	wet.			0.0	SM	
		1.2						
12	S-6	1-3-8-13/				0.4	SM	
		0.8						
14	S-7	7-18-10-	Grading to some gravel @ 14 ft bgs.			0.4	SM	
		21/0.5	Weathered bedrock in tip of split spoon @ 15.5 ft bgs.					
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-27
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/18/05	Date Completed: 4/18/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	21-50+/	0 - 2 ft bgs: No recovery.					
		0.0						
2	S-2	28-29-32-	2 - 4 ft bgs: No recovery.					
		26/0.0						
4	S-3	9-7-7-13/	4 - 6 ft bgs: No recovery. Split spoon wet @ 5 ft bgs.					
		0.0						
6	S-4	12-12-17-	6 - 8 ft bgs: No recovery.					
		17/0.0						
8	S-5	22-9-3-	8 - 12 ft bgs: Dark gray, Sand and Silt, some gravel,			0.5	SM	
		18/0.8	brick, and wood fragments, wet.					
10	S-6	4-9-18-6/				1.1	SM	
		0.3						
12	S-7	7-7-12-	12 - 13.5 ft bgs: Gray, Sand and Silt, wet.			0.4	SM	
		17/1.2	13.5 - 14 ft bgs: Dark Brown, Organic Silt, root fibers.				OL	
14	S-8	9-9-13-	14 - 16 ft bgs: Dark gray, Silt, some sand, little clay.			0.6	ML	
		15/1.4						
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-28
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/14/05	Date Completed: 4/14/05
Total Depth (ft bgs): 8.5	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	15-14-15-	0 - 4 ft bgs: Dark brown, Silt and fine Sand,			0.0	GM	
		9/1.8	with asphalt, brick and concrete pieces, moist.					
2	S-2	10-12-7-8/				0.0	SM	
		0.5						
4	S-3	12-15-16-	4 - 7.5 ft bgs: Tan, Sand, little silt, wet @ 5.5 ft bgs.			0.0	SM	
		18/1.6						
6	S-4	10-16-19-				0.0	SM	
		15/2.0	7.5 - 8.5 ft bgs: Tan, Silt and fine Sand, little fine					
8	S-5	26-50+/	gravel, wet.			0.0	ML	
		0.3						
10			Hit auger refusal at 8.5 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-29
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/13/05	Date Completed: 4/13/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Jessica Ferngren	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	11-15-25-	0 - 5 ft bgs: Dark brown, Silt and fine Sand, some			0.0	ML	
		17/0.7	gravel, some brick pieces, moist.					
2	S-2	15-25-30-				0.0	ML	
		47/0.7						
4	S-3	7-9-15-				0.0	ML	
		12/1.0	5 - 12 ft bgs: Orange-brown to dark brown, Silt and					
6	S-4	1-0-11-5/	fine Sand, little fine gravel, wet @ 6 ft bgs.			0.0	ML	
		0.5						
8	S-5	1-5-6-11/				0.0	ML	
		0.3						
10	S-6	11-13-6-				0.0	ML	
		5/0.2						
12	S-7	6-5-7-8/	12 - 16 ft bgs: Gray/brown, fine to medium Sand and			0.0	SM	
		1.0	Silt, trace fine gravel, wet.					
14	S-8	36-21-12-				0.0	SM	
		10/1.0						
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-30
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/14/05	Date Completed: 4/14/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	23-22-15-	0 - 4 ft bgs: Dark brown, Silt and fine Sand,			0.0	ML	
		15/1.2	with asphalt, brick and concrete pieces, moist.					
2	S-2	26-10-3-6/		Slight creosote/coal		0.5	ML	
		0.2		tar odor @ 3 ft bgs.				
4	S-3	1-3-4-4/	4 - 6 ft bgs: No recovery.					
		0.0						
6	S-4	1-2-2-1/	6 - 9.5 ft bgs: Gray, Silt and fine Sand, wet.	Slight creosote/coal		47.3	ML	
		1.2		tar odor @ 6 - 9.5				
8	S-5	1-1-1-1/		ft bgs.		38.5	ML	
		1.5						
10	S-6	1-1-2-1/	9.5 - 16 ft bgs: Orange-brown, Sand, little silt, wet.	No creosote/coal tar		0.0	SM	
		0.8		odor below 9.5 ft bgs				
12	S-7	5-5-7-8/				0.0	SM	
		0.8						
14	S-8	8-10-14-				0.0	SM	
		27/1.4						
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-33
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/14/05	Date Completed: 4/14/05
Total Depth (ft bgs): 6.0	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	19-9-6-2/	0 -4 ft bgs: Dark brown, Sand and brick, with some			3.7	SM	
		0.7	wood pieces, moist.					
2	S-2	7-12-19-4/				8.4	SM	
		0.5						
4	S-3	45-50-45-	4 - 6 ft bgs: Brown grading to black, Sand, some silt,			30	SM	
		50/0.5	moist.					
6								
			Hit auger refusal at 6.0 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-34
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/13/05	Date Completed: 4/13/05
Total Depth (ft bgs): 10.5	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Jessica Ferngren	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	17-50+/	0 - 4 ft bgs: Dark brown, Silt and fine Sand, some			0.0	ML	
		0.5	gravel, some brick pieces, moist.					
2	S-2	17-20-50+/				0.0	ML	
		0.2						
4	S-3	11-15-3-	4 - 10 ft bgs: Orange/yellow brown, fine to medium			0.0	SM	
		25/0.5	Sand, some silt, wet @ 8 ft bgs.					
6	S-4	20-21-32-				0.0	SM	
		35/1.0						
8	S-5	22-50+/				0.0	SM	
		0.3						
10	S-6	50+/	10 - 10.1 ft bgs: No recovery.					
		0.0						
12								
			Hit auger refusal at 10.5 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-35
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/20/05	Date Completed: 4/20/05
Total Depth (ft bgs): 2.5	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	18-36-50+/	0 - 1 ft bgs: Dark brown, Sand, some silt, moist.			0.0	SM	
		0.7	1 - 2 ft bgs: Concrete rubble.					
2	S-2	50+/	2 - 2.5 ft bgs: Weathered bedrock.			0.0		
		0.3						
			Hit auger refusal at 2.5 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-36
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/14/05	Date Completed: 4/14/05
Total Depth (ft bgs): 5.5	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	11-10-8-	0 - 1 ft bgs: Dark brown, Sand, some silt, moist.			1.6	SM	
		12/1.5	1 - 2 ft bgs: Brown, Silt, some sand, moist.				ML	
2	S-2	21-23-24-	2 - 5.5 ft bgs: Black to red/brown, Sand and silt,			3.0	SM	
		19/1.3	moist.					
4	S-3	24-30-54-	Grading to brown, wet at 4.5 ft bgs.			3.0	SM	
		62/1.5	5.5 - 6 ft bgs: Bedrock.					
6								
			Hit auger refusal at 5.5 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-37
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/20/05	Date Completed: 4/20/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	20-32-26-	0 - 2 ft bgs: Dark brown, Sand and Silt, moist.			0.3	SM	
2		22/1.2						
	S-2	17-38-17-	2 - 4 ft bgs: No recovery.					
4		12/0.0						
	S-3	9-7-6-9/	4 - 8 ft bgs: Orange/brown, fine Sand and Silt,			1.4	SM	
6		1.6	wet @ 6 ft bgs.					
	S-4	12-7-8-15/				1.6	SM	
8		0.8						
	S-5	6-6-5-9/	8 - 16 ft bgs: Dark gray, Silt and fine Sand, wet.			1.4	ML	
10		1.4						
	S-6	4-4--9-15/				0.9	ML	
12		1.5						
	S-7	8-5-5-7/				0.5	ML	
14		1.3						
	S-8	6-5-7-21/				0.4	ML	
16		2	Possible weathered bedrock in tip of split spoon					
			@ 16 ft bgs.					

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-41
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/15/05	Date Completed: 4/15/05
Total Depth (ft bgs): 13.2	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	4-4-5-5/	0 -6 ft bgs: Dark brown, Sand and Silt, much brick			1.0	SM	
		0.7	fragments, moist.					
2	S-2	4-4-7-12/				0.0	SM	
		0.5						
4	S-3	2-2-1-2/				2.0	SM	
		1.4						
6	S-4	1-2-2-4/	6 - 13 ft bgs: Gray/brown, Sand and Silt, wet.			0.2		
		1.1						
8	S-5	2-4-3-2/				0.2	SM	
		0.5						
10	S-6	21-18-15-				0.7	SM	
		17/1.1						
12	S-7	24-36-50+				0.4	SM	
		1.2	13 - 13.2 ft bgs: Bedrock (in tip of split spoon).					
14								
			Hit split spoon refusal at 13.2 ft bgs.					
16								

Shaw

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-42
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/20/05	Date Completed: 4/20/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	18-10-13-	0 - 4 ft bgs: Dark brown, Sand and Silt, moist.			3.0	SM	
2		20/0.6						
	S-2	13-16-20-				1.8	SM	
4		50+/0.8						
	S-3	7-13-14-	4 - 6 ft bgs: Brown grading to black, Sand and Silt,			3.2	SM	
6		12/0.4	moist.					
	S-4	6-18-10-	No Recovery from 6 -8 ft bgs.					
8		11/0.00						
	S-5	5-3-5-10/	8 - 16 ft bgs: Gray/brown, Sand and Silt, wet.			1.0	SM	
10		1.5						
	S-6	5-11-12-				2.3	SM	
12		11/1.0						
	S-7	5-4-7-8/				1.1	SM	
14		1.7						
	S-8	4-3-4-4/				0.3	SM	
16		1.5						

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-43
Drilling Company: Aquifer Drilling	Drilling Method: Hollow Stem Augers	Date Started: 4/19/05	Date Completed: 4/19/05
Total Depth (ft bgs): 16	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: W. Ferdinandsen	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
	S-1	6-25-50+/	0 - 6 ft bgs: Dark brown, Sand and Silt, with gravel,			1.1	SM	
		0.3	brick, and concrete pieces, moist.					
2	S-2	22-14-16-				0.7	SM	
		22/1.0						
4	S-3	7-10-12-				2.1	SM	
		50+/1.0						
6	S-4	23-15-31-	6 - 12 ft bgs: Gray, Sand and Silt, wet.			1.4	SM	
		27/0.2						
8	S-5	18-9-6-9/				0.5	SM	
		0.5						
10	S-6	2-3-8-42/				1.1	SM	
		2.0						
12	S-7	17-43-29-	12 - 16 ft bgs: Orange-brown, Sand and Silt, wet.			0.5	SM	
		50+/2.0						
14	S-8	17-42-50-				0.6	SM	
		50+/2.0						
16								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-44
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/27/05	Date Completed: 4/27/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 2 ft bgs: Dark brown, Silt and fine Sand, some	No Coal tar odor		0	ML	
			gravel, with glass, brick and metal pieces, moist					
	S-1	3.0	2 - 5 ft bgs: Brick and motar.			0		
5			5 - 8 ft bgs: Dark Brown, Gravel, Silt and Sand, wet,	Strong coal tar odor		60	GM	
			sheen.					
	S-2	5.0	8 - 10 ft bgs: Gray/brown, fine to medium Sand, some	Coal tar odor.		32	SM	
			silt, wet, slight sheen.					
10			10 - 15 ft bgs: Gray/brown, fine to medium Sand,	Very slight coal tar		3	SM	
			some silt, no sheen @ 14 ft bgs	odor @ 14 ft bgs				
	S-3	5.0						
15								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-45
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/27/05	Date Completed: 4/27/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 5 ft bgs: Dark brown, Silt and fine Sand, some	Slight coal tar odor		0.3	ML	
			brick, glass and wood fragments,	@ 3 ft bgs.				
	S-1	3.4						
5								
			5 - 7.5 ft bgs: Gray/brown, Gravel, Sand and Silt, wet,	Strong coal tar odor		1200	GM	
			sheen.					
	S-2	5.0	7.5 - 10 ft bgs: Gray/brown, Silt and Sand, wet, some	Coal tar odor.		32	ML	
			sheen.					
10								
			10 - 15 ft bgs: Gray/brown, Silt and Sand, wet.	No coal tar odor @		13	ML	
			no sheen by 14 ft bgs.	14 ft bgs				
	S-3	5.0						
15								

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BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-46
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/28/05	Date Completed: 4/28/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 1.5 ft bgs: Sand, Silt and Brick, moist	No coal tar odor		0	SM	
			1.5 - 2 ft bgs: Piece of wood,	No coal tar odor		0		
	S-1	3.4	2 - 2.5 ft bgs: Concrete	No coal tar odor		0		
			2.5 - 5 ft bgs: Black grading to gray, Sand and Silt,	Slight coal tar odor		0	SM	
			moist.					
5			5 - 10 ft bgs: Gray, Sand and Silt, wet.	Slight coal tar odor		0	SM	
	S-2	5.0						
10			10 - 14.5 ft bgs: Gray, Sand and Silt, wet.	No coal tar odor @		0	SM	
				13 ft bgs				
	S-3	5.0	14.5 - 15 ft bgs: Brown, Organic silt with root fibers.	No coal tar odor		0	ML	
15								

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Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-47
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/28/05	Date Completed: 4/28/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 2 ft bgs: Dark brown, Silt, Gravel, and Sand, wet.	Slight Septic Odor		0	ML	
			2 - 4 ft bgs: Brown, Brick, silt and sand, moist.	No coal tar odor		0	GM	
	S-1	3.9	4 - 5 ft bgs: Dark brown, Sand, Gravel and Silt, wet.	Slight coal tar odor		0	SM	
5			5 - 10 ft bgs: Gray/brown, Sand and Silt, wet, sheen, coal tar product observed from 7 - 8 ft bgs.	Strong coal tar odor		0	SM	
	S-2	5.0						
10			10 - 13 ft bgs: Gray/brown, Sand and Silt, wet, no sheen, no coal tar product.	Slight coal tar odor (decreases w/ depth)		0	SM	
	S-3	5.0	13 - 13.5 ft bgs: Brown, Organic Silt with root fibers	No coal tar odor		0	ML	
			13.5 - 15 ft bgs: Brown/gray, Silt, little fine sand, wet.	No coal tar odor		0	ML	
15								

Shaw™

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-48
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/28/05	Date Completed: 4/28/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 2 ft bgs: Brown, Gravel, Sand and Silt, wet	Septic Odor		0	GM	
			2 - 5 ft bgs: Dark brown, Gravel, Silt and Sand, some	Slight coal tar odor		0	GM	
	S-1	4.2	brick, some concrete, moist.					
5			5 - 10 ft bgs: Gray/brown, Sand and Silt, wet, sheen,	Strong coal tar odor		0	SM	
			coal tar product observed from 6 - 7 ft bgs and at					
	S-2	5.0						
10			10 - 13.5 ft bgs: Gray/brown, Sand and Silt, wet, no	Slight coal tar odor		0	SM	
			sheen, no coal tar product.	(decreases w/ depth)				
	S-3	5.0	13.5 - 15 ft bgs: Gray, Silt, little fine sand, wet.	No coal tar odor		0	ML	
15								

Shaw

Shaw Environmental & Infrastructure, Inc.

BORING LOG

Project Name: SCA-Motthaven			Boring Number: SB-49
Drilling Company: Aquifer Drilling	Drilling Method: Geoprobe	Date Started: 4/29/05	Date Completed: 4/29/05
Total Depth (ft bgs): 15	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Sample No.	Blow Counts/ Recovery (ft)	Soil/Rock Description	Drilling Data/ Remarks	Casing	PID Reading (ppm)	USCS Class.	Munsell Color
			0 - 1.5 ft bgs: Brown, Sand and Brick, moist.			0	GM	
			1.5 - 5 ft bgs: Dark brown, Sand, Silt, and Gravel,	No coal tar odor		0	SM	
	S-1	3.5	moist.					
5			5 - 7.5 ft bgs: Brown grading to dark brown, Silt,	No coal tar odor		1.1	ML	
			moist.					
	S-2	5.0	7.5 - 10 ft bgs: Gray, Sand and Silt, wet.	Slight coal tar odor		6.7	SM	
10			10 - 12 ft bgs: Gray, Sand and Silt, wet.	Slight coal tar odor				
			12 - 13 ft bgs: Dark gray/brown, Silt, little sand, trace	No coal tar odor		0.8	ML	
	S-3	5.0	natural organics (root fibers), wet.					
			13 - 15 ft bgs: Brown, Sand, some silt, wet.	No coal tar odor		0	SM	
15								

Drilling Log

Soil Boring **SB-50**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *60.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core _____

Drill Co. *ADT* Method *Hollow Stem Auger*

Driller _____ Log By *C. Kraemer* Date *8/5/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
2						Augered down to 16-feet, no cuttings due to large size of rubble fill.
4						
6						
8						
10						
12						
14						
16	3.2	100%			SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
18						
20						

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Drilling Log

Soil Boring **SB-50**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
20	0.0	90%			SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
22	0.2	40%			SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
24		100%			SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
26	0.5	100%	3 3 11 18		SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
28	1.1	100%			SP SM	Alternating 3-4-inch layers of fine grain SAND and SILT, and SILT, wet.
30	0.0	100%	3 5 7 7		SP SM	Alternating 3-4-inch layers of fine grain SAND and SILT, and SILT, wet.
32	0.2	90%	6 6 10 8		SP	Orange-brown, fine to medium grain SAND, little silt, wet.
34	0.8	90%	3 3 4 3		SP CL	Orange-brown, fine to medium grain SAND, little silt, wet. Brown, CLAY, slightly plastic.
36	0.0	100%	3 8 8 7		CL	Brown, CLAY, slightly plastic.
38						
40						
42	0.0	90%	6 6 10 8		CL	Brown, CLAY, little silt, plastic.
44	0.0	100%	4 8 10 8		CL	Brown, CLAY, little silt, plastic.
46	0.0		8		CL	Brown, CLAY, little silt, plastic.

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Drilling Log

Soil Boring **SB-50**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
48	0.0	100%	10 10 12		CL	
	0.3	100%	6 6 11 7		CL	Brown, CLAY, little silt, plastic.
50			8 7			
	0.0	50%	11 13		CL	Gray, CLAY, little silt, plastic.
52			30 100/5		SP SM	Gray, fine to medium grain SAND and SILT.
	0.0	65%				
54			100/3			Gray, GRAVEL and fine to coarse SAND, trace silt, weathered rock.
	0.3	15%			SP	
56			75 100/5			Weathered rock in tip of spoon.
	0.0	0%				
58						
60						
62						
64						
66						
68						
70						
72						

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Drilling Log

Soil Boring **SB-51**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 47.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core ____

Drill Co. ADT — Method Hollow Stem Auger

Driller ____ — Log By C. Kraemer — Date 8/9/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Augered down to 16-feet, faint coal tar odor from cuttings at 10-feet and again at 13.5-feet.
16	0.0	100%	2 3 3 3		SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
18	0.0	100%	4 3 5 3		SP SM	Dark gray, fine grain SAND and SILT, some natural organics (wood, leaves), no odor, wet.
20	0.0	65%	5 7 8 7		SP SM	Dark gray, fine grain SAND and SILT, no odor, wet.
22	0.0	100%	8 11 12 11		SP SM	Dark gray, fine grain SAND and SILT, trace natural organics (wood, leaves), no odor, wet. Grading at 24-feet to brown, SILT, wet.
24						

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Drilling Log

Soil Boring **SB-51**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
24	0.0	100%	12 16 18 20		SP	Brown, fine to medium grain SAND, trace silt, wet.
26	0.0	65%	10 13 17 18		CL ML	Brown, CLAY, little silt, slightly plastic.
28	0.0	70%	8 10 10 13		CL ML	Brown, CLAY, little silt, slightly plastic.
30	0.0	75%	6 9 9 14			Grading to gray-brown, plastic.
32	0.0	100%	8 7 13 15		CL ML	Gray-brown, CLAY, little silt, slightly plastic.
34	0.0	55%	13 23 20 27 100/3		CL ML SP SM	CLAY Gray, SILT. Gray, SILT and SAND, little gravel, trace clay. (Glacial Till) Weathered rock.
36	0.0	15%				
38		0%	10 11 13 18			No Recovery
40						
42	0.0	40%	23 31 100/5		SP	Gray, fine to medium grain SAND, trace silt, wet.
44	0.0	55%	28 41 100/4		SP	Gray, fine to medium grain SAND, trace silt, wet.
46	0.0	60%	38 43 100/4		SP	Gray, fine to medium grain SAND, trace silt, wet.
			100/1		SP	Brown, coarse SAND, and fine gravel, wet. Rock
48	0.0	5%				
50						
52						
54						
56						

Drilling Log

Soil Boring **SB-52**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 27.0 ft. — North — East

Top of Casing NA — Water Level Initial NA — Static NA — Diameter

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material — Rig/Core

Drill Co. ADT — Method Hollow Stem Auger

Driller — Log By C. Kraemer — Date 8/11/05 — Permit # NA

Checked By — License No.

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
2						Augered down to 16-feet, no cuttings to ground.
4						
6						
8						
10						
12						
14						
16	0.0	100%	8 12 15 16		SP SM	Gray, fine to medium grain SAND, little silt, no odor, wet.
18	0.0	65%	9 17 12 18		SP SM	Gray, fine to medium grain SAND, little silt, no odor, wet.
20						

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Drilling Log

Soil Boring **SB-52**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
20	0.0	75%	6 8 10		SP SM	Gray, fine to medium grain SAND, little silt, no odor, wet.
22	0.0	90%	8 9 11 19		SP SM	Gray, fine to medium grain SAND, little silt, no odor, wet.
24	0.0	55%	8 3 5 5		CL ML CL ML	Gray-brown, CLAY, some silt, very slightly plastic. Gray-brown, CLAY, some silt, very slightly plastic.
26	0.0	40%	6 38 100/5			Weathered rock.
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						

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Drilling Log

Soil Boring **SB-54**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *41.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core _____

Drill Co. *ADT* Method *Hollow Stem Auger*

Driller _____ Log By *C. Kraemer* Date *8/16/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Augered down to 16-feet.
16	0.8	55%	8 11 16 16		SP SM	Gray, fine grain SAND and SILT, wet, no odor.
18	0.0	90%	13 10 10 12		SP SM	Gray, fine grain SAND and SILT, wet, no odor.
20	0.0	100%	6 9 9 7		SP SM	Gray, fine grain SAND and SILT, trace natural wood fibers, wet, no odor.
22						

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Drilling Log

Soil Boring **SB-54**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
22	0.0	65%	6, 10, 13, 15		SP SM	Gray, fine grain SAND and SILT, with organics, wet, no odor.
24	0.0	100%	13, 15, 19, 26		SP	Brown, fine to medium grain SAND, trace silt, wet.
26	0.0	65%	10, 12, 15, 16		SP CL	Brown, fine to medium grain SAND, trace silt, wet. Brown, CLAY, little silt slightly plastic.
28	0.0	90%	8, 11, 13, 15		CL	Brown, CLAY, little silt slightly plastic.
30	0.0	85%	8, 11, 11, 8		CL	Brown, CLAY, little silt slightly plastic.
32	0.0	85%	15, 30, 46, 58		CL ML SP SM	Grading to gray, CLAY Gray, SILT, wet. Gray, SILT, SAND and GRAVEL, wet. (Glacial Till)
36	0.0	60%	22, 38, 47, 68		SP SM	Gray, SILT, SAND and GRAVEL, wet. (Glacial Till)
38	0.0	20%	100/5			Weathered bedrock.
40	0.0	10%	100/3			Weathered rock.
42						
44						
46						
48						
50						

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Drilling Log

Soil Boring **SB-55**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 38.5 ft. — North — East

Top of Casing NA — Water Level Initial NA — Static NA — Diameter

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material — Rig/Core

Drill Co. ADT — Method Hollow Stem Auger

Driller — Log By C. Kraemer — Date 8/12/05 — Permit # NA

Checked By — License No.

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Augered down to 16-feet
16	0.0	60%	6, 10, 10, 13		SP	Brown, fine to medium SAND, some silt, moist.
18	0.0	80%	13, 15, 18, 21		SP SM	Alternating layers of brown, SILT, with brown fine to coarse grain SAND, little silt, wet.
20						*Continued Next Page*

Drilling Log

Soil Boring **SB-55**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
20	0.0	55%	10 27 50/4		SP SM	Gray, SILT, SAND and GRAVEL, trace clay, wet. (Glacial Till)
22	0.0	55%	14 30 47 19		SP SM	Gray, SILT, SAND and GRAVEL, trace clay, wet. (Glacial Till)
24	0.0	40%	30 40 50/3		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
26	0.0	15%	37 50/3		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
28	0.0	10%	42 100/3		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
30						
32						
34	0.0		100/4		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
36	0.0	10%	100/4		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
38	0.0	10%	100/5		SP SM	Gray, SILT, SAND and GRAVEL, trace clay,weathered bedrock gravel, wet. (Glacial Till)
40						
42						
44						
46						

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Drilling Log

Soil Boring **PBSB-1**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 35.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 3.5 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core ____

Drill Co. ADT — Method ____

Driller ____ — Log By W. Peters/C. Kraemer — Date 8/16/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS
Boring completed on 08/23/2005

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
2	6.2	PBSB1-(2-3) 100%				Dark gray, SAND, SILT and GRAVEL, with brick and concrete, wet. (Fill)
▽ 4					SP SM	Gray, SILT and fine grain SAND, wet, coal tar odor.
6					SP SM	Gray, fine grain SAND and SILT, few small coal tar globules, some sheen at 5-7 feet, wet.
8	14.7	PBSB1-(6-7) 100%				
10						Gray, fine grain SAND and SILT, few small coal tar globules, some sheen at 14 feet, wet.
12	5.7	PBSB1-(13-14) 100%			SP	
14						
16						

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Drilling Log

Soil Boring **PBSB-1**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
26	1.4				SP	Dark brown, SAND, silt, trace clay
					CL ML	CLAY, some silt, defining water layer.
28	0.2	90%			SP SM	Light brown, SAND and SILT, little clay, dense.
					SP	Light brown, SAND.
30	0.1				CL	Brown, CLAY, dense.
32	0.1				SP	Light brown, coarse grain SAND.
34						Bedrock.
36						

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Drilling Log

Soil Boring **PBSB-2**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 30.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 5.0 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller Andrea — Log By C. Kraemer — Date 8/15/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0					SP SM	Dark brown, SAND and SILT, moist. (Fill)
						Concrete and brick
					SP SM	Dark brown, SILT and SAND, some gravel, moist. (Fill)
2		PBSB2-(3-4) 35%				Dark brown, SILT and SAND, some gravel, grading to wet, some coal tar odor.
					SP SM	
4						
▽						Gray, fine grain SAND and SILT, wet, coal tar odor.
6						
		PBSB-(5-7) 100%			SP SM	
8						
10						Gray, SILT and fine grain SAND, wet, slight coal tar odor.
12	1.0	PBSB2-(14-15) 100%			SP SM	
14						
						Gray SILT and fine grain SAND, wet, very slight coal tar odor.
16	0.7	180%			SP SM	
18						Red-brown, fine to medium SAND, little silt, wet, no odor.
					SP SM	
20						

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Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

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Drilling Log

Soil Boring **PBSB-2**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
						Continued
20					ML	Gray, SILT, trace clay, trace sand, wet.
					SP	Brown, medium to coarse grain SAND, little silt, wet.
22	0.0	80%				
					SP	Brown, fine grain SAND, little silt, wet.
24						
					SP	Brown, fine grain SAND, little silt, wet.
26						
					CL	Gray, CLAY, little silt, slightly plastic, no odor.
28	0.0	80%				
30						
32						
34						
36						
38						
40						
42						
44						
46						

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Drilling Log

Soil Boring **PBSB-3**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/18/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0					SP	Brown, SAND, some silt, some gravel, moist. (Fill)
2	0.0	80%			SP SM	Dark gray, SAND and SILT, concrete, brick, wet. (Fill)
4						Concrete
6						Gray, fine to medium grain SAND, some silt, wet.
8	0.0	PBSB3-(6-7) 70%			SP	
10						Gray, fine to medium grain SAND, some silt, wet.
12	0.0	100%			SP	
14						
16						

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

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Drilling Log

Soil Boring **PBSB-4**

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Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *16.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *8.0 ft.* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core _____

Drill Co. *ADT* Method _____

Driller _____ Log By *W. Peters* Date *8/23/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0	60%			SP SM	Dark brown, SAND and SILT, fill material.
2	4.0				SP SM	Dark brown, SAND and SILT, fill material.
4	0.7	PBSB4-(4-6)			SP SM	Dark brown, SAND and SILT, fill material.
6	0.1				SP SM	Light brown, SAND and SILT, fill material.
8 ▽	1.1				SP SC	Dark brown, SAND and CLAY, wet.
10					SP SC	Dark brown SAND, SILT and CLAY, medium density, moist.
12					CL	Light brown, CLAY, some silt, trace sand, dense.
14					CL ML	CLAY and SILT, trace sand, moist.
16						
18						

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Drilling Log

Soil Boring **PSB-1**

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Project: Mott Haven — Owner: NYC School Construction Authority

Location: Bronx, NY — Proj. No.: 114926

Surface Elev.: NA — Total Hole Depth: 15.0 ft. — North: — East: —

Top of Casing: NA — Water Level Initial: ▽ 2.0 ft. — Static: NA — Diameter: —

Screen: Dia: NA in. — Length: NA ft. — Type/Size: NA/NA in.

Casing: Dia: NA in. — Length: NA ft. — Type: NA

Fill Material: — Rig/Core: Geoprobe 6610

Drill Co.: ADT — Method: Geoprobe

Driller: — Log By: C. Kraemer — Date: 8/17/05 — Permit #: NA

Checked By: — License No.: —

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP SM	Brown, SAND and SILT, some gravel, moist. (Fill)
2 ▽					SP SM	Gray, GRAVEL, SILT and SAND, wet at 2 feet.
	0.7	PSB1-(2-3) 90%			SP SM	Gray, SILT and fine grain SAND, wet.
4						
					SP SM	Gray, SILT and fine grain SAND, wet. (PID reading of 2.0ppm)
6						Brown, fine grain SAND and SILT, slight coal tar odor.
	9.2	PSB1-(6-7) 100%			SP SM	
8						
					SP	Fine to medium grain SAND, little silt. (PID reading of 5.1ppm)
10						Fine to medium grain SAND, little silt. (PID reading of 0.2ppm)
					SP	
12	0.1	PSB1-(14-15) 100%				
					SP SM	Gray, fine grain SAND and SILT, wet.
14					ML	Gray, SILT, wet. (PID reading of 0.1ppm)
16						

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Drilling Log

Soil Boring **PSB-2**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *15.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *C. Kraemer* Date *8/17/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP SM	Brown, SAND and SILT, moist. (Fill)
2	0.0	PSB2-(4-5) 60%			SP SM	Dark gray, SILT and fine grain SAND, some gravel, wet.
4						
6					SP SM	Dark gray, SILT and fine grain SAND, some gravel, wet. Slght coal tar odor at 7.8 feet. (PID reading 10.2 ppm at 7.8 feet).
8	10.2	PSB2-(7-8) 100%				
10					SP SM	Gray, fine grain SAND and SILT, wet. (PID readings: 2.2 ppm at 12-feet and 0.3 ppm at 13-feet)
12	0.3	PSB2-(14-15) 100%				
14					ML	Gray, SILT, wet.
16						

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Drilling Log

Soil Boring **PSB-3**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 2.5 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/17/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP	Brown, SAND, some silt, moist. (Fill)
2 ▽	0.0	PSB3-(4-5) 80%			SP	Gray, fine grain SAND, little silt, some gravel, wet at 2.5-feet.
4						
6					SP	Gray, fine grain SAND, some silt, wet. (PID readings: 1.2 ppm at 6-feet, 2.3 ppm at 7-feet, 4.8 ppm at 8-feet, and 1.1 ppm at 9-feet).
8	1.1	PSB3-(7-8) 100%				
10					ML	Gray, SILT, wet. (PID reading, 0.4 ppm at 10-feet).
12	4.3	PSB3-(14-15) 100%			SP SM	Gray, fine grain SAND and SILT, wet. (PID readings: 4.3 ppm at 12-feet and 0.4 ppm at 15-feet).
14						
16						

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Drilling Log

Soil Boring **PSB-4**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *15.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *C. Kraemer* Date *8/18/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
2	0.0	80%			SP	Dark gray, SAND, fine gravel, some silt, wet, no odor. (Fill)
4						
6					SP	Dark gray, SAND, fine gravel, some silt, with concrete and wood pieces, wet, no odor. (Fill)
8	0.0	100%				
10					SP	Gray-brown, fine to medium grain SAND, some silt, wet.
12	0.0	PSB4-(10-12) 100%			SP SM	Gray, fine grain SAND and SILT, wet, no odor.
14					SP SM	Grading to brown, SILT and fine grain SAND.
16						

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Drilling Log

Soil Boring **PSB-5**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 2.0 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/19/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP	Brown, SAND, some silt, gravel, moist. (Fill)
						Dark gray, SAND and SILT, some gravel, wet at 2-feet. (Fill)
2 ▽	0.0	70%			SP SM	
4						Gay, fine to medium grain SAND and SILT, wet.
6						
8	0.0	PSB5-(6-7) 100%			SP SM	
10						Gay, fine to medium grain SAND and SILT, wet.
12	0.0	100%			SP SM	
14					ML	Dark brown, ORGANIC PEAT and SILT.
					ML	Gray, SILT, some fine grain sand, wet.
16						

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Soil Boring **PSB-6**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 3.0 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/19/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
					SP	Brown, fine to medium grain SAND, some gravel, little silt, moist.
2	0.0	80%				Dark gray, SAND, some gravel, little silt, concrete. Wet at 3-feet.
▽ 3					SP	
4						
6						Dark gray, SAND, some gravel, little silt, concrete. (Fill)
	0.0	100%			SP	
8						
10					SP SM	Gray, fine grain SAND and SILT, wet.
12	0.0	PSB6-(11-12) 100%			ML	Dark brown, ORGANIC SILT, peat fibers.
						Gray, SILT, some fine grain sand, wet.
14					ML	
16						

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Drilling Log

Soil Boring **PSB-7**

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Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *15.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *2.5 ft.* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *C. Kraemer* Date *8/18/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP	Brown, SAND little silt, little gravel, moist.
2	0.0	50%			SP	Dark gray, SAND, some silt, some gravel, railroad tie, wet at 2.5-feet. (PID reading 0.0, Railroad tie reading, 1.3 ppm)
4						
6					SP	Gray-brown, SAND, GRAVEL and SILT, wet.
8	0.3	PSB7-(9-10) 80%			SP	
10					SP	Black, GRAVEL, SAND and BRICK, wet, slight creosote odor. (PID reading 3.7 ppm)
					SP	Gray, GRAVEL and SAND, wet.
12	0.0	100%			SP SM	Gray, fine to medium grain SAND and SILT, wet, no odor.
14						
16						

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Drilling Log

Soil Boring **PSB-8**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 3.0 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/19/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0					SP SM	Dark brown, SILT and SAND, some fine gravel, moist. (Fill)
2	0.0	100%			SP SM	Layered broen to gray, fine grain SAND and SILT, some gravel, wet at 3 feet. (Fill)
4						
6					SP SM	Gray, fine grain SAND and SILT, wet.
8	0.0	PSB8-(6-7) 100%				
10					ML	Dark brown, ORGANIC SILT, peat fragments.
12	0.0	100%			SP SM	Gray, SILT and fine grain SAND, wet.
14						Weathered bedrock
16						

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Drilling Log

Soil Boring **PSB-11**

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Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *15.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA/NA in.*

Casing: Dia *NA in.* Length *NA ft.* Type *NA*

Fill Material _____ Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *C. Kraemer* Date *8/19/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP SM	Dark brown, SAND and SILT, gravel, moist. (Fill)
2	0.0	80%			SP SM	Brown, SAND, GRAVEL and SILT, moist. (Fill)
4						Concrete. (Fill)
6					SP SM	Gray, fine grain SAND and SILT, wet.
8	0.0	PSB11-(6-7) 100%			SP SM	Brown, fine to medium grain SAND, some silt, wet.
10					SP SM	Gray, fine to medium grain SAND and SILT, wet.
12	0.0	100%			SP SM	
14					ML	Dark brown, organic silt with peat fibers.
16						

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Drilling Log

Soil Boring **PSB-12**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 3.0 ft. — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/19/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0					SP	Brown, SAND, gravel, silt,brick, moist. (Fill)
2	0.0	80%			SP	Gray-brown, SAND, GRAVEL and SILT, concrete, wet at 3-feet. (Fill)
4						
6					SP	Alternating layers of brown and dark gray, fine to medium grain SAND and fine gravel, wet. (Fill)
8	0.0	50%				
10					SP SM	Gray, fine grain SAND and SILT, wet.
12	0.0	PSB12-(11-12) 100%			ML	Gray, SILT, some fine grain sand, little clay, wet.
14					SP	Gray, SAND and GRAVEL, some silt, wet.
					PT	Dark brown, ORGANIC PEAT, some silt.
16						

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

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Drilling Log

Soil Boring **PSB-16**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/19/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Dark gray, SAND, GRAVEL and SILT, moist. (Fill)
2	0.0				SP SM	
4					SP SM	Brown, SAND and SILT, trace clay, wet.
6						Brown, SAND and SILT, trace clay, wet.
8	0.0	PSB16-(6-7) 50%			SP SM	
10					SP SM	Brown, SAND and SILT, trace clay, wet.
12	0.0	60%				Gray, SILT and fine grain SAND, wet.
14					SP SM	
16						

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Drilling Log

Soil Boring **PSB-19**

Project Mott Haven | Owner NYC School Construction Authority

Location Bronx, NY | Proj. No. 114926

Surface Elev. NA | Total Hole Depth 15.0 ft. | North | East

Top of Casing NA | Water Level Initial ▽ 2.5 ft. | Static NA | Diameter

Screen: Dia NA in. | Length NA ft. | Type/Size NA/NA in.

Casing: Dia NA in. | Length NA ft. | Type NA

Fill Material | Rig/Core Geoprobe 6610

Drill Co. ADT | Method Geoprobe

Driller | Log By C. Kraemer | Date 8/19/05 | Permit # NA

Checked By | License No.

COMMENTS

Depth (ft)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0					SP	Interlayered brown and black SAND, some gravel, some silt, concrete brick wet at 2.5-feet.
2 ▽	0.0	80%				
4						
6					SP	Interlayered brown and black SAND, some gravel, some silt, concrete brick. (Fill)
8	0.0	60%				
10					SP	Interlayered brown and black SAND, some gravel, some silt, concrete brick. (Fill)
12	0.0	PSB19-(11-12) 60%			SP SM	Gray-brown, fine grain SAND and SILT, wet.
14					ML	Dark brown, ORGANIC SILT, some peat fragments, wet.
16					ML	Gray, SILT, some fine sand, wet.

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Drilling Log

Soil Boring **PSB-20**

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Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter ____

Screen: Dia NA in. — Length NA ft. — Type/Size NA/NA in.

Casing: Dia NA in. — Length NA ft. — Type NA

Fill Material ____ — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By C. Kraemer — Date 8/17/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Hit refusal at 9.5 feet in first location moved to second location, hit refusal at 5-feet, moved to third location, 2-feet west of original location to finish boring.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
					SP SM	Gray-brown, SAND, SILT and GRAVEL, brick and concrete, moist.
2	0.0	75%				
					SP	Brown, fine to medium grain SAND, some silt, little fine gravel, wet.
4						
					SP	Brown, SAND, some silt, wet.
6						
	0.0	PSB20-(6-7)			SP	Gray, alternating layers of medium to coarse grain SAND, trace silt, wet, and medium GRAVEL and SAND, wet. Hit refusal at 9.5-feet.
8						
						Brown, fine to medium grain SAND, some silt, wet.
10						
	0.0	75%			SP	
12						
14						
16						

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Drilling Log

Vapor Extraction Well **PSGI-1**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *4.5 ft.* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *0.5 ft.* Type *PVC*

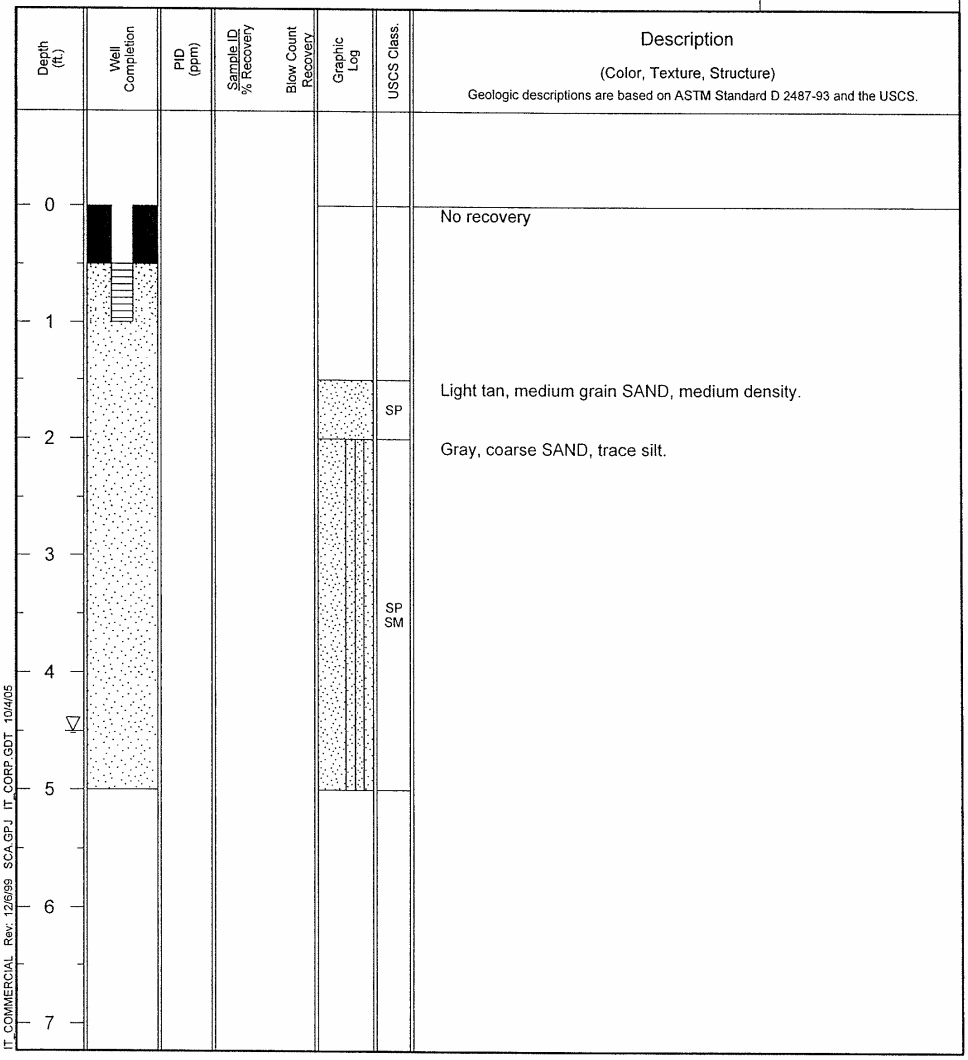
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



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Drilling Log

Vapor Extraction Well **PSGI-10**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 7.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter 2 in.

Screen: Dia 1 in. — Length 0.5 ft. — Type/Size PVC/0.01 in.

Casing: Dia 1 in. — Length 6 ft. — Type PVC

Fill Material Morie Sand No. 00 and bentonite — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By W. Peters — Date 8/4/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							Concrete
2						SP	Dark brown, medium grained SAND, medium density.
						SP	Black, coarse grained SAND, some large cobbles.
4						SP	Red, fine grain SAND, trace clay, dense.
6							
8							
10							

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-2**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *2.0 ft.* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *0.5 ft.* Type *PVC*

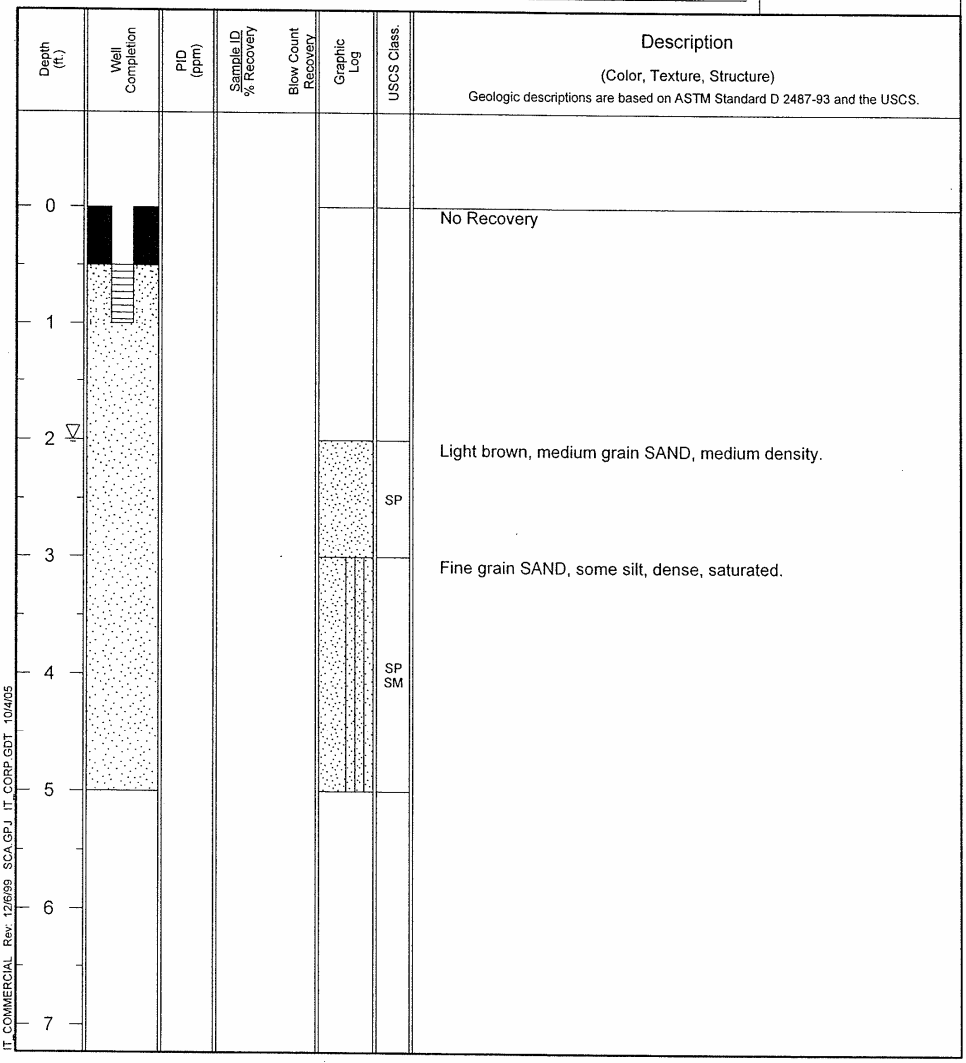
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



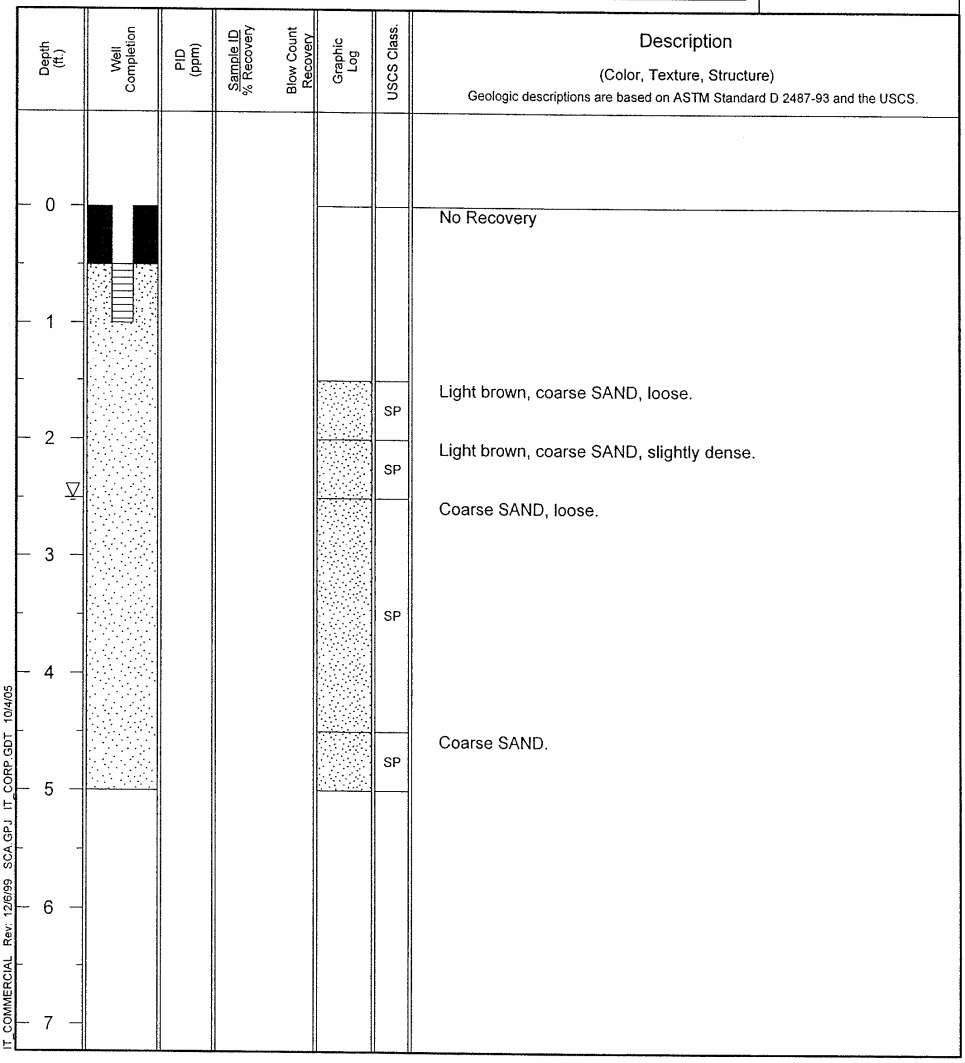
IT_COMMERCIAL Rev. 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well PSGI-3

Project: Mott Haven | Owner: NYC School Construction Authority
Location: Bronx, NY | Proj. No.: 114926
Surface Elev.: NA | Total Hole Depth: 5.0 ft. | North: | East:
Top of Casing: NA | Water Level Initial: ▽ 2.5 ft. | Static: NA | Diameter: 2 in.
Screen: Dia: 1 in. | Length: 0.5 ft. | Type/Size: PVC/0.01 in.
Casing: Dia: 1 in. | Length: 0.5 ft. | Type: PVC
Fill Material: Morie Sand No. 00 and bentonite | Rig/Core: Geoprobe 6610
Drill Co.: ADT | Method: Geoprobe
Driller: | Log By: W. Peters | Date: 8/15/05 | Permit #: NA
Checked By: | License No.:

COMMENTS



IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-4**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *3.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *2.5 ft.* Type *PVC*

Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							Light brown, SAND, trace silt, medium density. Hit refusal at 3-feet (Cement)
1						SP	
2							
3							
4							
5							

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-5**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *3.5 ft.* Type *PVC*

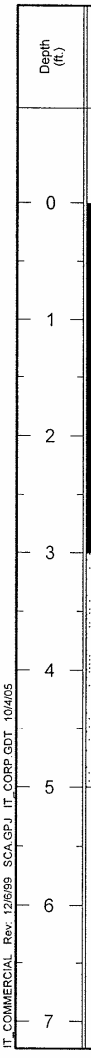
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
No Recovery
Medium grain SAND, some fill, medium density.
Concrete
Medium grain SAND, some fill, medium density.

IT_COMMERCIAL Rev. 12/5/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-6**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *3.5 ft.* Type *PVC*

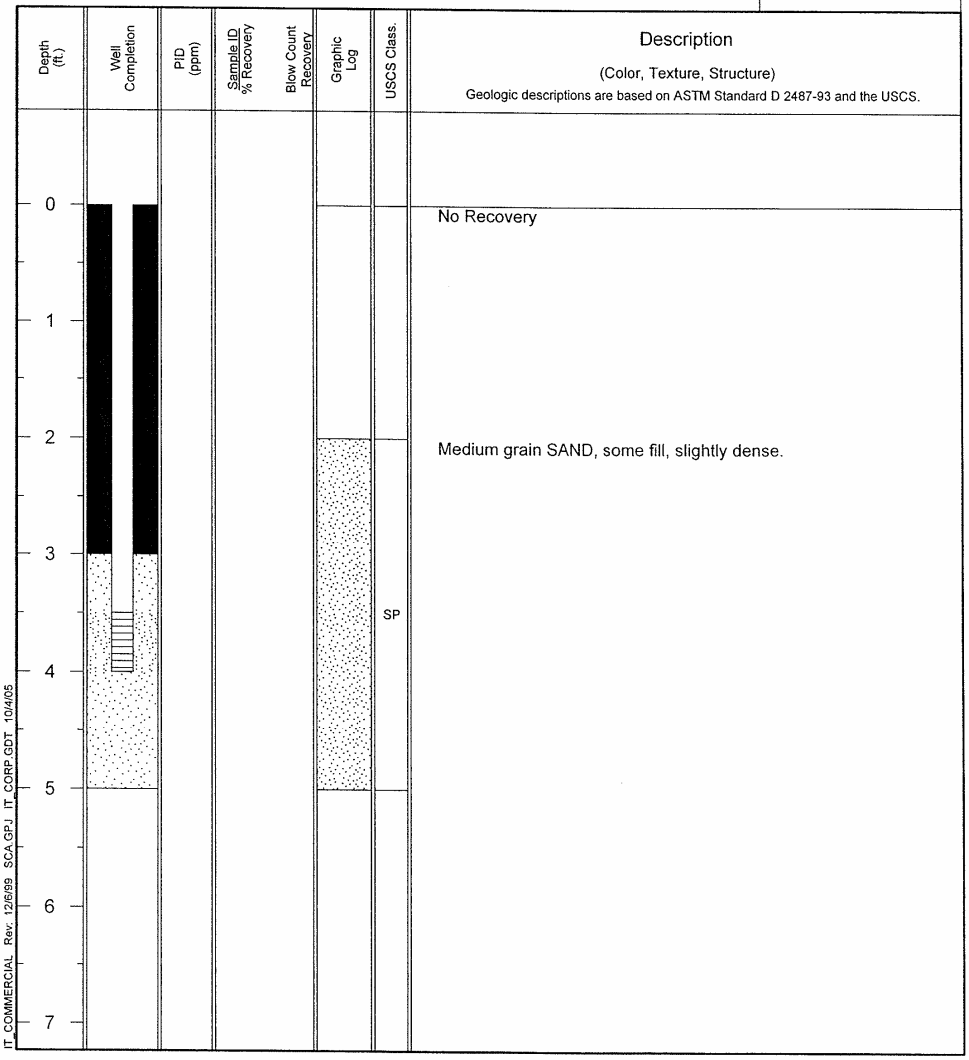
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



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Drilling Log

Vapor Extraction Well **PSGI-7**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 5.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter 2 in.

Screen: Dia 1 in. — Length 0.5 ft. — Type/Size PVC/0.01 in.

Casing: Dia 1 in. — Length 3 ft. — Type PVC

Fill Material Morie Sand No. 00 and bentonite — Rig/Core Geoprobe 6610

Drill Co. ADT — Method Geoprobe

Driller ____ — Log By W. Peters — Date 8/15/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							No Recovery
1							
2							
3							
4						SP	Light brown, FILL and coarse SAND, loose.
5							
6							
7							

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-8**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *1.5 ft.* Type *PVC*

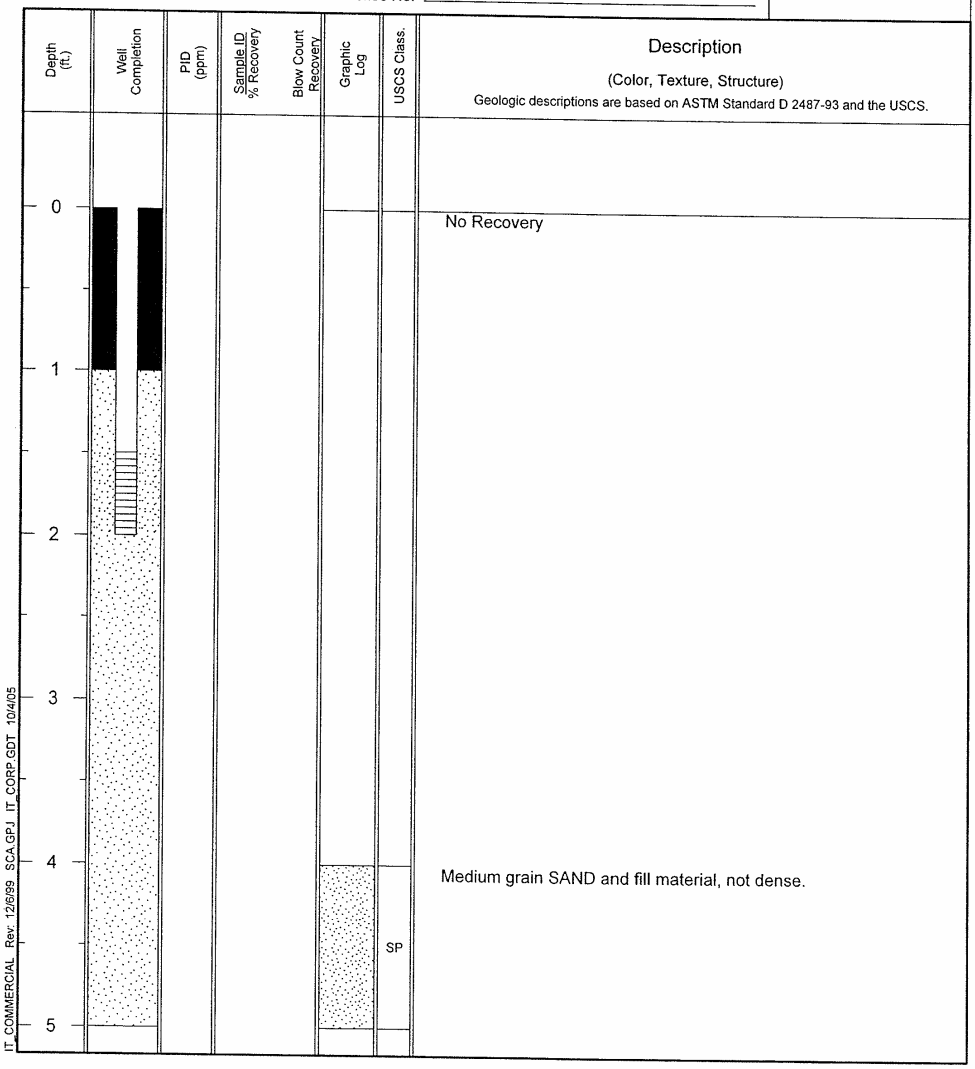
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/15/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Vapor Extraction Well **PSGI-9**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Surface Elev. *NA* Total Hole Depth *6.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *2 in.*

Screen: Dia *1 in.* Length *0.5 ft.* Type/Size *PVC/0.01 in.*

Casing: Dia *1 in.* Length *6 ft.* Type *PVC*

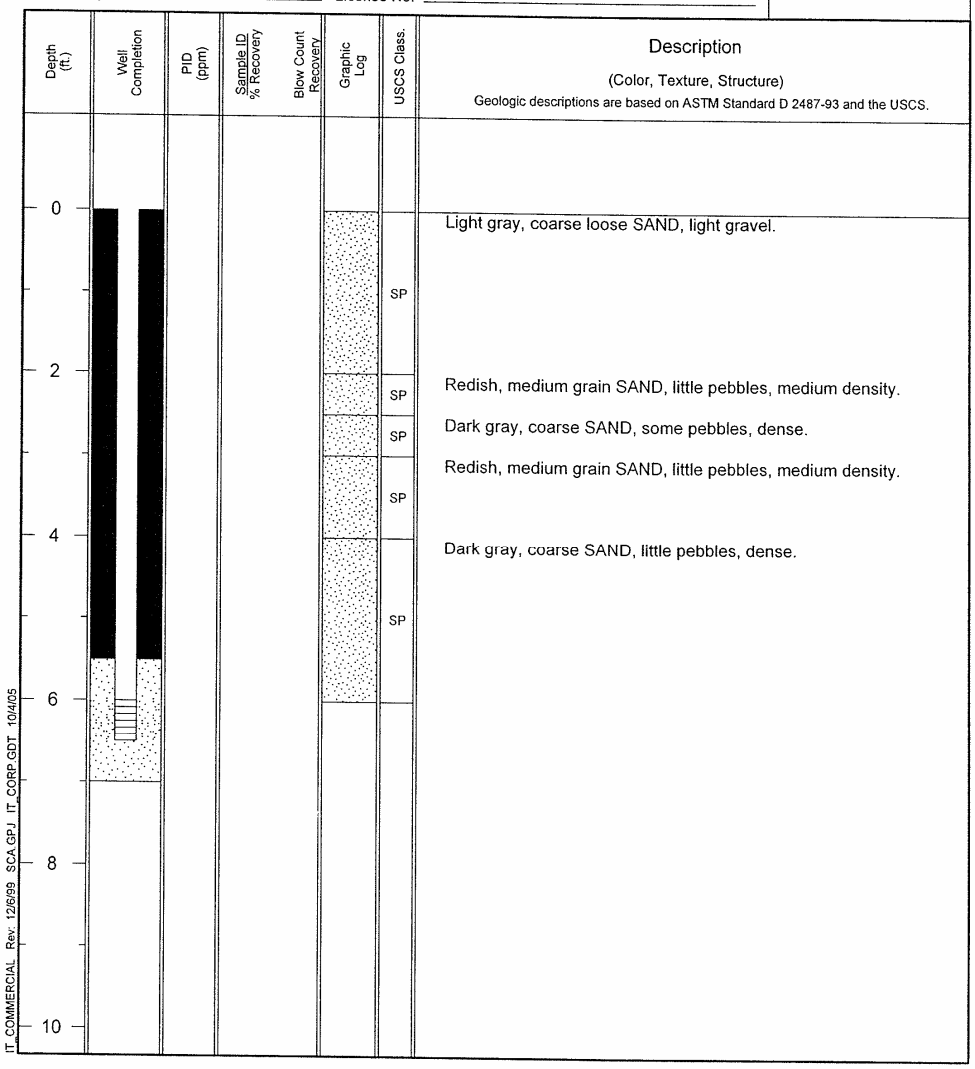
Fill Material *Morie Sand No. 00 and bentonite* Rig/Core *Geoprobe 6610*

Drill Co. *ADT* Method *Geoprobe*

Driller _____ Log By *W. Peters* Date *8/4/05* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Monitoring Well **MW-1**

Project: Mott Haven — Owner: NYC School Construction Authority
Location: Bronx, NY — Proj. No.: 114926
Surface Elev.: NA — Total Hole Depth: 16.0 ft. — North: — East: —
Top of Casing: NA — Water Level Initial: ▽ 10.0 ft. — Static: NA — Diameter: 10.25 in.
Screen: Dia: 4 in. — Length: 10 ft. — Type/Size: PVC/0.01 in.
Casing: Dia: 4 in. — Length: 6 ft. — Type: PVC
Fill Material: Morie Sand No. 00, bentonite, cement — Rig/Core: B61
Drill Co.: ADT — Method: Hollow Stem Auger
Driller: Shawn — Log By: J. Ferngren — Date: 4/7/05 — Permit #: NA
Checked By: — License No.:

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery / Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Dark brown, silty fine grain SAND, some fine gravel, odor present.
2						
4		0.0	50%			Dark brown, silty fine grain SAND, some fine gravel, odor present. Grades to Brick for 2-inches, crushed weathered bedrock for 2-inches, and black, fine grain SAND and SILT, some fine gravel and wood fragments.
6		2.7	50%			Black, fine grain SAND and SILT, some fine gravel, grades to light olive gray, SILT and very fine grain SAND.
8		0.0	50%			Black and dark brown, SILT and fine grain SAND, some fine gravel, sweet odor. Grades at 6-inches to light brown fine grain SAND and SILT, few fine gravel, saturated.
10 ▽						

Continued Next Page

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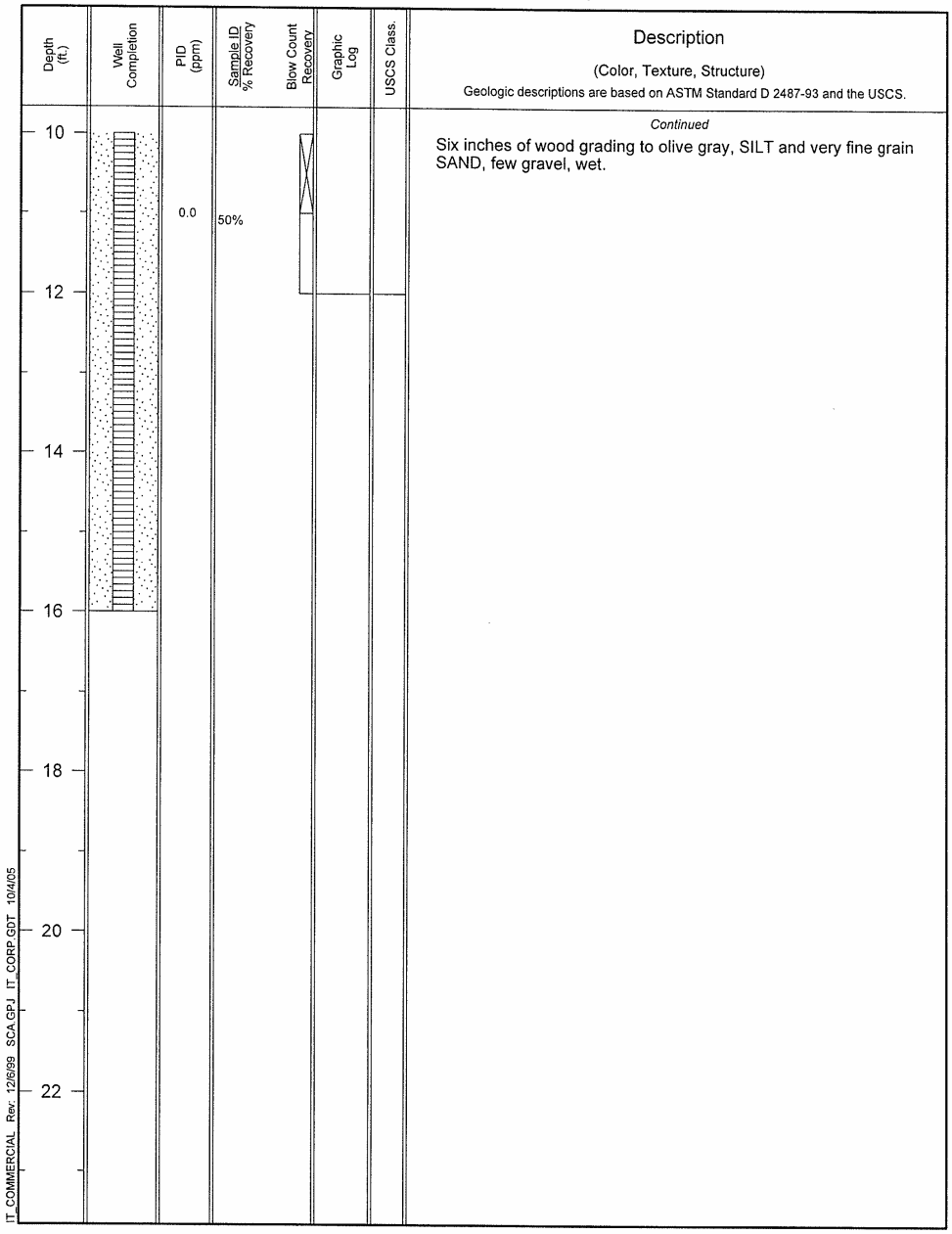
Drilling Log

Monitoring Well **MW-1**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*



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Drilling Log

Monitoring Well **MW-2**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 15.0 ft. — North — East —

Top of Casing NA — Water Level Initial ▽ 7.0 ft. — Static NA — Diameter 10.25 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 4 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite, grout/cement — Rig/Core —

Drill Co. ADT — Method Hollow Stem Auger

Driller — Log By J. Ferngren — Date 4/8/05 — Permit # NA

Checked By — License No. —

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							
		0.0	25%			SP SM	Dark brown to black fine grain SAND and SILT, few fine gravel, organics.
2							Brown, SILT, some fine grain sand, little clay.
		0.0	10%			ML	
4							Brown, SILT, some fine grain sand, little clay.
		0.0	50%			ML	
6							Brown, SILT, some fine grain sand, little clay, dense, dry.
▽		0.0	50%			ML	
8							No recovery
			0%				Brown, SILT, some fine grain sand, little clay, dense, damp.
		0.0	10%			ML	
10							

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Drilling Log

Monitoring Well **MW-2**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
							Continued
10		0.0	10%			ML	
							Yellowish brown, medium to coarse grain SAND, some silt, mica flakes, dry.
12		0.0	10%			SM	
							Olive brown, fine to medium grain SAND, mica flakes, some silt, few fine gravel, damp.
14		0.0	10%			SM	
16							
18							
20							
22							

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Drilling Log

Monitoring Well **MW-3**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 11.5 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 2.0 ft. — Static NA — Diameter 10.25 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 1.5 ft. — Type PVC

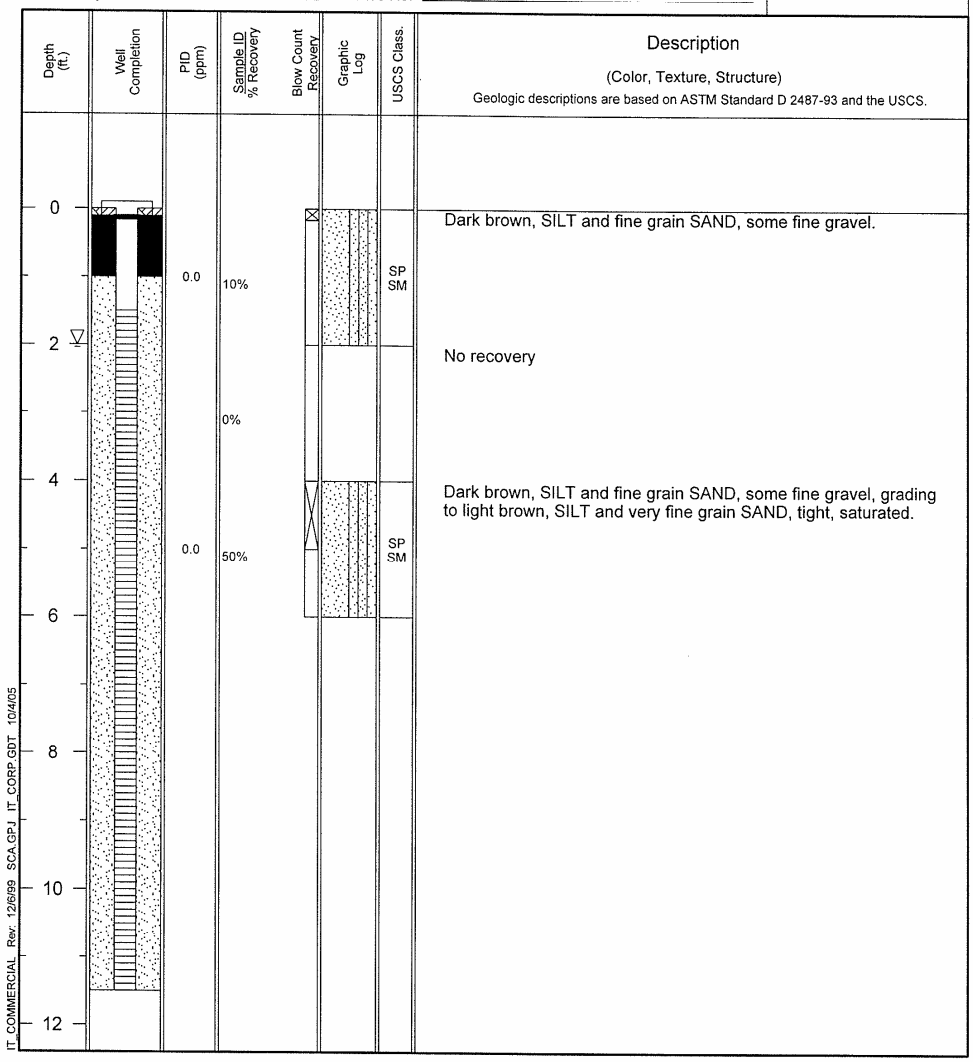
Fill Material Morie Sand No. 00, bentonite and cement — Rig/Core B61

Drill Co. ADT — Method Hollow Stem Auger

Driller Shawn — Log By J. Ferngren — Date 4/11/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS



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Drilling Log

Monitoring Well **MW-4**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 10.0 ft. — North — East

Top of Casing NA — Water Level Initial NA — Static NA — Diameter 5 7/8 in.

Screen: Dia 4 in. — Length 7 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 3 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite and cement — Rig/Core F10

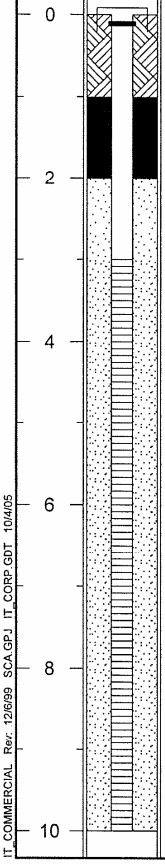
Drill Co. ADT — Method Air Rotary

Driller Chris — Log By J. Ferngren — Date 4/12/05 — Permit # NA

Checked By — License No.

COMMENTS

Well started with HSA, hit refusal at 4-feet, moved well, tried 5 times, still refusal, finish well with air rotary.



Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.	USCS Class.
Black to dark brown, fine to coarse SAND, little silt, fine gravel, trace bricks and organics, no odor or staining, wet. (Fill)	SP
No Recovery (rock - drill with solid core to advance)	
Refusal at 4-feet	

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Drilling Log

Monitoring Well MW-5

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 11.5 ft. — North ____ — East ____

Top of Casing NA — Water Level Initial ▽ 2.0 ft. — Static NA — Diameter 10.25 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 1.5 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite and cement — Rig/Core F10

Drill Co. ADT — Method Hollow Stem Auger

Driller Chris — Log By J. Ferngren — Date 4/11/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0							Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0		0.0	90%			SP SM	Dark brown fine grain SAND and SILT, some fine gravel.
2 ▽		0.0	75%			SP SM	Dark brown fine grain SAND and SILT, some fine gravel, grading to light brown fine grain SAND and SILT, tight, saturated.
4							
6							
8							
10							
12							

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Drilling Log

Monitoring Well **MW-6**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 14.0 ft. — North — East —

Top of Casing NA — Water Level Initial ▽ 6.0 ft. — Static NA — Diameter 10.25 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 4 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite and cement — Rig/Core B61

Drill Co. ADT — Method Hollow Stem Auger

Driller Shawn — Log By J. Ferngren — Date 4/12/05 — Permit # NA

Checked By — License No.

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							
0			10%			SP SM	Dark brown, SILT and fine grain SAND, crushed rock. Hit cobbles at 1.8 feet.
2		0.0	50%			SP SM	Dark brown, SILT and fine grain SAND, some fine gravel.
4		0.0	25%			SP SM	Dark brown, SILT and fine grain SAND, some fine gravel, wet at bottom of spoon
6 ▽		0.0	50%			SP SM	Dark brown, SILT and fine grain SAND, some fine gravel, grading into light brown, silty fine grain SAND, saturated.
8							
10							
12							
14							
16							

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Drilling Log

Monitoring Well **MW-9**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 40.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial ▽ 37.0 ft. — Static NA — Diameter 10.25 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 33 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite, grout/cement — Rig/Core ____

Drill Co. ADT — Method Hollow Stem Auger

Driller ____ — Log By D. Downing — Date 3/30/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

For well completion, 5-feet to 28 feet was cement/bentonite grout.

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery / Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						

Continued Next Page

Drilling Log

Monitoring Well **MW-9**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
							Continued
30		0	50%	7 3 14 31		SM	Brown, SILT and SAND, some pebbles.
32		29	50%	10 15 21 14		SM	Grayish-brown, SILT and SAND
34			0%	20 10 7 12			No Recovery
36		1359	40%	6 6 10 14		SM	Brown to gray, SILT and fine grain SAND, wet at 37 feet.
38				6 6 6 10		SM	Brown, SILT and fine grain SAND, wet.
40							
42							
44							
46							

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Drilling Log

Monitoring Well **MW-10**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 14.0 ft. — North ____ East ____

Top of Casing NA — Water Level Initial NA — Static NA — Diameter 6 in.

Screen: Dia 4 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 4 in. — Length 4 ft. — Type PVC

Fill Material Morie Sand No. 00, bentonite and cement — Rig/Core B61/Shawn

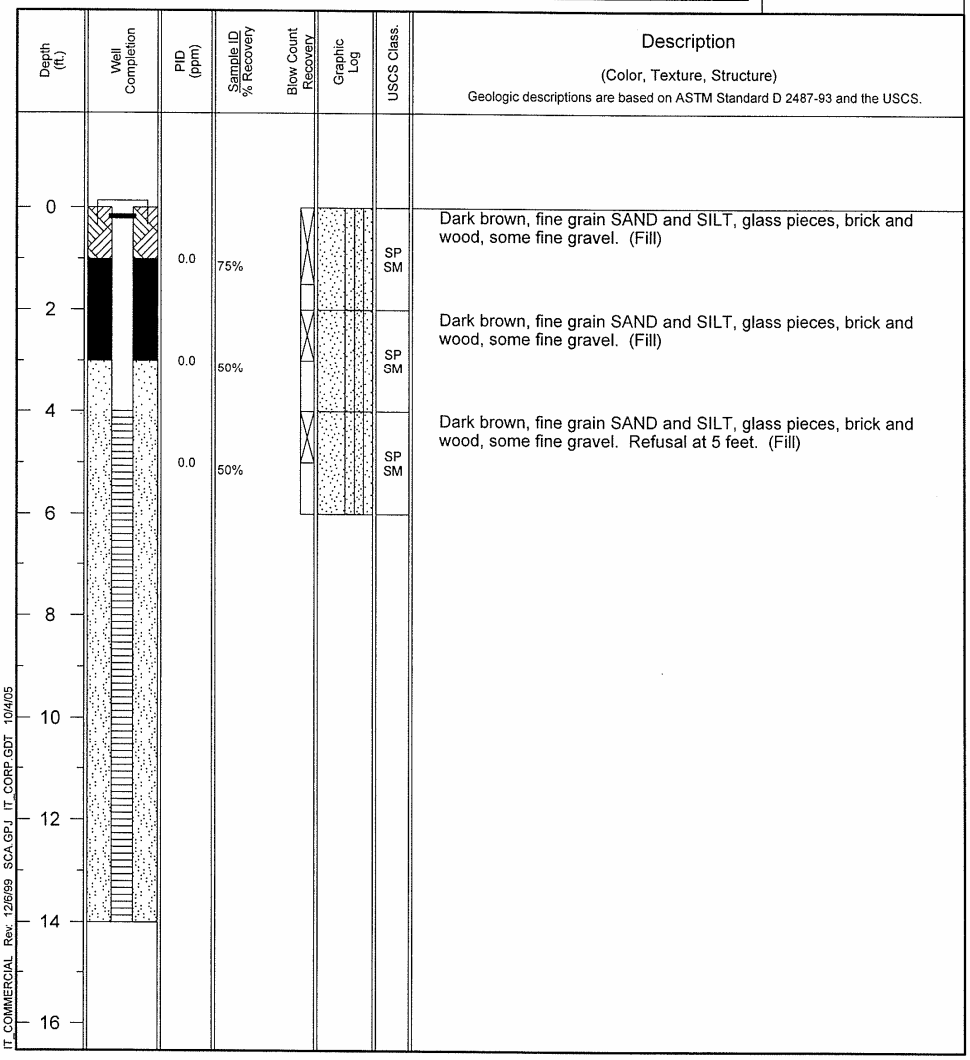
Drill Co. ADT — Method Hollow Stem Auger

Driller ____ — Log By J. Ferngren — Date 4/7/05 — Permit # NA

Checked By ____ — License No. ____

COMMENTS

Well started with HSA, hit refusal at 5-feet, moved well, tried 5 times, still refusal, finish well with air rotary.



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Drilling Log

Monitoring Well **MW-11**

Project: Mott Haven | Owner: NYC School Construction Authority
Location: Bronx, NY | Proj. No.: 114926
Surface Elev.: NA | Total Hole Depth: 14.0 ft. | North: | East:
Top of Casing: NA | Water Level Initial: ▽ 4.5 ft. | Static: NA | Diameter: 10.25 in.
Screen: Dia: 2 in. | Length: 10 ft. | Type/Size: PVC/0.01 in.
Casing: Dia: 2 in. | Length: NA | Type: PVC
Fill Material: Morie Sand No. 00, bentonite and fill | Rig/Core: B61
Drill Co.: ADT | Method: Hollow Stem Auger
Driller: Tony | Log By: H. Fariello | Date: 4/7/05 | Permit #: NA
Checked By: | License No.:

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0		0.0	50%	6, 20, 35			Black, fine to coarse SAND, some fine gravel, trace brick and concrete, no odor or staining.
2		0.0	50%	2, 5, 9, 5		SP	Black, fine to coarse SAND, some fine gravel, trace brick and concrete, no odor or staining. Tan to white, medium to coarse SAND, no odor or staining.
4 ▽		0.0	60%	2, 3, 3, 2		SP	Tan to white, fine to coarse SAND, little mica, wet at 4-5 feet, no odor or staining.
6		0.0	40%	63, 45, -, -		SP	White, MICA and QUARTZ, refusal with spoon, dry at 7-feet, no odor or staining.
8		0.0	50%	29, 30, 31, 30		SP	Tan to red/tan, fine to coarse SAND, little gravel and rock, wet at 10-feet, no odor or staining.
10		0.0	80%	28, 50, 3, -		SP	White to tan with red lens, fine to coarse SAND, some silt, trace fine gravel, wet 10-11 feet, no odor or staining
12		0.0	0%	12, 60, -, -			Sluff, no sample collected.
14							

Soil Boring Log

Shaw Environmental & Infrastructure
Engineering of New York, P.C.
[illegible]

Project # 114926 Project Name NYCSCA Site #
Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-18
Sheet No. 1 of 2

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Sean, Jaime
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Date Started 8/22/05
Date Finished 8/22/05
Weather warm, clear
Shaw Geologist DD

Depth (ft)	SAMPLE: Depth Interval (ft.)	% Rec./	Blows/6"	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moisture	WELL CONSTRUCTION
	5-7	50	5,10,8,6		Light brown SANDY SILT. Some ROCKS and PEBBLES.		1.7	dry	
	7-9	50	4,3,5,4		Light brown CLAYEY SILT, with PEBBLES		2.4	dry	
	9-11	25	5,7,8,5		Light brown SANDY SILT. No odor.		3.0	dry	
	11-13	75	6,8,10,10		Same as previous, with BRICK fragments and FILL.		3.8	moist	
	13-15	50	8,10,6,6		Same as previous		3.9	moist	
	15-17	50	5,3,5,5		Same as previous		3.9	moist	
	17-19	50	5,7,4,8		Same as previous		1.9	moist	
	19-21	50	100 for 1'		Light brown SANDY SILT. Concrete pieces and FILL.		1.1	moist	
	21-23	65	8,6,10,6		Light brown SANDY SILT and CLAYEY SILT. BRICK fragments and PEBBLES.		1.7	moist	

Soil Boring Log

Shaw Environmental & Infrastructure
Engineering of New York, P.C.
14 NORTH AVENUE
NEW ROCHELLE, NY 10801

Project # 114926 Project Name NYCSCA Site #

Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-18

Sheet No. 2 of 2

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Sean, Jaime
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Date Started 8/22/05
Date Finished 8/22/05
Weather warm, clear
Shaw Geologist DD

Depth (ft)	SAMPLE: Depth Interval (ft.)	% Rec./	Blows/6"	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moisture	WELL CONSTRUCTION
	23-25	50	4,3,3,2		Fine and medium SAND and SANDY SILT.		3.1	moist	
	25-27	100	8,6,12,8		top 20" same as previous. bottom 4" wet tarlike gravel. Wet at 26'.		6.6	wet	
	27-29	100	8,6,8,7		Tar like oil film visible on top Light brown CLAYEY SILT. Tar smell and look. Wet throughout.		17.6	wet	
	29-31	100			top 1' same as previous. bottom 1' yellowish brown fine SAND. Wet.		4.4	wet	
	31-33	100	3,5,2,4		Yellowish brown fine SAND.		2.2	wet	
					Well set at 33'. Well specs are as follows: 2" PVC well set to 33' below grade. 10' screen from 23'-33'. Sand around well to 21' BG. 2' of Bentonite to 19' BG. Backfill using native soil from 19' BG to grade.				

Soil Boring Log

Shaw Environmental & Infrastructure
Engineering of New York, P.C.
92 NORTH AVENUE
NEW ROCHELLE, NY 10801

Project # 114926 Project Name NYCSCA Site #
Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-19
Sheet No. 1 of 2
Date Started 8/24/05
Date Finished 8/24/05
Weather warm, clear
Shaw Geologist DD

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Tony
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Depth (ft)	SAMPLE: Depth Interval (ft.)	SAMPLE: % Rec./	SAMPLE: Blows/6"	SAMPLE: USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moisture	WELL CONSTRUCTION
	5-7	25	3,2,2,3		Light brown SANDY SILT. Few GRAVEL CONCRETE and FILL.		29.0	dry	
	7-9	10	1,2,2,2		Same as previous. bottom 1" light brown fine SAND.		24.5	dry	
	9-11	50	0,2,2,2		Light brown SANDY SILT. Few fine GRAVEL.		10.6	dry	
	11-13	80	1,2,2,2		Same as previous. Bottom 3" some FILL and darker brown		4.1	dry	
	13-15	40	3,6,6,4		Light brown SILT. Some fine SAND, FILL.		2.6	dry	
	15-17	10	1,2,3,3		Same as previous, odorless.		0.6	dry	
	17-19	5	3,3,3,3		Light brown SANDY SILT.		4.0	moist	
	19-21	50	3,3,3,5		Same as previous		1.2	moist	
	21-23	40	3,6,6,3		Same as previous.		0.9	moist	

Soil Boring Log

Shaw Environmental & Infrastructure Engineering of New York, P.C.
22 NORTH AVENUE
NEW ROCHELLE, NY 10801

Project # 114926 Project Name NYCSCA Site #

Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-19

Sheet No. 2 of 2

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Tony
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Date Started 8/24/05
Date Finished 8/24/05
Weather warm, clear
Shaw Geologist DD

Depth (ft)	SAMPLE: Depth Interval (ft.)	% Rec./	Blows/6"	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moisture	WELL CONSTRUCTION
	23–25	50	6,16,27,5		Light brown CLAYEY SILT.		2.0	moist	
	25–27	20	12,8,5,16		Dark brown SANDY SILT. Slightly wet.		24.5	wet	
	27–29	25	5,6,5, refusal		Light brown SANDY SILT. BRICK and ROCK fragments.		1.1	wet	
					Refusal hit at 30'				
					2" PVC well set at 29' below grade. 10' of screen from 19' – 29' BG. Sand pack from 17–29' BG. Bentonite from 15'–17' BG. Backfill with native soil to grade.				
	19–21								
	21–23								

Soil Boring Log

Shaw Environmental & Infrastructure
Engineering of New York, P.C.
52 NORTH AVENUE
NEW ROCHELLE, NY 10801

Project # 114926 Project Name NYCSCA Site #
Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-20
Sheet No. 1 of 2

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Sean, Jaime
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Date Started 8/23/05
Date Finished 8/23/05
Weather warm, clear
Shaw Geologist DD

Depth(ft)	SAMPLE: Depth Interval (ft.)	% Rec./	Blows/6"	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moist-ure	WELL CON-STRUCTION
	5-7	50	4,5,6,5		Light brown fine SAND. Some SILT. ROCKS and concrete throughout. no odor.		0.0	dry	
	7-9	75	5,3,6,4		top 6" same as previous. bottom 1' light brown fine SAND.		0.0	dry	
	9-11	0	3,2,2,2		No recovery.				
	11-13	75	6,4,3,6		Light brown fine SAND.		0.0	dry	
	13-15	50	7,3,6,8		Same as previous		0.0	dry	
	15-17	40	5,7,6,4		Same as previous		0.0	dry	
	17-19	100	5,3,4,5		Same as previous		0.0	moist	
	19-21	75	4,5,4,3		Same as previous, except wet at 20'		0.0	wet	
	21-23	100	2,4,4,3		bottom 1' same as previous. top 1' grayish brown SILTY CLAY.		0.1	wet	

Soil Boring Log

Shaw Environmental & Infrastructure Engineering of New York, P.C.
62 North Avenue
New Rochelle, NY 10801

Project # 114926 Project Name NYCSCA Site #

Site Name Motthaven Site Address 672 Concourse Village West, Bronx NY

Boring No. MW-20

Sheet No. 2 of 2

LEGEND
- Grout
- Bentonite
- Filter Pack

Drill Company ADT Driller Sean, Jaime
Drill Method Drill Rig
Rig Type Sampler Type Split Spoon
Total Boring Depth 33' Boring Diameter 4 1/4"
Well Depth 33' Well Diameter 2"
Screen length/size: 10'

Date Started 8/23/05
Date Finished 8/23/05
Weather warm, clear
Shaw Geologist DD

Depth (ft)	SAMPLE: Depth Interval (ft.)	% Rec./	Blows/6"	USCS	SOIL DESCRIPTION/LITHOLOGY	Lab Sample	PID (ppm)	Moisture	WELL CONSTRUCTION
	23–25	50	4,2,5,2		Light grey SILTY CLAY. Very slight tar smell.		0.0	wet	
					2" PVC well set at 27'. 10' of screen from 17'–27'. Sand pack from 27' BG to 15' BG. Bentonite seal from 15' to 13' BG. Backfill with native soil to grade				

Drilling Log

Monitoring Well **MW-21**

Project Mott Haven — Owner NYC School Construction Authority

Location Bronx, NY — Proj. No. 114926

Surface Elev. NA — Total Hole Depth 25.0 ft. — North — East —

Top of Casing NA — Water Level Initial ▽ 18.0 ft. — Static NA — Diameter 8.25 in.

Screen: Dia 2 in. — Length 10 ft. — Type/Size PVC/0.01 in.

Casing: Dia 2 in. — Length NA — Type PVC

Fill Material Morie Sand No. 00, bentonite and fill — Rig/Core B61

Drill Co. ADT — Method Hollow Stem Auger

Driller Tony — Log By H. Fariello — Date 8/23/05 — Permit # NA

Checked By — License No.

COMMENTS

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0							Fill
2						Fill	
4							
6		2.9	MW21-(5-7) 70%	1 1 1 2		SP SM	Brown, fine to medium grain SAND, trace fine gravel, little silt, no odor or staining.
8		3.0	80%	1 3 2 2		SP SM	Brown, fine to medium grain SAND, little silt, trace coarse sand and fine gravel, no odor or staining.
10		2.2	50%	4 3 3 2		SP SM	Brown, fine to medium grain SAND, trace silt, no odor or staining.
12		0.0		5 6 6 5		SP SM	Brown, fine to medium grain SAND, trace silt, no odor or staining.
14		3.2	60%	3 4 4 3		SP SM	Brown, fine to medium grain SAND, trace silt, little gray/red-brown mottling, no odor or staining.
16		0.9	70%	4 3 3 3		SP SM	Brown, SAND with slight gray/red-brown mottling, trace silt, no odor or staining.
18 ▽		0.0	90%			SP SM	Brown, SAND, trace silt, no odor or staining.
						SP SM	Brown SAND, some silt, no odor or staining, wet.

Continued Next Page

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Drilling Log

Monitoring Well **MW-21**

Project *Mott Haven* Owner *NYC School Construction Authority*

Location *Bronx, NY* Proj. No. *114926*

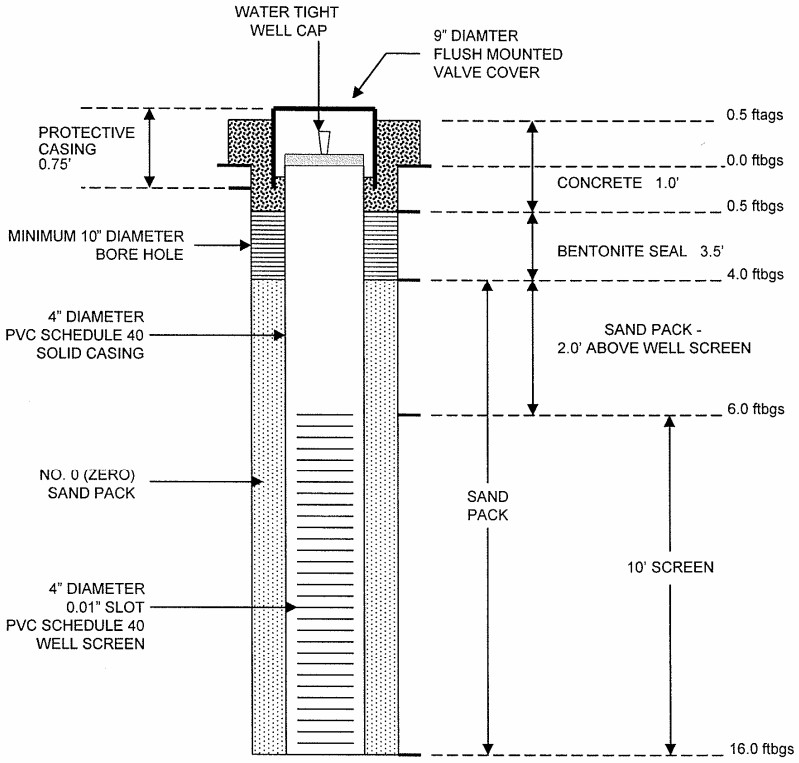
Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
							Continued
20		1.9				ML	Brown, SILT, some fine to medium grain SAND, some gray/red-brown mottling, bottom 6-inches dark gray SILT, no odors or staining, wet.
22		1.6	70%	4 4 5 3		ML	Gray, SILT, little fine to medium grain sand and clay, no odor or staining.
24		0.0	70%	5 5 4 3		ML	Gray, SILT with dark brown mottling, clay content increases towards 25-feet, no odor or staining.
26							
28							
30							
32							
34							
36							
38							
40							
42							
44							

IT_COMMERCIAL Rev: 12/6/99 SCA.GPJ IT_CORP.GDT 10/4/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

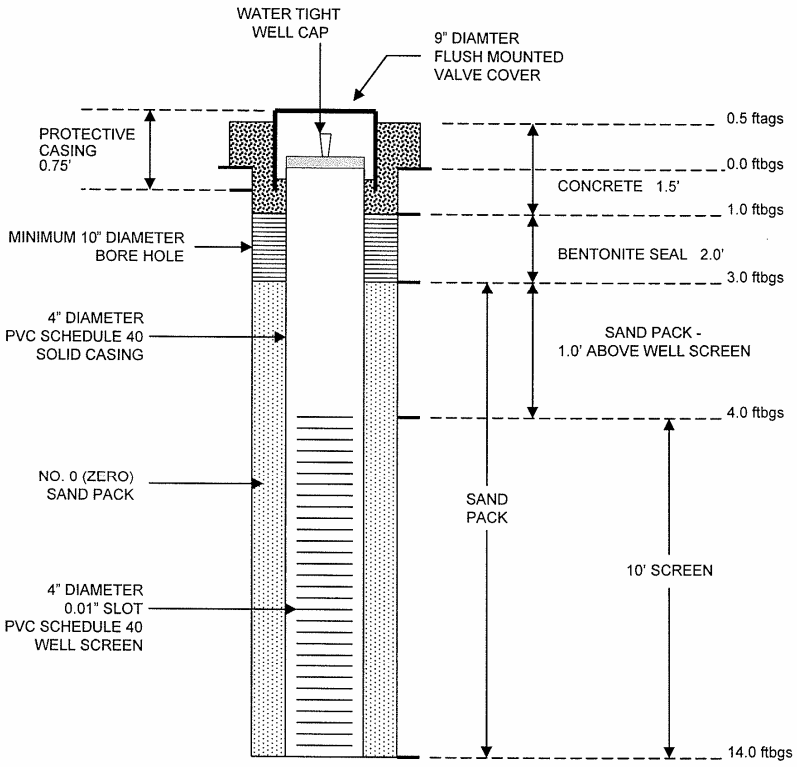
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-1**
DATE COMPLETED: 4/7/05

Shaw™
Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

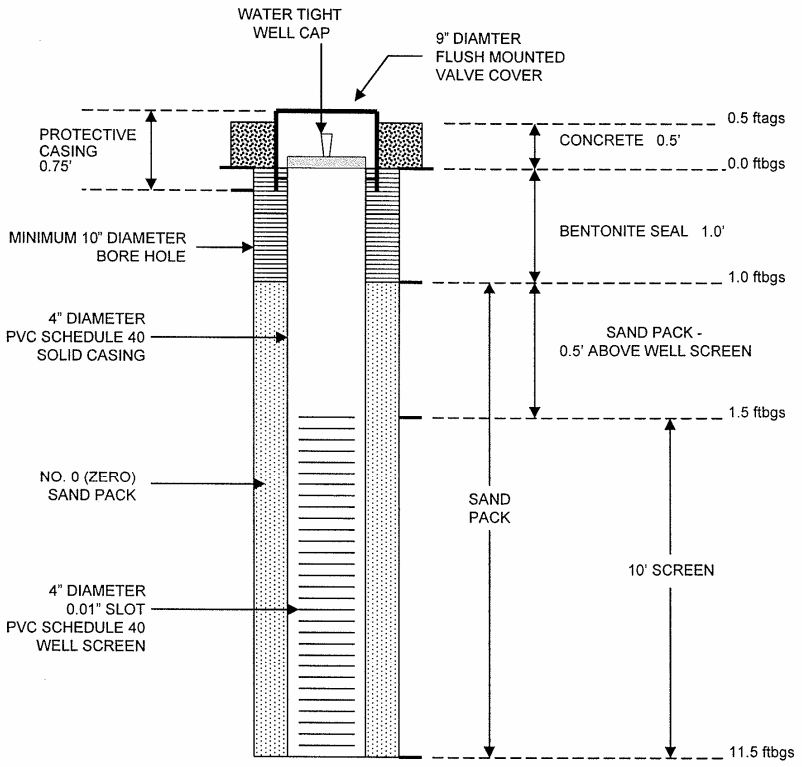
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-2**
DATE COMPLETED: 4/8/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

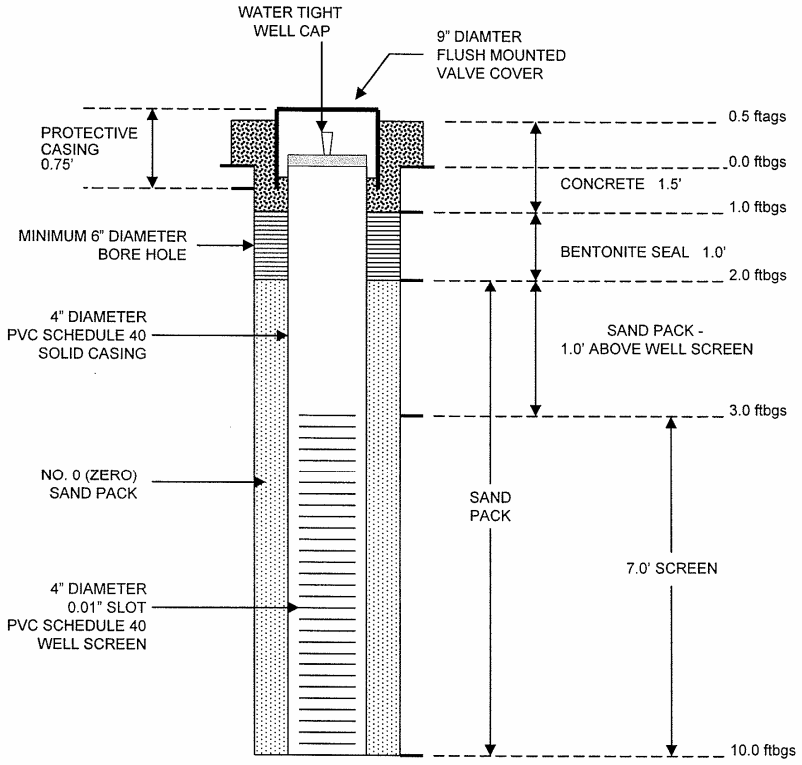
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-3**
DATE COMPLETED: 4/11/05

Shaw™
Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

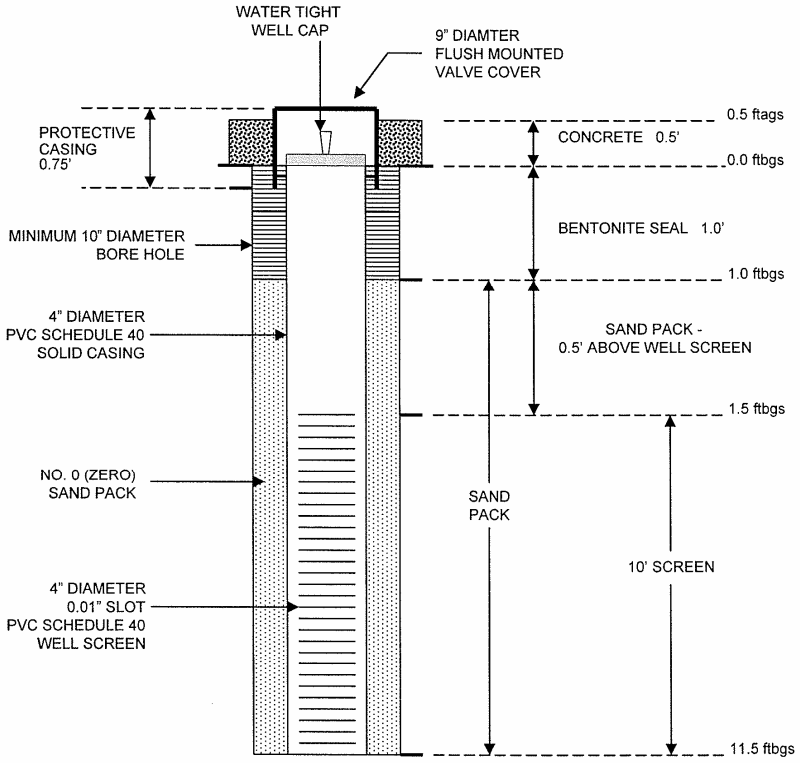
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-4**
DATE COMPLETED: 4/12/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

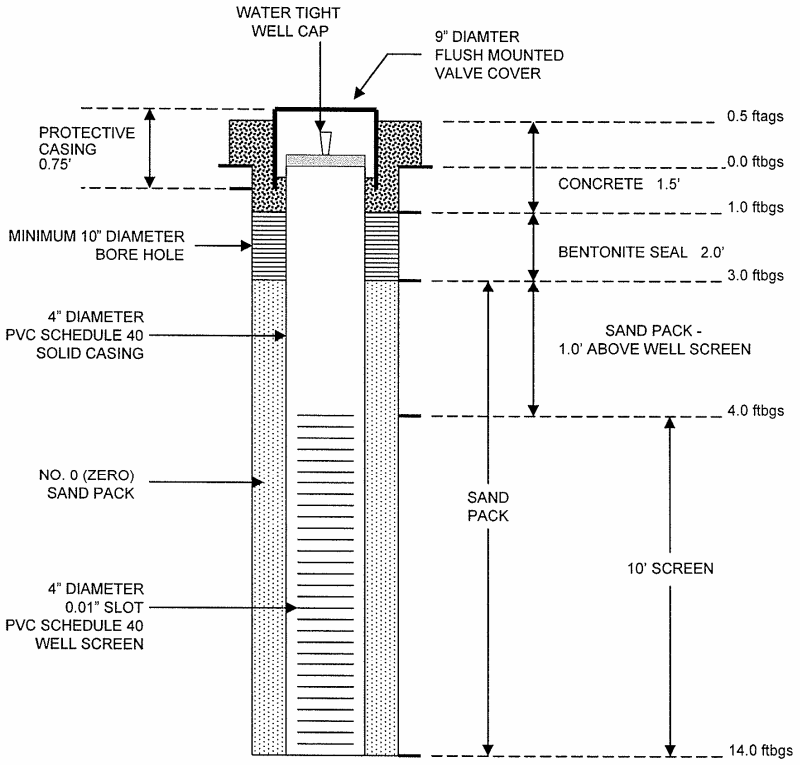
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-5**
DATE COMPLETED: 4/11/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

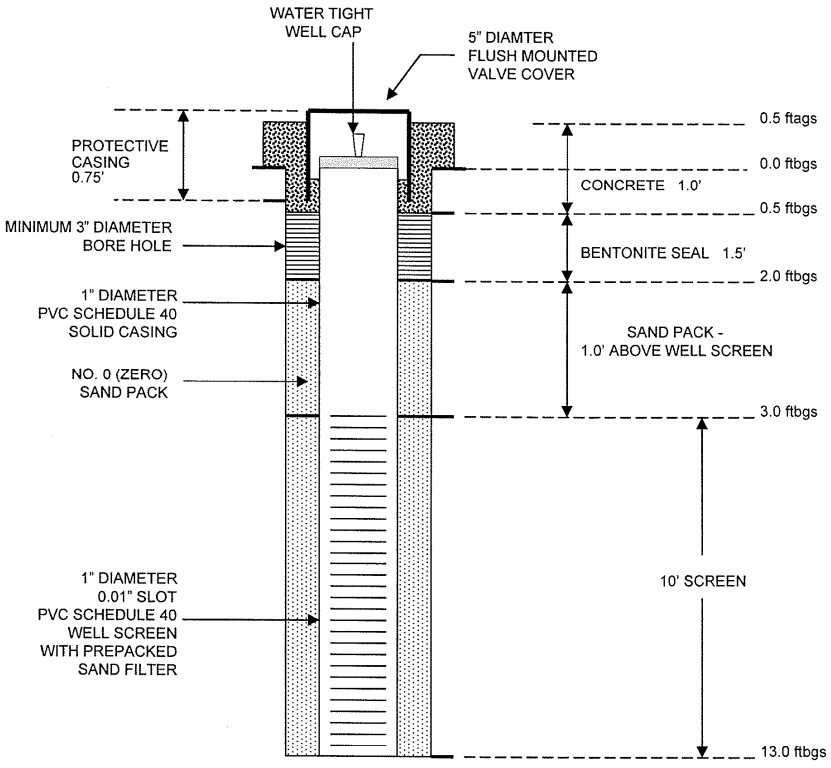
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-6**
DATE COMPLETED: 4/12/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-7**
DATE COMPLETED: 4/27/05

Shaw™
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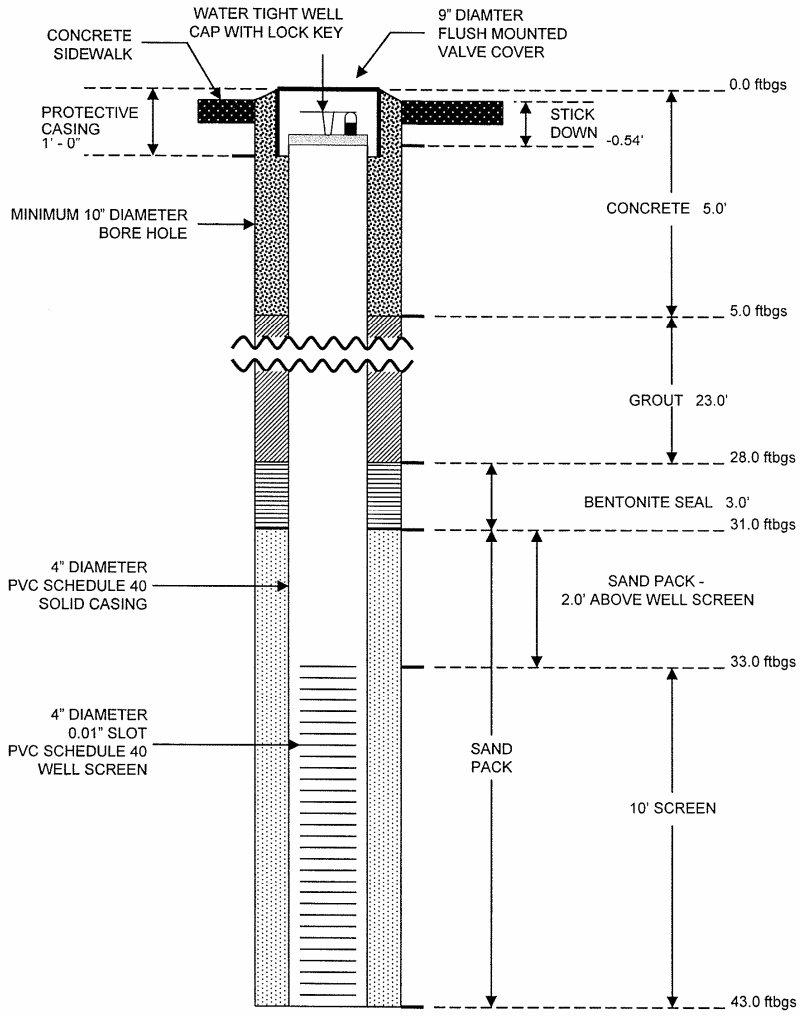
SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

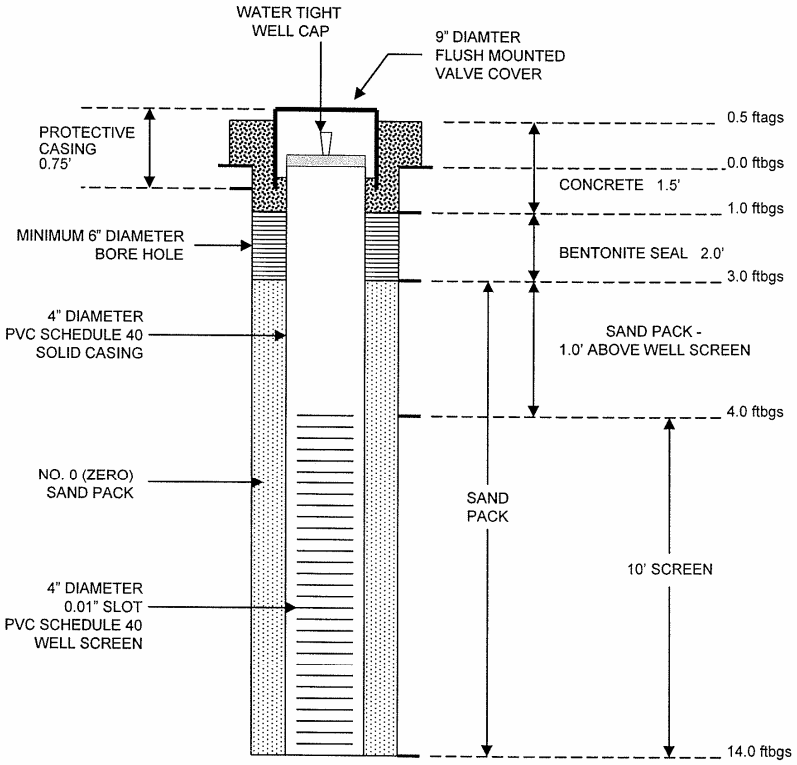
Note:
ftbgs - feet below ground surface

WELL NO.: **MW-9**
DATE COMPLETED: 3/31/05

Shaw™
Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

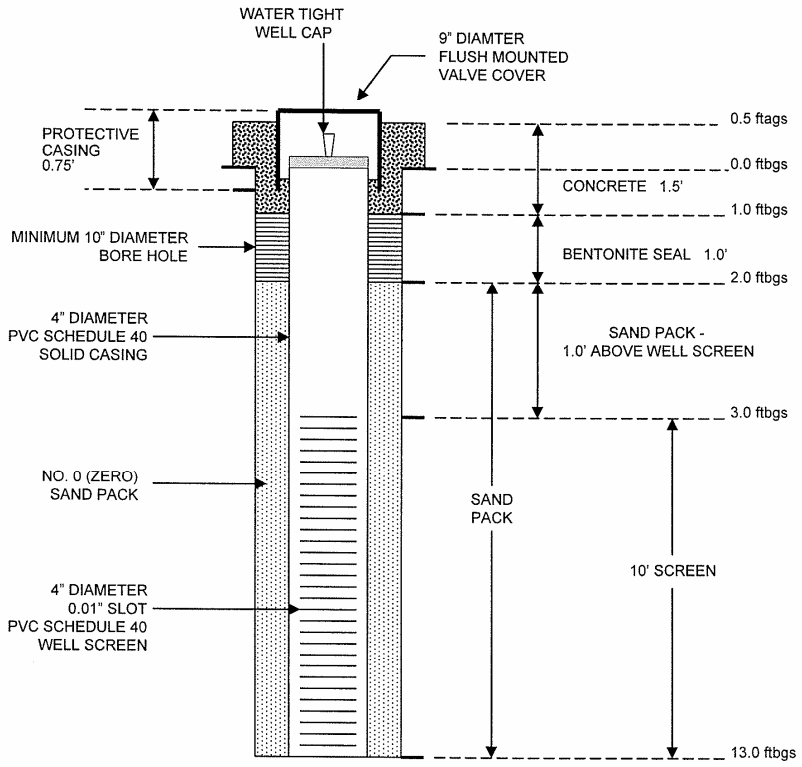
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-10**
DATE COMPLETED: 4/14/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

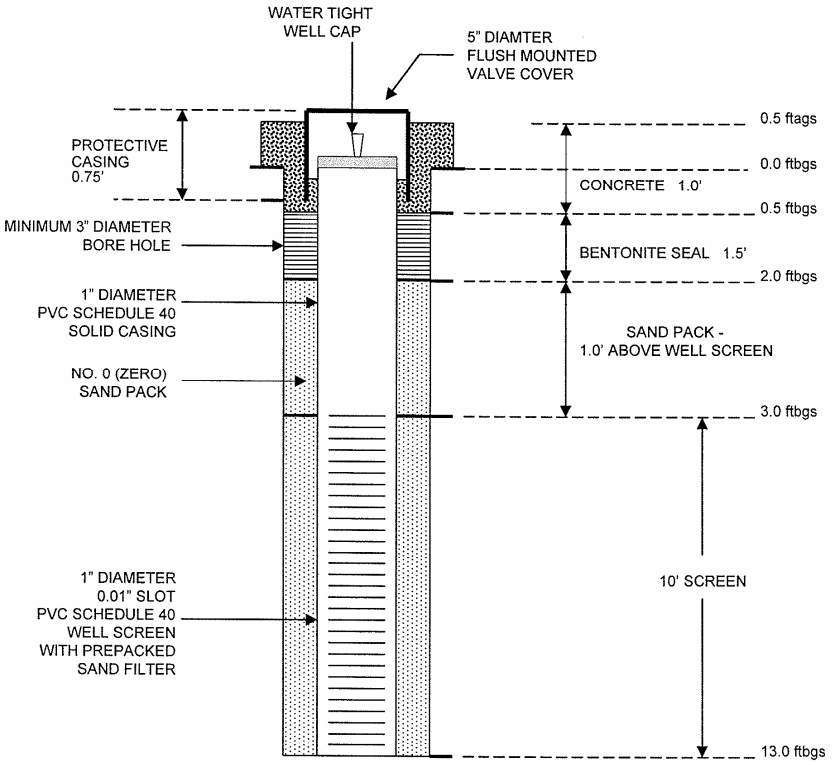
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-11**
DATE COMPLETED: 4/7/05

Shaw™
Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

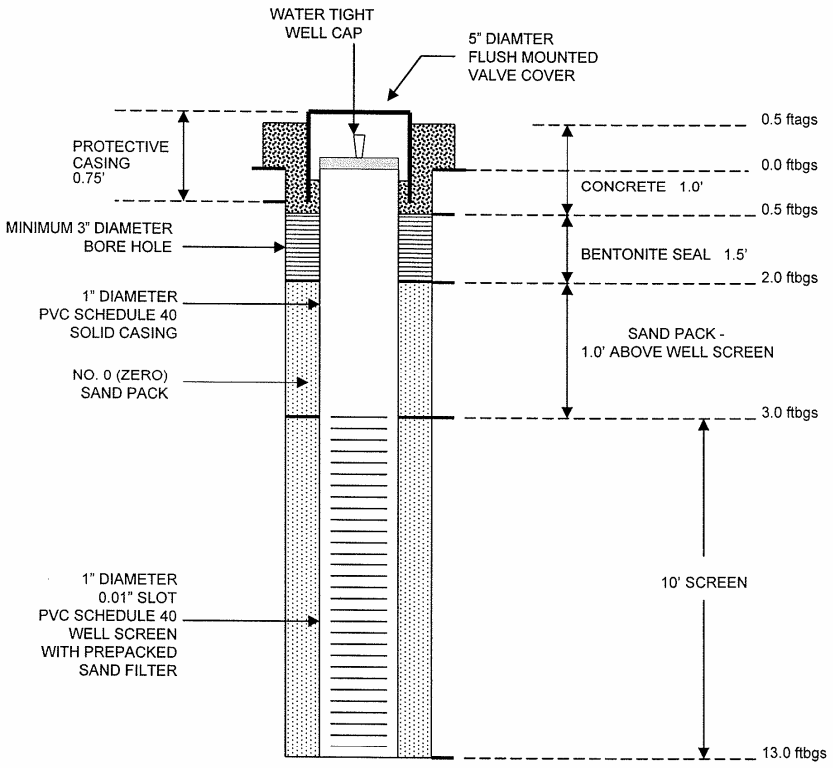
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-12**
DATE COMPLETED: 4/27/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

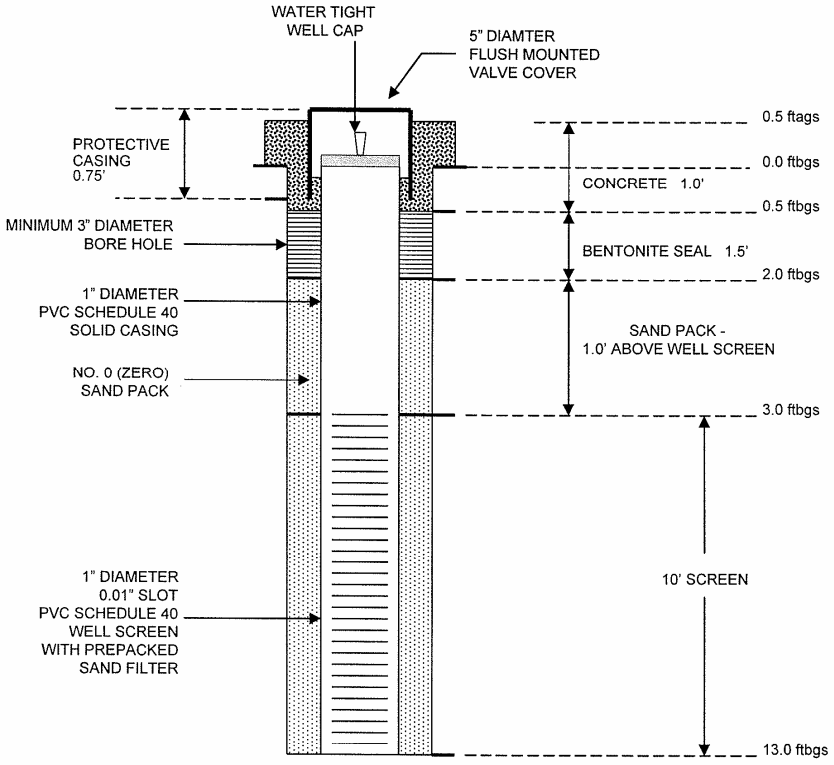
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-13**
DATE COMPLETED: 4/28/05

Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

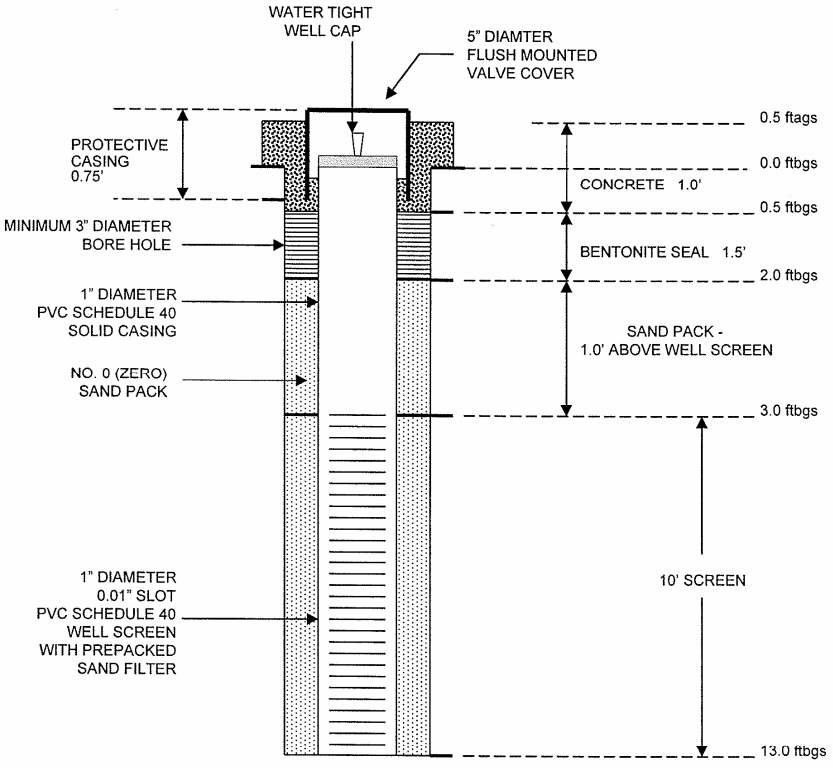
Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-14**
DATE COMPLETED: 4/28/05

Shaw™
Shaw Environmental & Infrastructure, Inc.

SCA - Motthaven
Bronx, New York

WELL CONSTRUCTION DETAIL



NOT TO SCALE

Note:
ftags - feet above ground surface
ftbgs - feet below ground surface

WELL NO.: **MW-15**
DATE COMPLETED: 4/28/05

Shaw™

Shaw Environmental & Infrastructure, Inc.

TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-11	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/19/05	Date Completed: 4/19/05	
Total Depth (ft bgs): 5.2	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 5.2 ft bgs: Dark brown, Silt and fine Sand, with brick, concrete and		0.0	ML	
2	gravel, moist.		0.0		
			0.0	ML	
4		Collected sample TP-11 (3-4)	0.0		
			0.0	ML	
6					
	Test pit terminated at 5. 2 ft bgs. Bottom of test pit below existing grade.				
8					
	Took photographs:				
10	Photo 11 - TP-11 location prior to excavation.				
	Photo 12 - TP-11 after completing excavation/prior to backfill.				
12					
14					
16					

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Shaw Environmental & Infrastructure, Inc.

TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-12	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/19/05	Date Completed: 4/19/05	
Total Depth (ft bgs): 7.3	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 6.2 ft bgs: 2-inch stone (ballast), with small amount of silt and fine		0.0	GM	
2	sand, moist. Some lumber noted from 0 - 2 ft bgs, some large pieces of		0.0	GM	
	concrete noted from 3 - 5 ft bgs, and some brick noted from 5 - 6.2 ft		0.0	GM	
4	bgs.		1.1	GM	
		Collected sample TP-12 (4-5)	1.1	GM	
6			1.1	GM	
	6.2 - 7.3 ft bgs: Dark brown, Silt and fine Sand, moist.		0.0	ML	
8					
	Test pit terminated at 7.3 ft bgs. Bottom of test pit below existing grade.				
10					
	Took photographs:				
12	Photo 11 - TP-11 location prior to excavation.				
	Photo 12 - TP-11 after completing excavation/prior to backfill.				
14					
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-13
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/18/05	Date Completed: 4/18/05
Total Depth (ft bgs): 5.5	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 5.5 ft bgs: Dark brown, Silt and fine Sand, moist. With:		0.0	ML	
2	concrete and granite bricks from 0 - 3 ft bgs;		0.0	ML	
	clay brick from 3 - 5 ft bgs; and		0.0	ML	
4	2-inch stone (ballast) in southern half of test pit from 3 - 5 ft bgs.	Collected sample TP-13 (3-4)	0.0	ML	
			0.0	ML	
6	Encountered very dense 2-inch stone (ballast) at 5.5 ft bgs (also at existing				
	grade) - appears to be original ballast from former railyard.				
8					
	Test pit terminated at 5.5 ft bgs. Bottom of test pit at existing grade.				
10					
	Took photographs:				
12	Photo 5 - TP-13 location prior to excavation.				
	Photo 6 - TP-13 after completing excavation/prior to backfill.				
14	Photo 7 - Bottom center of TP-13 (former railyard ballast).				
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-14	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/19/05	Date Completed: 4/19/05	
Total Depth (ft bgs): 5.1	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 0.3 ft bgs: Light brown, Sand, Little silt, moist.		0.0	SM	
2	0.3 - 3 ft bgs: Dark brown, Sand, some silt, moist. With:		0.0	SM	
	concrete, brick, steel pipe (2-inch), plastic, and cloth fabric.		0.0	SM	
4	3 - 5 ft bgs: Orange-brown, Sand, little silt, little fine gravel, moist. With:	Collected sample TP-14 (3-4)	0.0	SM	
	concrete, brick, steel pipe (2-inch), plastic, and cloth fabric.		0.0	SM	
6					
	Test pit terminated at 5.1 ft bgs. Bottom of test pit below existing grade.				
8					
	Took photographs:				
10	Photo 18 - TP-14 location prior to excavation.				
	Photo 19 - TP-14 after completing excavation/prior to backfill.				
12					
14					
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-15
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/19/05	Date Completed: 4/19/05
Total Depth (ft bgs): 4.7	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 4.7 ft bgs: Dark brown, Sand and Silt, moist. With:		0.0	SM	
2	concrete, lumber, and brick.		0.0	SM	
			0.0	SM	
4		Collected sample TP-15 (3-4)	0.0	SM	
			0.0	SM	
6	Test pit terminated at 4.7 ft bgs. Bottom of test pit below existing grade.				
8	Took photographs:				
	Photo 16 - TP-15 location prior to excavation.				
10	Photo 17 - TP-15 after completing excavation/prior to backfill.				
12					
14					
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-16
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/19/05	Date Completed: 4/19/05
Total Depth (ft bgs): 5.4	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 5.4 ft bgs: Dark brown, Sand and Silt, some 2-inch stone, moist. With:		0.0	SM	
2	cobbles, plastic and concrete. Two large concrete slabs @ 3.5 ft bgs,		0.1	SM	
	one at the north end, and one at the south end of the test pit.		0.0	SM	
4		Collected sample TP-16 (3-4)	0.0	SM	
			0.0	SM	
6	Test pit terminated at 5.4 ft bgs. Bottom of test pit below existing grade.				
8	Took photographs:				
	Photo 14 - TP-16 location prior to excavation.				
10	Photo 15 - TP-16 after completing excavation/prior to backfill.				
12					
14					
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-19	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/18/05	Date Completed: 4/18/05	
Total Depth (ft bgs): 7.3	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 6.7 ft bgs: Dark brown, Silt and fine Sand, some 2-inch stone, moist.		0.0	ML	
2	With: concrete, railroad ties, rubber hose, and brick.		0.0	ML	
			0.0	ML	
4			0.0	ML	
			0.0	ML	
6		Collected sample TP-19 (5-6)	0.0	ML	
	6.7 - 7.3 ft bgs: Light brown, Sand and Silt, trace gravel, moist.		0.0	SM	
8					
	Test pit terminated at 7.3 ft bgs. Bottom of test pit below existing grade.				
10					
	Took photographs:				
12	Photo 1 - TP-19 location prior to excavation.				
	Photo 2 - TP-19 after completing excavation/prior to backfill.				
14	Photo 3 - Excavated soil pile.				
	Photo 4 - Soil from bottom of test pit (in backhoe bucket).				
16					

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TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-20	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/18/05	Date Completed: 4/18/05	
Total Depth (ft bgs): 6.2	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 6.2 ft bgs: Brown, Sand and Silt, moist. With:		0.0	SM	
2	concrete and brick.		0.0	SM	
			0.0	SM	
4			0.0	SM	
		Collected sample TP-20 (4-5)	0.0	SM	
6			0.0	SM	
8	Test pit terminated at 6.2 ft bgs. Bottom of test pit below existing grade.				
10	Took photograph:				
	Photo 8 - TP-20 location prior to excavation.				
12					
14					
16					

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Shaw Environmental & Infrastructure, Inc.

TEST PIT LOG

Project Name: SCA-Motthaven			Test Pit Number: TP-21	
Test Pit Contractor: Aquifer Drilling	Backhoe Model: Case Extend-a-hoe	Date Started: 4/18/05	Date Completed: 4/18/05	
Total Depth (ft bgs): 5.8	Depth to Bedrock (ft bgs): NA	Water Table (ft bgs): NA	Ground Elev. (amsl):	
Protection Level: Modified D	H&S Monitoring Equip. PID/LEL/O2/Dust	Logged by: Curt Kraemer	Checked by:	

Depth (ft bgs)	Soil/Rock Description	Sampling Data/ Remarks	PID Reading (ppm)	USCS Class.	Munsell Color
	0 - 5 ft bgs: Brown, Sand, some silt, moist. With:		0.0	SM	
2	concrete, brick, lumber, and miscellaneous plastic trash.		0.0	SM	
			0.0	SM	
4			0.0	SM	
		Collected sample TP-21 (4-5)	0.0	SM	
6	5 - 5.8 ft bgs: Brown, Gravel (2-inch stone [ballast]), some sand, little		0.0	GM	
	silt, moist.				
8	Test pit terminated at 5.8 ft bgs. Bottom of test pit below existing grade.				
10	Took photographs:				
	Photo 9 - TP-21 location prior to excavation.				
12	Photo 10 - TP-21 after completing excavation/prior to backfill.				
14					
16					

APPENDIX C
AIR MONITORING LOGS

05/24/2005 09:26 FAX 6314724077 008/013

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA matthew PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D. Downs	830	PDR	0.023 mg/m3	onsite Soil Boring
"	"	830	PID	0.0 ppm	"
"	"	830	5 Star	Ocomb 20.7 O_2 3 CO 0 H_2S	"
"	"	830	Landfill gem 2000	CH_4-0.0 21.3-O_2 LO_2 - 0.1	"
		845	PDR	0.003 mg/m3	
		"	PID	0.0 ppm	
		"	5 Star	Ocomb 20.6 O_2 0 CO 0 H_2S	
		"	gem 2000	CH_4=0.0 CO_2=0.1	
		900	PDR	0.002 mg/m3	
		"	PID	0.0 ppm	
		"	5 Star	Ocomb 20.6 O_2 0 CO 0 H_2S	
		"	gem 2000	0.0 CH_4 0.0 O_2	
		915	PDR	0.002 mg/m3	
		915	PID	~~0.002~~ In 0.0 ppm	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Mott Haven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D Downing	915	5 Star	0 comb 20.7 O_2 0 CO 0 H_2S	Onsite Soil boring
		11	Gem 2000	0 CH_4 0 CO_2	
		930	PDR	0.003 mg/m3	
		11	PID	0.0 ppm	
		11	5 Star	0 comb 20.6 O_2 0 CO 0 H_2S	
		11	Gem 2000	0 CH_4 0 CO_2	
		945	PDR	0.011 mg/m3	
		11	PID	0 ppm	
		11	5 Star	0 comb 20.7 O_2 0 CO 0 H_2S	
		11	Gem 2000	0 CH_4 0 CO_2	
		1000	PDR	0.003 mg/m3	
		11	PID	0.0 ppm	
		11	5 Star	0 comb 20.7 O_2 0 CO H_2S	
		11	Gem 2000	0 CH_4 0 CO_2	

05/24/2005 09:27 FAX 6314724077 010/013

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA matthaven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D Downing	1015	PDR	0.000 mg/m3	onsite soil borings
		11	PID	0.0 ppm	
		11	5 Star	0 Comb 20.8 O2 0 CO 0 H2S	
		11	Gem 2000	0 CH4 0 CO2	
		1030	PDR	0.004 mg/m3	
		11	PID	0.0 ppm	
		11	5 Star	0 Comb 20.8 O2 0 CO 0 H2S	
		11	Gem 2000	0 CH4 0 CO2	
		1045	PDR	0.000 mg/m3	
		11	PID	0.0 ppm	
		11	5 Star	0 Comb 20.8 O2 0 CO 0 H2S	
		11	Gem 2000	0 CH4 0 CO2	
		1100	PDR	0.000 mg/m3	
		11	PID	0.0 ppm	

05/24/2005 09:27 FAX 6314724077 ☒011/013

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Matthaven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D. Downing	1100	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	Onsite soil borings
		"	Gem 2000	0.0 CH_4 0 CO_2	
		1115	PDR	0.000 mg/m³	
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1130	PDR	0.000 mg/m³	
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1145	PDR	0.001 mg/m³	
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Matthaven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D. Downing	1200	PDR	0.00 mg/m3	Onsite Soil Borings
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1215	PDR	0.001 mg/m3	
		"	PID	0.0 ppm	
		"	5 Ster	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1230	PDR	0.003 mg/m3	
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1245	PDR	0.007 mg/m3	
		"	PID	0.0 ppm	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SEA Mottshaven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.	Concentration (Units)	Location/Activity
4/28/05	D. Downing	1245	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	Onsite Soil Borings
		"	Gem 2000	0 CH_4 0 CO_2	
		1300	PDR	0.000 mg/m³	
		"	PID	0.0 ppm	
		"	5 Star	0 Comb 20.8 O_2 0 CO 0 H_2S	
		"	Gem 2000	0 CH_4 0 CO_2	
		1315	PDR	mg/m³	
		"	PID	ppm	
		"	5 Star	Comb O_2 CO H_2S	
		"	Gem 2000	CH_4 CO_2	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA PROJECT LOCATION: Bronx, NY PROJECT No. 119926

Date	Analyst	Time	Manufacturer Model/Serial No.				Concentration (Units)		Location/Activity			O_2
			PID ppm	Mini Ram mg/m3	LandTec CH_4/CO_2	MSA LEL%	PID ppm	Mini Ram mg/m^3	LandTec CH_4/CO_2	MSA LEL%/%		LandTec O_2
8/5/05	Bill Peters	—	〃	〃	〃	〃	2.0	0.00	0%/0%	0 comb 3 CO 0 H_2S	Background Reading Downwind of SB-50	20.9
8/5/05	Bill Peters	0935	〃	〃	〃	〃	2.1	0.010	0%/0%	0 comb 3 CO 0 H_2S	〃	20.8
8/5/05	Bill Peters	1005	〃	〃	〃	〃	2.9	0.00	0%/0%	0 comb 3 CO 0 H_2S	〃	20.9
8/5/05	Bill Peters	1020	〃	〃	〃	〃	0.7	0.00	0%/0%	0 comb 2 CO 0 H_2S	〃	20.7
8/5/05	Bill Peters	1035	〃	〃	〃	〃	0.0	0.00	0%/0%	0 comb 3 CO 0 H_2S	〃	20.3
8/5/05	Bill Peters	1050	〃	〃	〃	〃	0.0	0.007	0%/0%	0 comb 4 CO 0 H_2S	〃	20.3
8/5/05	Bill Peters	1105	〃	〃	〃	〃	2.8	0.017	0%/0%	0 comb 6 CO 0 H_2S	〃	20.8
8/5/05	Bill Peters	1120	〃	〃	〃	〃	1.0	0.000	0%/0%	0 comb 7 CO 0 H_2S	〃	20.8
8/5/05	Bill Peters	1135	〃	〃	〃	〃	0.0	0.00	0%	0 comb 8 CO 0 H_2S	〃	20.8
8/5/05	Bill Peters	1150	〃	〃	〃	〃	Break for Lunch				〃	Lunch
8/5/05	Bill Peters	1322	〃	〃	〃	〃	Broken	0.006	0%/0%	0 comb 9 CO 0 H_2S	〃	21.0
8/5/05	Bill Peters	1338	〃	〃	〃	〃	Broken	0.002	0/0	0 comb 7 CO 0 H_2S	〃	20.9
8/5/05	Bill Peters	1353	〃	〃	〃	〃	Broken					

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No.				Concentration (Units)		Location/Activity			
			PID ppm	Mini Ram mg/m3		MSA	PID ppm	Ram mg/m3	Hand Tel CH4/CO2	MSA % LEL	Down wind of SB-50	O2
8/5/05	Bill Peters	~~1408~~					Broken	0.000	0%/0%	0 combs 4 CO 0 H2S	"	20.9
8/5/05	Bill Peters	~~1408~~ 1353	"	"	"	"	Broken	0.000	0%/0%	0 combs 25 CO 0 H2S	"	20.8
8/5/05	Bill Peters	1423	"	"	"	"	Broken	0.000	0%/0%	3 combs 8 CO 0 H2S	"	20.7
8/5/05	Bill Peters	1438	"	"	"	"	Broken	0.000	0%/0%	3 combs 10 CO 0 H2S	"	20.8
8/5/05	Bill Peters	1453	"	"	"	"	Broken	0.014	0%/0%	0 combs 13 CO 0 H2S	"	20.8
8/5/05	Bill Peters	1508	"	"	"	"	Broken				"	
8/8/05	Wayne FERDINANDSEN	1015	48383	84615	83958	85371	0.0	0.000	0/0	20% O2 0 H2S, 0 CO	"	
8/8/05	"	1030	"	"	"	"	0.0	0.000	0%/0%	20.0% O2 0% LEL 0% H2S	"	
8/8/05	"	1045	"	"	"	"	0.0	0.000	0%/0%	20% O2 0% LEL 0% H2S		
8/8/05	"	1100	"	"	"	"	0.0	0.000	0%/0%	20% O2 0% LEL 0% H2S	"	
"	"	1115	"	"	"	"	0.0	0.000	0%/0%	20% O2 0% LEL 0% H2S	"	
"	"	1130	"	"	"	"	0.0	0.000	0%/0%	shut down	"	
"	"	1145	"	"	"	"	0.0	0.003	0%/0%/0%	shutdown	"	

~50'

3/207

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Matthews PROJECT LOCATION: Matthews, BRONX NY PROJECT No. 114926.

SBSI

Date	Analyst	Time	Manufacturer Model/Serial No. PID			MSA	Concentration (Units) PID		MSA.	Location/Activity
~~8/9/05~~	Waren	~~1200~~ 1600	48584	~~261659~~	~~99320~~	85321	0	0.00	0/0	21%O2 0-H2S/CO	SBSI Boring adjacent
8/9/05	"	1015	"	"	"	"	0	0.001	0/0	21.2-O2 0-H2S/CH4	"
"	"	1030	"	"	"	"	0	0.000	CH4/CO2 0 0	20.6-O2 0-H2S-CO	"
"	"	1045	"	"	"	"	0	0.004	CH4 CO2 0/0	21-O2 0-CO & H2S	"
"	"	1100	"	"	"	"	0	0.031	CH4/CO2 0/0	21.-O2. 0-CO & H2S	" Normal Dust (Asphalt)
"	"	1115	"	"	"	"	0	0.000	CH4 & CO2	21.1-O2 0-CO/H2S	"
"	"	1130	"	"	"	"	0	0.000	CH4 0 & CO2	21.1-O2 0-CO/H2S	"
"	"	1145	"	"	"	"	0	0.000	CH4/O 0/CO2	21.2-O2 0-CO/H2S	
"	"	1200	"	"	"	"	0	0.000	CH4-0 CO2-0	21.2-O2 0-CO/H2S	"
"	"	1305	"	"	"	"	0	0	CH4-0 CO2-0	21.4-O2 0-CO H2S	"
"	"	1320	"	"	"	"	0	0.000	CH4-0 CO2-0	21.3-O2 0-CO/H2S	"
"	"	1335	"	"	"	"	0	0.000	CH4-0 CO2-0	21.3-O2 0-CO/H2S	"
"	"	1350	"	"	"	"	0	0.000	CH4-0 CO2-0	21.2 O2 0-CO/H2S	"
"	"	1406	"	"	"	"	0	0.000	CH4-0 CO2-0	21.2-O2 0-CO/H2S	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Matthews PROJECT LOCATION: Matthews Bronx PROJECT No. 114926

SB-51

Date	Analyst	Time	Manufacturer Model/Serial No. PID	PDR	LANDTEC	MSA 4gas	Concentration (Units) PID	PDR	Landtec	MSA	Location/Activity
8/9/05	Warren	1420	48584	47659	84327	85371	0.0	0.000	O-CH4 O-CO2	21.3-O2 O-CO/H2S	SB-51
8/9/05	Warren	1435	"	"	"	"	0.0	0.000	O-CH4 O-CO2	21.4-O2 O-CO/H2S	SB-51
8/9/05	Warren	1450	"	"	"	"	0.0	0.000	O-CH4 O-CO2	21.3-O2 O-CO/H2S	SB-51
8/9/05	Warren	1505	"	"	"	"	0.0	0.000	O-CH4 O-CO2	21.4-O2 O-CO/H2S	SB-51.
8/11/05	Bill Peters	0845	47661	48583	"	"	3.2	0	O CH4 O CO2	21.5 O2 O/O H2S	SB-52 Background
8/11/05	Bill Peters	0900	"	"	"	"	0.0	0.000	O CH4 O CO2	21.6 O2 O/O H2S	SB-52
"	Bill Peters	0915	"	"	"	"	0.0	0.000	O CH4 O CO2	21.4 O2 O/O	SB-52
"	Bill Peters	0930	"	"	"	"	0.0	0.000	O CH4 O CO2	21.2 O2 O/O	SB-52
"	Bill Peters	0945	"	"	"	"	0.0	0.000	O CH4 O CO2	21.4 O2 O/O	SB-52
"	Bill Peters	1000	"	"	"	"	0.0	0.000	O CH4 O CO2	20.5 O2 3 CO/0 H2S	SB-52
"	Bill Peters	1015	"	"	"	"	0.0	0.139	O CH4 O CO2	5 O/O CH4	SB-52
"	Bill Peters	1030	"	"	"	"	0.0	0.000	O CH4 O CO2	20.9 8 CO/0 H2S	SB-52
"	Bill Peters	1045	"	"	"	"	0.0	0.049	O CH4 O CO2	21.4 O2 0 CO/0 H2S	SB-52
"	Bill Peters	1100	"	"	"	"	0.0	0.119	O CH4 O CO2	20.7 O2 13 CO/0 H2S	SB-52

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: Sea Matthews PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No. PID	PDR Tan	4 gas		Concentration (Units) PID	PDR MG/M³		smoke	Location/Activity MSA	
8/11/05	Bill Peter	1115	Done	with Hele								SB-5-2
8/11/05	Bill Peter	11										
8/12/05	Warren F.	0830	[illegible]	48584	83958	85374	0	0.000		0/0	20.9-O2 0-CO/H2S	SB-55
8/12/05	Warren F.	0845	"	"	"	"	0	0.000		0/0	20.8-O2 0-CO/H2S	SB-55
8/12/05	Warren F	0900	"	"	"	"	0	0.00		0/0	20.9-O2 0-CO/H2S	SB-55
8/12/05	Warren F	0915	"	"	"	"	0	.0.012		0/0	21.0-O2 0-CO/H2S	SB-55
8/12/05	"	0930	"	"	"	"	0	0.00		0/0	20.9-O2 0-CO/H2S	SB-55
8/12/05	"	0945	"	"	"	"	0	.0.001		0/0	20.9-O2 0-CO/H2S	SB-55
8/12/05	"	1000	"	"	"	"	0	0.007		0/0	20.9-O2 0-CO/H2S	SB-55
8/12/05	"	1015	"	"	"	"	0.0	0.054		0/0	21.0-O2 0-CO/H2S	SB-55
8/15/05	Warren F	1040	[illegible]	48584	84377	85381	0.0	0.009		0/0	20.9-O2 0-CO/H2S	BBSB-2
8/15/05	Warren F	1111	"	"	"	"	0.	0.027		0/0	20.9-O2 0-CO/H2S	PSGI-2
8/15/05	Bill V	1139	"	"	"	"	0.1	0.20		0/0	20.8 0-CO/H2S	PSGI-1

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Moff Haven PROJECT LOCATION: Bronx, NY PROJECT No. 1149226

Date	Analyst	Time	Manufacturer Model/Serial No.					Concentration (Units)	Location/Activity
			PID PPM	CH_4 %	CO_2 %	O_2 %	H_2S	PDR mg/m³	
8/16/05	C Kraemer								SB-54
		1200	0.0	0.0	0.0	21.0		0.003	
		1215	0.0	0.0	0.0	21.0		0.008	
		1230	0.0	0.0	0.0	21.0		0.013	
		1300	0.0	0.0	0.0	21.0		0.009	
		1315	0.0	0.0	0.0	21.0		0.011	
		1330	0.0	0.0	0.0	21.0		0.022	
		1345	0.0	0.0	0.0	21.0		0.017	
		1400	0.0	0.0	0.0	21.0		0.008	
		1415	0.0	0.0	0.0	21.0		0.006	
		1430	0.0	0.0	0.0	21.0		0.018	
		1445	0.0	0.0	0.0	21.0		0.011	
		1500	0.0	0.0	0.0	21.0		0.028	
		1515	0.0	0.0	0.0	21.0		0.007	
		1530	0.0	0.0	0.0	21.0		0.008	
8/18/05	W.FERDIN	0918	0.0	0.0	0.0	21.1	%	0.000	SB-54
		0925							SB-53
8/18/05	D. Downs	1000	0.0	0.0	0.0	20.9	%	0.000	
		1234	0.0	0.0	0.0	20.9	%	0.000	
8/18/05	W.FERD	1247	0.0	0.0	0.0	20.9	%	0.000	
		1300	0.0	0.0	0.0	20.7	%		
		1315	0.0	0.0	0.0	20.8	%	0.000	

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: MOTTHAVEN PROJECT LOCATION: BRONX NY PROJECT No. 114926.

Date	Analyst	Time	Manufacturer Model/Serial No. PID	PDR	CH_4	CO_2	Concentration (Units) CO	H_2S	O_2	Location/Activity
8/19/09	Andrew Rick	9:35 AM	0.0	0.000	00.0	00.0	0	0	20.7%	NW corner/open area
"	Andrew Rick	9:50 AM	0.0	0.000	00.0	00.0	0	0	20.7%	"
"	"	10:05 AM	0.0	0.000	00.0	00.0	0	0	20.8%	"
"	"	10:20 AM	0.0	0.000	00.0	00.0	0	0	20.8%	"
"	"	10:35 AM	0.0	0.005	00.0	00.0	0	0	20.8%	"
"	"	10:50 AM	0.0	0.000	00.0	00.0	0	0	20.8	"
"	"	11:05	0.0	0.000	00.0	00.0	0	0	20.8	"
"	"	11:20	0.0	0.000	00.0	00.0	0	0	20.8	"
"	"	11:35	0.0	0.000	00.0	00.0	0	0	20.8	"
"	"	11:50	0.0	0.000	00.0	00.0	0	0	20.8	"
8/22/09	Bill Peters	0910	0.0	0.00	0.1	0.0	0	0	21.2	Background.
"	"	0925	0.0	0.000	0.0	0.0	0	0	21.3	PSB-10
"	"	0940	0.0	0.12	0.0	0.0	0	0	21.4	PSB-10
"	"	0958	0.0	0.000	0.0	0.2	0	0	20.9	PSB-14

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: Sea-Matthaven PROJECT LOCATION: Bronx, NY PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No. PID	FID	LEL CH4	CO2	Concentration (Units) CO	H2S	O2	Location/Activity
8/22/05	Bill Peters	1011	0.0	0.0	0.0	0.0	0	0	20.8	PSB-14
"	"	1020	0.1	0.00	0.0	0.0	0	0	20.8	PSB-17
"	"	1102	0.3	0.00	0.0	0.0	0	0	20.8	PSB-18
8/22/05	Pierretta	12:55	0.1	0.00	0.0	0.0	-1	0	20.8	MW-18 Drilling
	"	13:10	0.0	0.00	0.0	0.0	0	0	20.8	
	"	13:50	0.0	0.00	0.00	0.0	0	0	20.8	STOP FOR Lunch
	"	14:15	0.0	0.00	0.0	0.0	0	0	20.8	MW-18
	"	14:30	0.0	0.00	0.0	0.0	0	0	20.8	"
	"	14:45	0.0	0.00	0.0	0.0	0.0	0.0	20.8	"
	"	15:00	0.1	0.00	0.00	0.00	0	0.0	20.8	"
	"	15:15	0.1	0.00	0.0	0.0	0	0	20.7	Done. Lifted TD Top 0.02

REAL TIME AIR MONITORING LOG
(PID/FID/LEL/O2)

PROJECT NAME: SCA Matthaven PROJECT LOCATION: Bronx PROJECT No. 114926

Date	Analyst	Time	Manufacturer Model/Serial No. PID	PPR	TCH4	tCO2	Concentration (Units) CO	H2S	O2	Location/Activity
6/29	AP	8:20	0.0	0.0	0.0	0.0	0.0	0.0	20.8	Drilling MW-21
		8:35	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		8:50	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		9:05	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		9:20	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		9:35	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		9:50	0.0	0.0	0.0	0.0	0.0	0.0	20.8	Hit Bedrock stopped drilling
		10:30	0.0	0.0	0.0	0.0	0.0	0.0	20.8	Resume monitoring setting well
		10:45	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		11:00	0.0	0.0	0.0	0.0	0.0	0.0	20.8	
		11:15	0.0	0.0	0.0	0.0	0.0	0.0	20.8	well install complete
		11:30	0.0	0.0	0.0	0.0	0.0	0.0	20.8	

APPENDIX D
MONITORING WELL DEVELOPMENT FORMS

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthaven
WELL ID: mw-1
TECHNICIAN'S NAME: Mike J.

WEATHER: 55, sunny
WELL CONDITION:
SUBCONTRACTOR: A.D.T

GAUGE DATE: 4/12/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 10:50
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4

DEVELOPMENT TIME: 10:30

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	16.42 Ft
B. Depth to Water (ft.):	5.50 Ft
C. Liquid Depth(ft.)[A-B]:	10.92 Ft
D. Well Vol./Ft.(see table):	0.65
E. Well Volume (gal.) [C*D]:	7.00 gallons = 1 well volume
F. Water Added (Drill)(gal):	N/A
G. One Well Vol. (gal.)[E+F]:	7. gallons
H. Five Well Volumes [G*5]:	35

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.
Initial	10:30			0	6.54	10.37c	1.919	29.38 2.90 mg/L
1 7	10:34			7	6.33	10.07c	1.909	2.96.33 mg/L
2 14	10:39			14	6.40	11.01c	1.870	12.68 1.33 mg/L
3 21	10:48	7.9 Ft		21	6.38	12.32c	.033	93.72 10 mg/L
4 28	11:29			28	6.55	10.17c	1.859	75.52 7.61 mg/L
Final 35	11:34			35	6.53	10.99c	1.875	48.87 5.21 mg/L

Total Quantity of Water Removed (Gal.): 35

Development Description:

* Dry after 3 volumes Let recharge after 30 minutes and completed development. Very silty throughout purge.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthews
WELL ID: MW-3
TECHNICIAN'S NAME: Mike T.

WEATHER: 50's @ Sunny
WELL CONDITION: Perfect
SUBCONTRACTOR: A.I.D.T

GAUGE DATE: 4/12/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 2:05
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4 inch

DEVELOPMENT TIME: 2:15

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	11.20
B. Depth to Water (ft.):	2.95
C. Liquid Depth(ft.)[A-B]:	8.25
D. Well Vol./Ft.(see table):	.65
E. Well Volume (gal.) [C*D]:	5.3625
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	5.3625
H. Five Well Volumes [G*5]:	25

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	DO
Initial 0	2:15	2.95		0	7.51	17.60	.541	greater	61.8% 5.14 mg/L
1 5	2:18			5	6.60	9.39	.529	greater	10.8% 1.21 mg/L
2 10	2:20			10	6.50	9.37	.529	greater	10.8% 1.22 mg/L
3 15	2:22			~~15~~	6.45	9.40	.527	greater	10.7% 1.22 mg/L
4 20	2:24			~~20~~	6.45	9.40	.527	greater	11.1% 1.27 mg/L
Final 25	2:26			25	6.44	9.40	.526	greater	11.5% 1.32 mg/L

Total Quantity of Water Removed (Gal.): 25

Development Description: well recharged its self very well- retrieved 25 gallons No problem. The Turb. test was comp but as Error 3. To silty for test.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthewen
WELL ID: MW4
TECHNICIAN'S NAME: Mike TAVAKolian

WEATHER: 58°s @ Sunny
WELL CONDITION: Perfect
SUBCONTRACTOR: A.D.T

GAUGE DATE: 10:23
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 10:23
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4-inch

DEVELOPMENT TIME: 10:31

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	10.07ft
B. Depth to Water (ft.):	3.99ft
C. Liquid Depth(ft.)[A-B]:	7.08ft
D. Well Vol./Ft.(see table):	.65
E. Well Volume (gal.) [C*D]:	4.66
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	4.66
H. Five Well Volumes [G*5]:	23.3

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	Do
Initial 0	10:26				7.88	17.17	.524	quite	86.2 9.14
1 4.66	10:31				7.60	10.09	.562	quite	52.5 5.89
2	11:06				7.54	10.15	.592	quite	40.1 4.45
3	11:19				7.59	10.32	.585	quite	65.1 6.79
4	11:45				7.32	10.02	.564	quite	57.3 6.04
Final	11:52				7.26	9.89	.538	quite	42.9 5.14

Total Quantity of Water Removed (Gal.):

Development Description: well went dry @ 10:32. Started pumping @ 11:04. well went Dry @ 11:07. Started pump @ 11:19 reading gauged @ 12:20 3.68ft do water.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthews
WELL ID: MW 5
TECHNICIAN'S NAME: mike .T.

WEATHER: 50 sunny
WELL CONDITION: Perfect.
SUBCONTRACTOR: A, D, T

GAUGE DATE: 4/12/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 11:15
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4

DEVELOPMENT TIME: 11:15

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	11.55
B. Depth to Water (ft.):	3.7ft inches
C. Liquid Depth(ft.)[A-B]:	7.85
D. Well Vol./Ft.(see table):	.65
E. Well Volume (gal.) [C*D]:	5.1025
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	5.1025
H. Five Well Volumes [G*5]:	25.5125

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	(0.65)
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

		Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	DO
Initial	0	11:15	3.70+		0	7.57	11.02	.783	greater	78.2% 7.9 mg/L
1	5	11:38			5	6.34	9.84	.762	greater	9.0% 0.96 mg/L
2	10	1:10			10	6.54	9.54	.753	greater	30.9% 3.10 mg/L
3	15	1:14			15	6.42	9.70	.760	greater	11.9% 1.30 mg/L
4	20	1:37			20	7.23	10.52	.750	greater	21.9% 3.26 mg/L
Final	25	1:44			25	6.09	9.56	.763	greater	25.6 1.45 mg/L

Total Quantity of Water Removed (Gal.):

Development Description: Dried out at 11:42. let recharge. Recharged @ 1:07 water in well was @ 3.73ft. 1:15 well went dry again waiting to recharge. well recharged at 1:37 last of my last reading @ 1:44, the well gone dry.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthews
WELL ID: MW, 6
TECHNICIAN'S NAME: Mike Tavakolian

WEATHER: 50's Sunny
WELL CONDITION: Perfect
SUBCONTRACTOR: A.D.T

GAUGE DATE: 4/13/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 9:35
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4 inch

DEVELOPMENT TIME: 9:35

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	15.35
B. Depth to Water (ft.):	4.5
C. Liquid Depth(ft.)[A-B]:	10.75
D. Well Vol./Ft.(see table):	.65
E. Well Volume (gal.) [C*D]:	7.5
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	7.5
H. Five Well Volumes [G*5]:	37.5

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

		Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	Do
Initial	0	9:35			0	7.05	10.54	1.254	greater	49.7% 5.14mg/L
1	7.5	9:41			7.5	6.97	11.02	1.99	grete	8.6% .98mg/L
2	15.0	9:48			15.0	6.58	12.54	1.20	grete	15.4% 1.72mg/L
3	22.5	9:31			22.5	6.34	10.47	.912	Grete	55.5% 6.10mg/L
4	30.5	9:45			30.5	6.86	11.67	1.096	grete	68.6% 7.88mg/L
Final	37.5	9:56			37.5	6.92	11.83	1.127	grete	72.1% 7.85mg/L

Total Quantity of Water Removed (Gal.): 37.5

Development Description: @ 8:49 well went Dry. going to let well recharge. Restarted well @ 9:26 water depth 5.12ft. 9:35 well went dry again. 9:48 well went Dry again. started well at 9:56. Depth to water was at 12.27ft

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA Mayflower
WELL ID: MW-7
TECHNICIAN'S NAME: C Kraemer

WEATHER: Clear
WELL CONDITION: ~~OK~~ OK
SUBCONTRACTOR: ADT

GAUGE DATE: 4-29-03
SOUNDING METHOD: Solinst Water Level Indicator

GAUGE TIME: 1125
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 1"

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):
B. Depth to Water (ft.): 13.32
C. Liquid Depth(ft.)[A-B]: 0
D. Well Vol./Ft.(see table):
E. Well Volume (gal.) [C*D]: 0
F. Water Added (Drill)(gal):
G. One Well Vol. (gal.)[E+F]: 0
H. Five Well Volumes [G*5]: 0

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	°C Temp.	mS/cm³ Cond.	Turb.	Rate Seconds/ 0.5 Liter
Initial	1155				6.57	12.25	1.638	102.9	58
1	1200				6.53	12.19	1.629	22.4	58
2	1205				6.56	12.26	1.644	12.9	59
3					6.56	12.26	1.643		
4									
Final	1210	3			6.55	12.26	1.643	12.9	59

1217 3.50 ~~rising~~

Total Quantity of Water Removed (Gal.): 7.5 Liters

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Northaven
WELL ID: MW-9
TECHNICIAN'S NAME: Mike. T.

WEATHER: 50's Sunny
WELL CONDITION:
SUBCONTRACTOR: A, D.T

GAUGE DATE: 4/12/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 10:23
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4 inch

DEVELOPMENT TIME: 10:23

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	37.85	
B. Depth to Water (ft.):	~~38.33~~ 5	
C. Liquid Depth(ft.)[A-B]:	4.35	
D. Well Vol./Ft.(see table):	.65	
E. Well Volume (gal.) [C*D]:	2.8275	
F. Water Added (Drill)(gal):	0	
G. One Well Vol. (gal.)[E+F]:	2.8275	
H. Five Well Volumes [G*5]:	15.00	

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	(0.65)
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	DO
Initial 0	10:03			0	2.84	18.07	2.189		4.15 mg/L 38.6%
3 1				3					
6 2				6					
9 3				9					
12 4				12					
15 Final				15					

Total Quantity of Water Removed (Gal.):

Development Description: 10:27 well went Dry, Took pump out cleaned pump. set pump set up pump well Dry ~~again~~ again.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA. Matthaeus
WELL ID: MW 9
TECHNICIAN'S NAME: Mike .T.

WEATHER: 55's sunny
WELL CONDITION: perfect
SUBCONTRACTOR: A.D.T

GAUGE DATE: 4/13/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 2:23
REFERENCE POINT: Top of P
WELL DIAMETER (IN.): 4inch

DEVELOPMENT TIME: 2:20

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	38.1
B. Depth to Water (ft.):	33.8
C. Liquid Depth(ft.)[A-B}:	4.3
D. Well Vol./Ft.(see table):	.65
E. Well Volume (gal.) [C*D]:	2.79
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	2.79
H. Five Well Volumes [G*5]:	13.95

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.
Initial 0				0				
1 2.79				2.79				
2 5.58				5.58				
3 8.37				8.37				
4 11.16				11.16				
Final 13.95				13.95				

Total Quantity of Water Removed (Gal.): 0

Development Description: Tried to pump w/ Grundfos pump. would not pump do to amount of silt in the well.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA-Matthaei
WELL ID: MW-10
TECHNICIAN'S NAME: J. Forngren

GAUGE DATE: 4/15/05
SOUNDING METHOD: Water Level Indicator

WEATHER: Sunny ~50°F
WELL CONDITION: Good
SUBCONTRACTOR: ADT

GAUGE TIME: 11:00
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	15.10
B. Depth to Water (ft.):	7.85
C. Liquid Depth(ft.)[A-B]:	7.25
D. Well Vol./Ft.(see table):	0.65
E. Well Volume (gal.) [C*D]:	4.7125
F. Water Added (Drill)(gal):	0
G. One Well Vol. (gal.)[E+F]:	5
H. Five Well Volumes [G*5]:	25

~ 1 Ft riser above ground surface

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.	ORP	DO
Initial	1120	7.85	~1gpm	0	7.28	12.74	1,245	>2000	80.0	7.41/6.67
1	1125		~	5	6.82	11.63	1,220	>2000	88.0	7.72/7.11
2				10						
3				15						
4				20						
Final				25						

Total Quantity of Water Removed (Gal.): 15 after 3 times of going dry

Development Description:

DRY after 1 vol purged @ 1125. Will let recharge.
1300- Back at 14.00 Ft. Will continue to let recharge. ~~Setting manhole cover~~ chop off 1 ft of riser.
4/18- Purge 1 vol. Dry
4/19- Purge 1 vol. Dry - Slightly silty.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, Matthaven
WELL ID: MW-11
TECHNICIAN'S NAME: Mike Tavakolian

WEATHER: 50's Sunny
WELL CONDITION:
SUBCONTRACTOR: A.D.T

GAUGE DATE: 4/13/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 9:02
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4 inches

DEVELOPMENT TIME: 9:02

CALCULATION OF WELL VOLUME

		D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
A. Well Depth (ft.):	13.7		
B. Depth to Water (ft.):	6.30		
C. Liquid Depth(ft.)[A-B]:	7.40		
D. Well Vol./Ft.(see table):	0.65	2-in.	0.16
E. Well Volume (gal.) [C*D]:	4.81	4-in.	(0.65)
F. Water Added (Drill)(gal):	0	6-in.	1.47
G. One Well Vol. (gal.)[E+F]:	4.81 ← 1 well vol.	8-in.	2.61
H. Five Well Volumes [G*5]:	24.05 gal	12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	Turb.
Initial 0				0				
1 5				5				
2 10				10				
3 15				15				
4 20				~~20~~				
Final 25				25				

Total Quantity of Water Removed (Gal.): 5 gallons

Development Description: Running well Dry to see how fast it recharges started to pump water out of well @ 9:02. well went Dry at 9:06 pumped out about 5 gallons of water. Gauged well at 2:37 about 7.21 ft of water in well.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA, matthews
WELL ID: MW 11
TECHNICIAN'S NAME: Mike. T.

WEATHER: 55 sunny
WELL CONDITION:
SUBCONTRACTOR: A.D.T

GAUGE DATE: 4/12/05
SOUNDING METHOD: Water Level indicator

GAUGE TIME: 1:06
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.):

DEVELOPMENT TIME: 1:06

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	13.75ft
B. Depth to Water (ft.):	6.3 ft
C. Liquid Depth(ft.)[A-B]:	7.45
D. Well Vol./Ft.(see table):	.65 ft
E. Well Volume (gal.) [C*D]:	4.8425
F. Water Added (Drill)(gal):	N/A
G. One Well Vol. (gal.)[E+F]:	5 gallons
H. Five Well Volumes [G*5]:	24.2

D.: Well Vol./Ft.:

Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	Temp.	Cond.	DO ~~Turb.~~	turb
Initial 0	1:06			0	7.85	12.42	.713	62.0% 5.80 mg/L	1100
1 ~~5~~	1:17			5	7.06	11.74	.975	246% 2.35 mg/L	1064
2 ~~10~~				10					
3 ~~15~~				15					
4 ~~20~~				20					
Final ~~25~~				25					

Total Quantity of Water Removed (Gal.):

Development Description: Dried out at 5 gallons waiting for recharge. Checked well @ 1:41 still Dry. Stopped @ 2:10 absolutely dry. No water. Let well recharge till tomarrow.

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA Mothball
WELL ID: MW-12
TECHNICIAN'S NAME: C Roemer

WEATHER: 60's Clear
WELL CONDITION: OK
SUBCONTRACTOR: ADT

GAUGE DATE: 4/29/05
SOUNDING METHOD: Solinst Water Level Indicator

GAUGE TIME: 0935
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 1.0

DEVELOPMENT TIME: 0941

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	13.4 bgs
B. Depth to Water (ft.):	4.87
C. Liquid Depth(ft.)[A-B]:	0
D. Well Vol./Ft.(see table):	
E. Well Volume (gal.) [C*D]:	0
F. Water Added (Drill)(gal):	
G. One Well Vol. (gal.)[E+F]:	0
H. Five Well Volumes [G*5]:	0

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	°C Temp.	mS/cm³ Cond.	Turb.	Rate: secs/.5 liter
Initial	1013				6.42	11.89	2.140	14.1	51
1	1018				6.43	11.84	2.084	6.1	52
2	1023				6.46	11.89	2.068	4.09	52
3	1028								
4									
Final	1028	4.18			6.46	11.89	2.065	3.22	52

Total Quantity of Water Removed (Gal.): 7.0 liters

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: Sca mothaven
WELL ID: mw-13
TECHNICIAN'S NAME: C Kraemer

WEATHER: clear
WELL CONDITION: Good
SUBCONTRACTOR: ADT

GAUGE DATE: 4-29-05
SOUNDING METHOD: Solinst Water Level Indicator

GAUGE TIME: 1038
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 4

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft.): 13'
B. Depth to Water (ft.): 10.68' 3.32'
C. Liquid Depth(ft.)[A-B]: 0
D. Well Vol./Ft.(see table):
E. Well Volume (gal.) [C*D]: 0
F. Water Added (Drill)(gal):
G. One Well Vol. (gal.)[E+F]: 0
H. Five Well Volumes [G*5]: 0

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	°C Temp.	mS/cm³ Cond.	Turb.	rate Seconds / 0.5 liter
Initial	1100				6.46	11.60	1.550	11.1	53
1	1105				6.47	11.63	1.550	24.4	55
2	1110				6.49	11.66	1.551	10.6	56
3									
4									
Final	1115				6.50	11.63	1.547	28.3	53

1117 9.05 + rising

Total Quantity of Water Removed (Gal.): 7.0 liters

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA Mothballing
WELL ID: MW-14
TECHNICIAN'S NAME:

WEATHER: cloudy
WELL CONDITION: OK
SUBCONTRACTOR: ADT

GAUGE DATE: 4-29-05
SOUNDING METHOD: Solinst Water Level Indicator

GAUGE TIME: 1408
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 1"

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):
B. Depth to Water (ft.): 0.52
C. Liquid Depth(ft.)[A-B]: 0
D. Well Vol./Ft.(see table): 0
E. Well Volume (gal.) [C*D]: 0
F. Water Added (Drill)(gal):
G. One Well Vol. (gal.)[E+F]: 0
H. Five Well Volumes [G*5]: 0

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

ORP 25 mV

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	°C Temp.	mS/cm² Cond.	Turb.	Rate seconds/0.5 liter
Initial	1420				6.76	12.09	1.683	73.7	66
1	1425				6.76	12.01	1.688	48.4	63
2	1430				6.75	12.02	1.697	33.9	
3									
4									
Final	1435	2.55			6.75	12.03	1.701	21.4	

Total Quantity of Water Removed (Gal.): 8.0

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA Mattiveyen
WELL ID: MW-5
TECHNICIAN'S NAME: C Kraemer

WEATHER: Partly cloudy
WELL CONDITION: OK
SUBCONTRACTOR: KDT

GAUGE DATE: 4-29-05
SOUNDING METHOD: Solinst Water Level Indicator

GAUGE TIME: 1320
REFERENCE POINT: Top of PVC
WELL DIAMETER (IN.): 1"

DEVELOPMENT TIME:

wet to water level @ 0.7' below TOC

CALCULATION OF WELL VOLUME

A. Well Depth (ft.):	
B. Depth to Water (ft.):	0.7
C. Liquid Depth(ft.)[A-B]:	0
D. Well Vol./Ft.(see table):	
E. Well Volume (gal.) [C*D]:	0
F. Water Added (Drill)(gal):	
G. One Well Vol. (gal.)[E+F]:	0
H. Five Well Volumes [G*5]:	0

D.: Well Vol./Ft.: Well Diameter	Gallon/Ft.
2-in.	0.16
4-in.	0.65
6-in.	1.47
8-in.	2.61
12-in.	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

	Time	Water Level	Purge Rate	Volume Purged	pH	°C Temp.	mS/cm² Cond.	Turb.	Rate seconds / 0.5 liter
Initial	1350				6.68	11.00	1.657	34.1	63
1	1355				6.66	10.87	1.628	16.9	63
2	1400				6.67	10.87	1.629	12.5	65
3					6.6	10.88			
4									
Final	1405				6.66	10.88	1.626	10.25	64

1406 3.50 + rinsing

Total Quantity of Water Removed (Gal.): 8-0 (1 drum)

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA MOTT HAVEN
WELL ID: MW-16
TECHNICIAN's NAME: CKronemer

WEATHER: Clear 75°F
WELL CONDITION: Good
SUBCONTRACTOR: Shaw

GUAGE DATE: 9-3-05
SOUNDING METHOD: Water Level Indicator

GUAGE TIME: 1000
REFERENCE POINT: Top of PVC
WELL DIAMETER (in): 2

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft): 12.77
B. Depth to Water (ft): 3.27
C. Liquid Depth (ft) [A-B]: 9.50
D. Well Vol./Ft. (see table):
E. Well Volume (gal.) [C-D]:
F. Water Added (drill)(gal):
G. One Well Vol. (gal)[E+F]:
H. 5 Well Vol. (Gx5)(gal):

WELL VOLUME/Ft. TABLE

Well Diamter (in)	Gallon/Ft.
2	0.16
4	0.65
6	1.47
8	2.61
12	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

Interval	Time	Water Level (ft)	Purge Rate (gal/min)	Volume Purged (gal)	pH	Temp. (°C)	Cond.	Turbidity (NTUs)	
Initial	1010	3.27	0.8	0	7.21	18.6	1.577	301	
1	1015		0.8	4.0	7.15	19.3	1.327	189	
2	1020		0.25	5.25	7.11	19.7	1.188	111	
3	1025		0.25	6.5	7.07	19.9	1.167	78	
4	1030		0.25	9.5	7.01	19.9	1.154	63	
5	1040		0.25	12.5	6.99	19.9	1.133	52	
6	1050		0.25	15.5	6.98	19.9	1.141	48	
7									
8									
9									
Final									

Total Quantity of Water Removed (gal): 15.5

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA MOTT HAVEN
WELL ID: MW-17
TECHNICIAN's NAME:

WEATHER: Clear, 70's
WELL CONDITION: OK
SUBCONTRACTOR: Shaw

GUAGE DATE: 9-3-05
SOUNDING METHOD: Water Level Indicator

GUAGE TIME: 1530
REFERENCE POINT: Top of PVC
WELL DIAMETER (in): 2

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft): 12.71
B. Depth to Water (ft): 6.77
C. Liquid Depth (ft) [A-B]: 5.94
D. Well Vol./Ft. (see table):
E. Well Volume (gal.) [C-D]:
F. Water Added (drill)(gal):
G. One Well Vol. (gal)[E+F]:
H. 5 Well Vol. (Gx5)(gal):

WELL VOLUME/Ft. TABLE

Well Diamter (in)	Gallon/Ft.
2	0.16
4	0.65
6	1.47
8	2.61
12	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

Interval	Time	Water Level (ft)	Purge Rate (gal/min)	Volume Purged (gal)	pH	Temp. (°C)	Cond.	Turbidity (NTUs)	
Initial	1535	6.77	0.15	0	7.07	18.6	1.323	277	
1	1545		0.15	1.5	7.01	19.2	1.117	93	
2	1600		0.1	3	6.96	19.5	.933	66	
3	1610		0.1	4	6.93	19.7	.867	56	
4	1620		0.1	5	6.91	19.9	.851	40	
5	1625		0.1	5.5	6.90	19.9	.848	42	
6									
7									
8									
9									
Final									

Total Quantity of Water Removed (gal): 5.5

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA MOTT HAVEN
WELL ID: MW-18
TECHNICIAN's NAME:

WEATHER: Clear, 70's
WELL CONDITION: OK
SUBCONTRACTOR: Shaw

GUAGE DATE: 5-3-05
SOUNDING METHOD: Water Level Indicator

GUAGE TIME: 1350
REFERENCE POINT: Top of PVC
WELL DIAMETER (in):

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft): 32.30
B. Depth to Water (ft): 24.66
C. Liquid Depth (ft) [A-B]: 7.54
D. Well Vol./Ft. (see table):
E. Well Volume (gal.) [C-D]:
F. Water Added (drill)(gal):
G. One Well Vol. (gal)[E+F]:
H. 5 Well Vol. (Gx5)(gal):

WELL VOLUME/Ft. TABLE

Well Diamter (in)	Gallon/Ft.
2	0.16
4	0.65
6	1.47
8	2.61
12	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

Interval	Time	Water Level (ft)	Purge Rate (gal/min)	Volume Purged (gal)	pH	Temp. (°C)	Cond.	Turbidity (NTUs)	
Initial	1355	24.66	0.1	0	6.92	18.3	1.425	429	
1	1400		0.1	.5	6.88	18.8	1.293	344	
2	1405		0.1	1	6.83	19.2	1.108	239	
3	1410		0.1	1.5	6.77	19.3	1.066	127	
4	1415		0.1	2	6.75	19.5	1.033	78	
5	1420		0.1	2.5	6.74	19.6	1.017	63	
6	1425		0.1	3	6.75	19.7	1.008	50	
7									
8									
9									
Final									

Total Quantity of Water Removed (gal): 3.0

Development Description:

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA MOTT HAVEN
WELL ID: MW-20
TECHNICIAN's NAME: CKroemer/SSpeltz

WEATHER: Clear
WELL CONDITION: OK
SUBCONTRACTOR: Shaw

GUAGE DATE: 9-1-05
SOUNDING METHOD: Water Level Indicator

GUAGE TIME: 1340
REFERENCE POINT: Top of PVC
WELL DIAMETER (in): 2

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft):	27.05
B. Depth to Water (ft):	20.47
C. Liquid Depth (ft) [A-B]:	6.58
D. Well Vol./Ft. (see table):	
E. Well Volume (gal.) [C-D]:	
F. Water Added (drill)(gal):	
G. One Well Vol. (gal)[E+F]:	
H. 5 Well Vol. (Gx5)(gal):	

WELL VOLUME/Ft. TABLE

Well Diamter (in)	Gallon/Ft.
2	0.16
4	0.65
6	1.47
8	2.61
12	5.87

RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

Interval	Time	Water Level (ft)	Purge Rate (gal/min)	Volume Purged (gal)	pH	Temp. (°C)	Cond.	Turbidity (NTUs)	
Initial	1345	20.47	0.15	0	7.17	18.9	1.176	374	
1	1400		0.10	2.3	7.06	18.6	0.831	127	
2	1415		0.10	3.8	7.03	19.4	0.776	70	
3	1430		0.10	5.3	6.97	19.7	0.742	63	
4	1445		0.10	5.8	6.95	19.9	0.738	51	
5	1030	20.49	0.10	5.8	7.03	19.2	0.921	176	9/2
6	1040		0.1	6.8	6.96	19.4	0.728	63	
7	1050		0.1	7.8	6.93	19.5	0.717	48	
8	1000		0.1	8.8	6.94	19.6	0.721	46	
9	1110		0.1	9.8	6.95	19.7	0.713	45	
Final									

Total Quantity of Water Removed (gal): 9.8

Development Description: Ran dry at 1450

FIELD RECORD OF WELL DEVELOPMENT

SITE NAME: SCA MOTT HAVEN
WELL ID: MW-21
TECHNICIAN's NAME: CKroeger/SSpatlers
GUAGE DATE: 9/1/05
SOUNDING METHOD: Water Level Indicator

WEATHER: Clear
WELL CONDITION: OK
SUBCONTRACTOR: Shaw
GUAGE TIME: 1200
REFERENCE POINT: Top of PVC
WELL DIAMETER (in): 2

DEVELOPMENT TIME:

CALCULATION OF WELL VOLUME

A. Well Depth (ft): 25.03
B. Depth to Water (ft): 21.21
C. Liquid Depth (ft) [A-B]: 3.82
D. Well Vol./Ft. (see table):
E. Well Volume (gal.) [C-D]:
F. Water Added (drill)(gal): 0
G. One Well Vol. (gal)[E+F]:
H. 5 Well Vol. (Gx5)(gal):

WELL VOLUME/Ft. TABLE

Well Diamter (in)	Gallon/Ft.
2	0.16
4	0.65
6	1.47
8	2.61
12	5.87

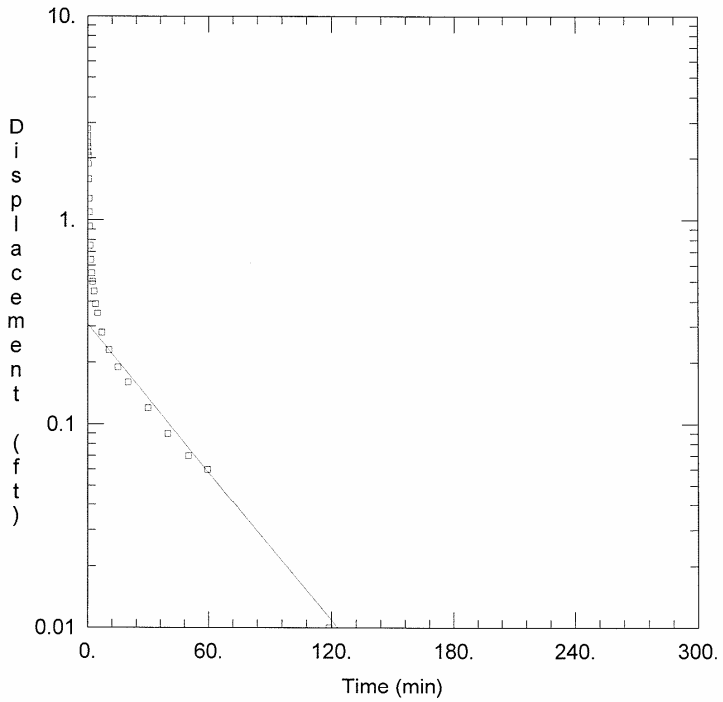
RECORD OF WELL DEVELOPMENT FIELD OBSERVATIONS

Interval	Time	Water Level (ft)	Purge Rate (gal/min)	Volume Purged (gal)	pH	Temp. (°C)	Cond.	Turbidity (NTUs)	
Initial	1246	22.27	0.2	0	6.73	21.3	1.727	227	
1	1250		0.2	0.8	6.81	19.4	1.638	133	
2	1300		0.15	2.3	6.88	18.7	1.579	68	
3	1310		0.15	3.8	6.93	19.1	1.543	54	
4	1315		0.1	4.3	6.96	19.4	1.530	48	d
9/2/05 5	0745	21.62	0.2	4.3	6.86	19.9	1.632	177	-dry
6	0800		0.15	7.3	6.95	19.6	1.528	57	
7	0830		0.1	11.8	6.97	19.8	1.537	46	
8	0900		0.1	14.8	6.95	19.8	1.532	42	
9	0930		0.1	17.8	6.97	19.9	1.538	48	
Final									

Total Quantity of Water Removed (gal): 17.8

Development Description: Clear to very slightly cloudy

APPENDIX E
SLUG TEST GRAPHS



MW-1 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-1-Visual.aqt
Date: 10/24/05 Time: 09:50:23

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-1
Test Date: 9-21-05

AQUIFER DATA

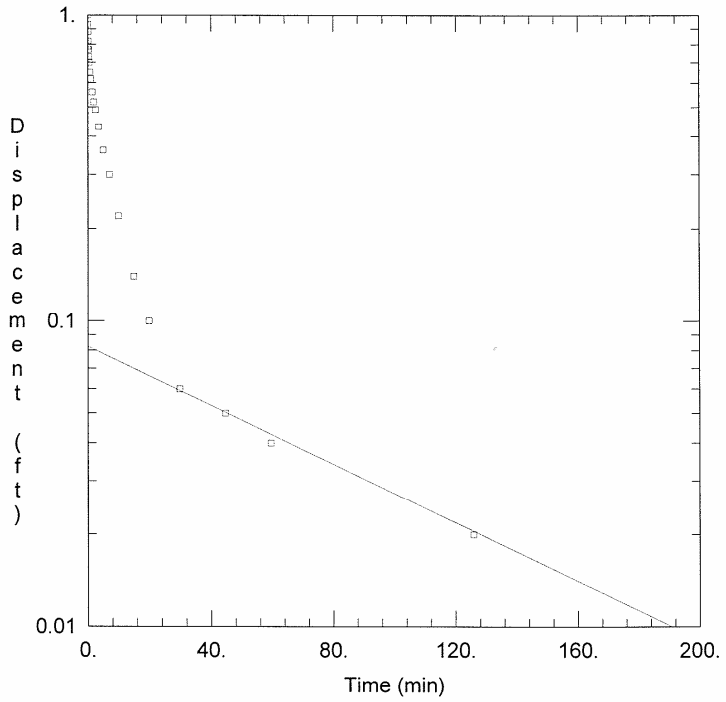
Saturated Thickness: 15. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 2.8 ft
Total Well Penetration Depth: 7.59 ft
Casing Radius: 0.17 ft
Static Water Column Height: 7.59 ft
Screen Length: 10. ft
Wellbore Radius: 0.17 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 5.371E-5 cm/sec
y0 = 0.3075 ft



MW-3 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-3-Visual.aqt
Date: 10/24/05 Time: 09:50:39

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-3
Test Date: 9-21-05

AQUIFER DATA

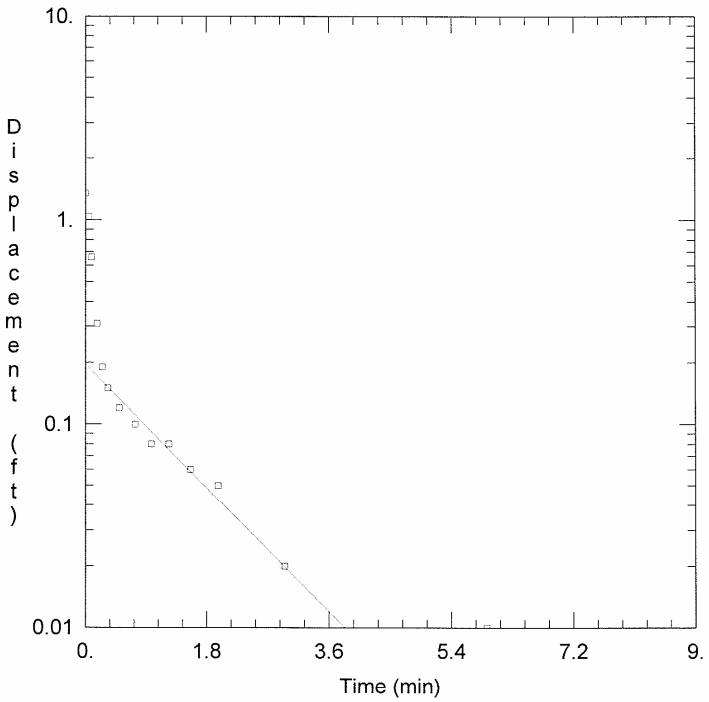
Saturated Thickness: 15. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 1. ft
Total Well Penetration Depth: 7.01 ft
Casing Radius: 0.17 ft
Static Water Column Height: 7.01 ft
Screen Length: 10. ft
Wellbore Radius: 0.17 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 2.093E-5 cm/sec
y0 = 0.08236 ft



MW-7 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-7-Visual.aqt
Date: 10/24/05 Time: 09:51:00

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-7
Test Date: 9-21-05

AQUIFER DATA

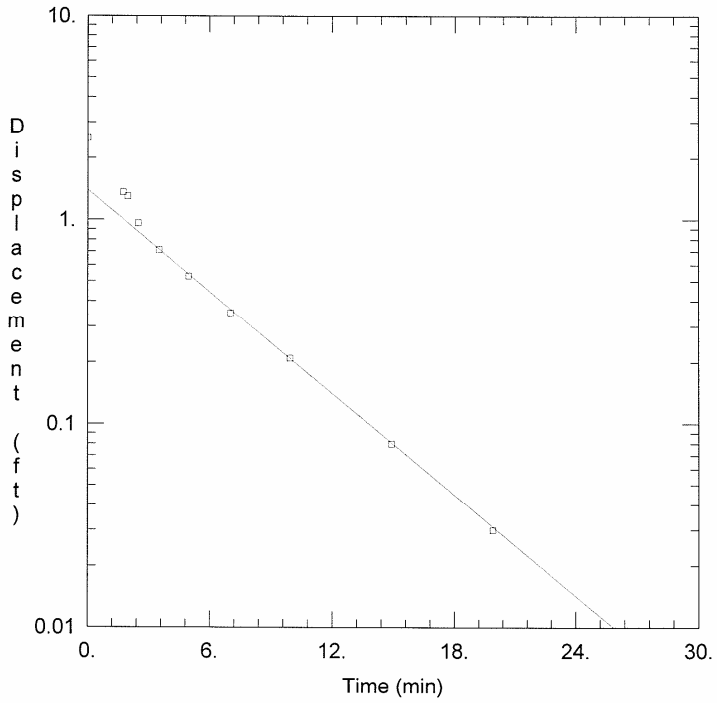
Saturated Thickness: 31. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-7)

Initial Displacement: 1.35 ft
Total Well Penetration Depth: 8.4 ft
Casing Radius: 0.042 ft
Static Water Column Height: 8.4 ft
Screen Length: 10. ft
Wellbore Radius: 0.042 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0001298 cm/sec
y0 = 0.1961 ft



MW-8 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-8-Visual.aqt
Date: 10/24/05 Time: 09:51:20

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-8
Test Date: 9-21-05

AQUIFER DATA

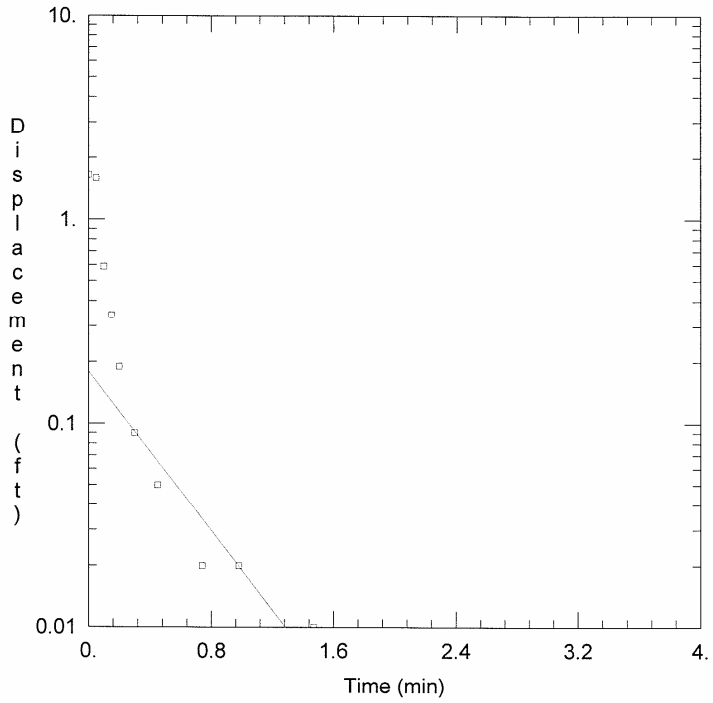
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-8)

Initial Displacement: 2.5 ft
Total Well Penetration Depth: 10.53 ft
Casing Radius: 0.17 ft
Static Water Column Height: 10.53 ft
Screen Length: 20. ft
Wellbore Radius: 0.17 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0002097 cm/sec
y0 = 1.399 ft



MW-12 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-12-Visual.aqt
Date: 10/24/05 Time: 09:49:40

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-12
Test Date: 9-21-05

AQUIFER DATA

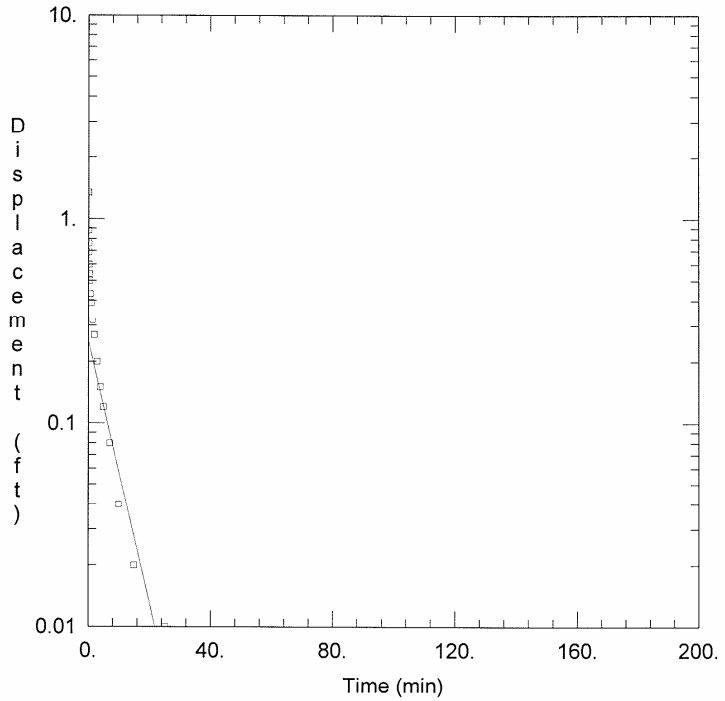
Saturated Thickness: 20. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12)

Initial Displacement: 1.65 ft
Total Well Penetration Depth: 7.58 ft
Casing Radius: 0.042 ft
Static Water Column Height: 7.58 ft
Screen Length: 10. ft
Wellbore Radius: 0.042 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0003723 cm/sec
y0 = 0.1793 ft



MW-13 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Havem MW-13-Visual.aqt
Date: 10/24/05 Time: 09:49:01

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-13
Test Date: 9-21-05

AQUIFER DATA

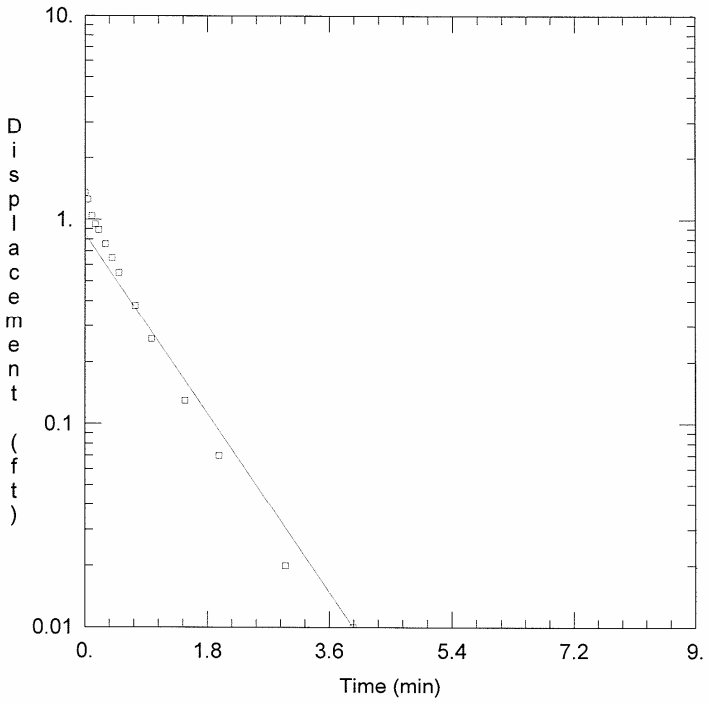
Saturated Thickness: 15. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13)

Initial Displacement: 1.35 ft
Total Well Penetration Depth: 7.89 ft
Casing Radius: 0.042 ft
Static Water Column Height: 7.89 ft
Screen Length: 10. ft
Wellbore Radius: 0.042 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 2.496E-5 cm/sec
y0 = 0.2535 ft



MW-14 SLUG WITHDRAWAL TEST

Data Set: C:\CKraemer\SCA\Mott Haven\slug tests\Mott Haven MW-14-Visual.aqt
Date: 10/24/05 Time: 09:49:58

PROJECT INFORMATION

Company: Shaw Environmental
Client: NYCSCA
Project: 114926
Location: Mott Haven
Test Well: MW-14
Test Date: 9-21-05

AQUIFER DATA

Saturated Thickness: 25. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-14)

Initial Displacement: 1.35 ft
Total Well Penetration Depth: 11.19 ft
Casing Radius: 0.042 ft
Static Water Column Height: 11.19 ft
Screen Length: 10. ft
Wellbore Radius: 0.042 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.0001965 cm/sec
Solution Method: Bouwer-Rice
y0 = 0.8479 ft

APPENDIX F
DATA USABILITY SUMMARY REPORT (DUSR) AND SUMMARY SHEETS

DATA USEABILITY SUMMARY REPORT (DUSR)
FOR VOLATILE and SEMIVOLATILE ORGANIC COMPOUNDS,
METALS, PESTICIDES, PCBs, HERBICDES AND CYANIDE ANALYSES
SAMPLES COLLECTED AND ANALYZED IN
APRIL 2005/MAY 2005
Report Prepared by
Shaw Environmental & Infrastructure
May 2005

The DUSR addresses the following questions:

1. Is the data package complete as defined under the requirements for the New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverable?
   No; There were no internal chain-of-custodies (COC) for any of the parameters and the cover page does not list the reanalysis/dilutions of samples. There were no percent breakdown of DDT and endrin for Pesticide analysis. There were also no PEM information in the pesticide sections; however it was referenced on the run log and labeled as "OK". In one particular case (SDG T2404, sample TP(4-6)), target compound, calcium was not listed on the Form I. The laboratory did not flag the inorganic compounds with "E" qualifiers when serial dilution QC requirements were not met; however, they noted the anomalies in the case narrative. All other information required by the NYSDEC ASP was included in all packages.

2. Have all holding times been met?
   Yes, all holding times were met for all samples.

3. Do all the QC data fall within the protocol required limits and specifications?

No, the QC data that falls outside required limits is outlined in the following evaluation. In all cases where QC control limits for spike or surrogate recoveries are exceeded, blank contamination is present, or precision criteria for field or laboratory replicates is exceeded, the magnitude of the exceedance is small enough that the data is still useable for decision-making purposes.

This evaluation applies to data packages from Chemtech Laboratory containing results from analyses of soil and groundwater samples collected for the SCA Motthaven Former Metro North Property for TCL VOC, SVOC, Pesticides, PCB, Herbicides, TAL metals and cyanide. The package identifiers that will be used throughout this report are Sample Delivery Group (SDG) numbers T2404, T2443, T2457, T2567, T2609, T2851, and T2877. The QC parameters that were evaluated were System Monitoring Compound Recoveries, Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries, Laboratory Control Standard (LCS) Recoveries, Method Blanks and Trip Blanks, GC/MS Mass Calibration and Ion Abundance Pattern, Initial and Continuing Calibrations, Stability of Internal Standard Response

and Retention Times, Field Duplicates and Laboratory Replicates, Dilution and/or Reanalysis of Samples, Matrix Spikes, and Matrix Spike Duplicates, and Miscellaneous Metals QC Parameters.

System Monitoring Compound Recoveries - VOCs

Chemtech's system monitoring compound recovery limits for these packages are broader than those required by the ASP Exhibit E, Part IX, Table 6. The limits in Table 6 were used to evaluate this data. They are 88-110% for toluene-d8, 86-110% for 4-bromofluorobenzene, and 76-114% for 1,2-dichloroethane-d4. ChemTech must revise their limits for NYSDEC work to comply with this requirement. The laboratory meets ASP requirements to reanalyze samples when any one volatile surrogate does no meet specified QC criteria where troublesome recoveries have occurred. It should be noted that Chem Tech has spiked a fourth compound, dibromofluoromethane (not required by the ASP) into all samples, blanks, and standards and no data were qualified based on recovery problems with this surrogate compound since it is not an ASP requirement. Any anomalies are noted for information purposes for the associated SDG. It should also be noted that MS/MSD exceedances are not shown since qualifiers are not assigned to the actual MS/MSD samples. Their results are evaluated to access the precision and accuracy of a particular matrix associated with a group of samples.

SOILS T2404

VOC Surrogate Recoveries Exceeding ASP Acceptance Criteria

Sample ID	Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
TP19(5-6)D	---	---	62
TP19(5-6)DRE	---	---	64
TP21(4-6)	---	---	59
TP21(4-6)RE	---	---	46
TP24(6-8)	---	---	76

It should be noted that recoveries for sample TP24(6-8) met lab QC, so reanalysis was not performed. The recoveries for TP19(5-6)D and TP21(4-6) did not meet lab QC and reanalysis was performed accordingly. They all were below ASP recovery requirements. The two reanalysis experienced similar low recoveries. It is recommended that the results from the original analysis be used since there was no significant improvement in the reanalysis and all results should be qualified J/UJ due to the low recoveries.

SOILS T2443

VOC Surrogate Recoveries Exceeding ASP Acceptance Criteria

Sample ID	Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
SB27(14-16)D	---	---	82

Lab QC criteria were met; however recovery was below ASP requirements. No re-analysis was performed since lab QC criteria were met.. All results should be qualified J/UJ due to the low recoveries.

SOILS T2457- All ASP requirements were met. No data were qualified.
SOILS T2567- All ASP requirements were met. No data were qualified.

SOILS T2609

VOC Surrogate Recoveries Exceeding Acceptance Criteria

Sample ID	Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
SB49(3-5)	---	79	33
SB49(3-5)RE	---	82	34

Despite no improvement for the recoveries in the reanalysis, the results from the reanalysis are the preferred results to report since all internal standards exhibited low area counts in the original analysis. All results for the reanalysis should be qualified J/UJ due to low surrogate recoveries.

WATER T2851
One surrogate (Toluene-d8) experienced a high recovery for MW-5GWD. No qualification was necessary since sample results were non-detect.

WATER T2877- All ASP requirements were met. No data were qualified.

System Monitoring Compound Recoveries - SVOCs
Chemtech only spiked the field and QC samples with six of the eight surrogates required by ASP (see Exhibit E, Part IV, Section 6.1). They did not spike 2-chlorophenol-d_4 and 1,2-dichlorobenzene-d_4. The recovery limits for these two compounds are advisory only. Chemtech's system monitoring compound recovery limits for the packages are the same as those required by the ASP Exhibit E, Part III, Table 7. Please note that exceedances were only listed if they prompted a qualification of the associated data. In accordance with Section 6 of Part IV of Exhibit E of the ASP, if two or more acid surrogates or two or more base/neutral surrogates have recoveries outside of acceptance criteria, or if the recovery of any one base/neutral or acid surrogate is < 10%, then corrective actions must be taken. Also MS/MSD surrogate recovery exceedances are not shown because the unspiked sample surrogate recoveries were acceptable (see Section 6.3.3 of Part IV of Exhibit E) and typically qualifiers are not assigned to the actual MS/MSD samples. Their results are evaluated to access the precision and accuracy of a particular matrix associated with a group of samples.

SOILS T2404- All ASP requirements were met. No data were qualified.
SOILS T2443- All ASP requirements were met. No data were qualified.
SOILS T2457- All ASP requirements were met. No data were qualified.
SOILS T2567- All ASP requirements were met. No data were qualified.
SOILS T2609- All ASP requirements were met. No data were qualified.
WATER T2851- All ASP requirements were met. No data were qualified.
WATER T2877- All ASP requirements were met. No data were qualified.

System Monitoring Compound Recoveries - Herbicides

SOILS T2404
Herbicide recoveries exceeded acceptance criteria; however all samples were non-detect. No qualification was necessary.

SOILS T2443
Herbicide recoveries exceeded acceptance criteria; however all samples were non-detect. No qualification was necessary.

SOILS T2457
Herbicide recoveries exceeded acceptance criteria; however all samples were non-detect. No qualification was necessary.

SOILS T2567
Herbicide recoveries exceeded acceptance criteria; however all samples were non-detect. No qualification was necessary.

SOILS T2609 – No Herbicide data reported for this SDG.

WATER T2851 – All recoveries were within limits. No qualification necessary.
WATER T2877 - All recoveries were within limits. No qualification necessary.

System Monitoring Compound Recoveries - Pesticides
SOILS T2404
The ASP surrogate limits are broader than the lab derived limits and thus all outliers noted by the lab were within ASP QC limits except for TCX in TP19(5-6); however, DCB surrogate was within limits. No qualification was necessary.

SOILS T2443
The ASP surrogate limits are broader than the lab derived limits and thus all outliers noted by the lab were within ASP QC limits. No qualification was necessary.

SOILS T2457
The ASP surrogate limits are broader than the lab derived limits and thus all outliers noted by the lab were within ASP QC limits. No qualification was necessary.

SOILS T2567
The ASP surrogate limits are broader than the lab derived limits and thus all outliers noted by the lab were within ASP QC limits. No qualification was necessary.

SOILS T2609 – No Pesticide data reported for this SDG.
WATER T2851 – All surrogates were within ASP requirements. No qualification.
WATER T2877 - All surrogates were within ASP requirements. No qualification.

System Monitoring Compound Recoveries – PCB's
SOILS T2404- All ASP requirements were met. No data were qualified.
SOILS T2443- All ASP requirements were met. No data were qualified.
SOILS T2457- All ASP requirements were met. No data were qualified.
SOILS T2567- All ASP requirements were met. No data were qualified.
SOILS T2609 – No PCB data reported in this SDG.
WATER T2851- All recoveries were within limits. No data were qualified.
WATER T2877- All recoveries were within limits. No data were qualified.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries
Chem Tech has spiked all MS/MSD samples with a full target analyte list in lieu of using the abbreviated list provided in the associated analytical sections of the ASP. Please note that specific exceedances were only listed if they prompted a qualification of the associated data and did not meet ASP requirements.

SOILS T2404
For volatile organics and cyanide analyses, the recoveries were within the ASP limits. No qualification was necessary.

For semivolatile organics, the laboratory spiked sample TP20(4-5) with the full analyte list. Some recoveries were below acceptance limits, but none of these were on the ASP short spike list. The RPD for Pyrene exceeded the acceptance criteria. The MS/MSD and LCS recoveries were within limits; therefore, professional judgment was applied and no qualification was necessary.

For Pesticides, some analytes exceeded the acceptance criteria; however, all samples were non-detect so no qualification was necessary based on the high recoveries. Heptachlor did experience a high RPD and results for this compound were qualified UJ for all samples.

For PCBs, Aroclor 1260 for TP19(5-6) and TP19(5-6)DDL was qualified J due to high recovery and RPD QC criteria.

For Herbicides, 2,4-D and 2,4,5-T recoveries were below the laboratory established limits and were qualified UJ in all samples.

For Metals, several spike recoveries were outside of 75-125% QC criteria. Results corresponding to sample results that were more than 4-times the spike level were not considered. Chromium (172.1% and 171.6%), Sodium (62.7%) and Silver (146.8%) exceeded acceptance criteria in the MS and/or MSD runs. Chromium also exceeded the 75-125% criterion in the post-digestion spike recovery run. Thus, Sodium was qualified J/UJ and positive Chromium and Silver results were qualified J in all samples due to MS, MSD and/or post-digestion spike results.

For cyanide, the matrix spike recovery was within the acceptance limits of 75-125%.

SOILS T2443
Laboratory batch QC samples were used for the VOC, SVOC, PCB, Pesticides, Metals, and Herbicides MS/MSD analyses. No action was required.

For cyanide, the matrix spike recovery was within the acceptance limits of 75-125%.

SOILS T2457
For volatile organics, sample SB20(14-16) was used as the MS/MSD sample. The MS recovery of benzene (74%) was slightly below the lower limit of the laboratory acceptance criteria; however within the limits provided in the ASP. No qualifications are recommended based upon percent recoveries; however, the RPD for benzene (22) was above the laboratory and the ASP QC limits (21). Therefore, benzene results for SB20(14-16) and BALLAST-1 were qualified UJ/J.

For semivolatiles, several compounds experienced recoveries outside the lab-derived QC limits; however, since they are not ASP required spiking compounds, no qualification was necessary.

For herbicides, sample SB20(14-16) was used as the MS/MSD sample. 2,4-D (o.k/51%, RPD 23), 2,4,5-TP (silvex) (RPD 24), and 2,4,5-T (27%/o.k., RPD 112) were below the lab-derived limits. Results for these compounds were qualified UJ for both samples. Note that surrogates recoveries for the MS and MSD were high.

For PCBs, Aroclor-1016 (o.k./145%, RPD 59) was above the QC criteria; however was not detected in the samples. No qualification was necessary.

For metals, sample SB20(14-16) was use as the MS/MSD samples. Silver (52.1%/45.6%) was below the QC limits and silver results for SB20(14-16) and BALLAST-1 were qualified J.

SOILS T2567
Since laboratory batch QC samples were used for the VOC, SVOC, Pesticides, and PCB MS/MSD analyses. No action was required. Sample SB44(14-15) was used as the MS/MSD sample for herbicides and high recoveries were exhibited. No qualification was necessary since all associated sample results were non-detect. Sample SB44(5-7)D was use as the MS/MSD sample for metals and chromium (60.3%/60.3%) and silver (26.3%/19.5%) were below the QC limits. All chromium results were qualified J and silver results were qualified UJ. It should be noted that silver also experienced a high RPD (29.4%).

SOILS T2609
For volatile organics, the recoveries were within ASP limits. No qualification was necessary.

For semivolatile organics, the laboratory spiked sample SB49(13-15) with the full analyte list. Some recoveries were below acceptance limits, but were not on the ASP short spike

list. Pentachlorophenol recovery was high in the MSD, but the samples were non-detect. The RPD for 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene, 4-chloro-3-methylphenol, acenaphthene and pentachlorophenol exceeded the acceptance criteria. The MS/MSD and LCS recoveries were within limits for all of these compounds except pentachlorophenol, which was qualified UJ. Because these are only advisory limits and no other problems were found, the other compounds noted were not qualified.

For cyanide, the matrix spike recovery was within the acceptance limits of 75-125%.

For Metals, sample SB49(13-15) was also used as the spike sample for MS and MSD analyses. Two metals produced spike recoveries outside of 75-125%. Results corresponding to sample results that were 4 or more times the spike level were not considered. Silver (18.6% and 13.4%) and Sodium (69.5% and 51.8%) exceeded acceptance criteria in the MS and MSD runs. Silver and sodium were qualified J/UJ in all soil samples due to low recoveries.

WATER T2851
For volatiles, cyanide, and PCB's, all QC criteria were met.

For semivolatiles, several compounds experienced recoveries outside the lab-derived QC limits; however, since they were not ASP required spiking compounds, no qualification was necessary.

For pesticides, 4,4'-DDT exceeded the limits; however, samples were non-detect. Gamma-BHC was below the acceptance criteria and all samples were qualified UJ.

For herbicides, 2,4-D, 2,4,5-TP and 2,4,5-T were below the laboratory established limits and results were qualified UJ in all samples.

For Metals, sample MW3-GW was used as the spike sample for MS and MSD analysis. Results corresponding to sample results that were 4 or more times the spike level were not considered. Barium (8.5% and 8.5%), Chromium (48.7% and 48.8%) and Copper (72.3% and 72.1%) exceeded acceptance criteria in the MS and MSD runs. These analytes were qualified J/UJ in all samples.

WATER T2877
For volatiles, cyanide, and PCB's, all QC criteria were met.

Since laboratory batch QC samples were used for the Pesticides and herbicides MS/MSD analyses. No action was required.

For semivolatiles, several compounds experienced recoveries outside the lab-derived QC limits; however, since they were not ASP required spiking compounds, no qualification was necessary.

For Metals, sample MW10-GW was used as the spike sample for MS and MSD analysis. Results corresponding to sample results that were 4 or more times the spike level were not considered. Aluminum, Arsenic, Barium, Cadmium, Potassium, Silver and Zinc exceeded the ASP acceptance criteria in the MS and/or MSD runs with high recoveries. Potassium also exceeded the 75-125% post-digestion spike recovery criteria. These analytes were qualified J for positive results in one or both samples.

Laboratory Control Standard (LCS) Recoveries
Chem Tech has spiked all LCS samples with a full target analyte list in lieu of using the abbreviated list provided in the associated analytical sections of the ASP. Please note that specific exceedances were only listed if they prompted a qualification of the associated data and did not meet ASP requirements.

SOILS T2404
All LCS recoveries were within the ASP acceptance criteria for all analytical fractions.

SOILS T2443
For volatile, pesticides, PCBs, herbicides, cyanide and metals, all LCS recoveries were within the ASP prescribed acceptance criteria. For SVOCs, 4-nitrophenol and pentachlorophenol exceeded the ASP criteria with high recoveries; however, all the samples were non-detect and no qualification was necessary.

SOILS T2457
For volatile, herbicides, pesticides, PCB, metals, and cyanide all soil LCS recoveries were within the ASP acceptance criteria.
For semivolatile organics, some compounds exceeded the lab-derived limits; however since they were not ASP required spiking compounds and sample results were non-detect. No qualification was necessary.

SOILS T2567
All LCS recoveries were within the ASP acceptance criteria for volatile, herbicides, pesticides, PCB, metals, and cyanide. For semivolatile organics, 2,4-dinitrophenol was below the lab-derived limits; however since this compound is not required to be spiked as part of the short ASP list, no qualification was necessary.

SOILS T2609
For volatiles, cyanide and metals, all LCS recoveries were within the ASP acceptance criteria. For SVOCs, 4-nitrophenol and pentachlorophenol exceeded the ASP criteria with high recoveries; however, all the samples were non-detect and no qualification was necessary.

WATER T2851
For volatile and semivolatile organics, pesticides, PCBs, herbicides and cyanide analyses. All LCS recoveries were within the ASP acceptance criteria.

For metals, calcium, barium, and chromium were below acceptance criteria and were qualified UJ in all samples.

WATER 2877
All LCS recoveries were within the ASP acceptance criteria for all analytical fractions.

Method Blanks
SOILS T2404
VOC method blanks reported non-detect, at less than the MDL, for all target analytes except for methylene chloride. In VBLK01, methylene chloride was detected at 4.6J µg/Kg. Methylene chloride is a common lab contaminant so the blank action level is set at ten times the blank level, or 46 µg/Kg. Methylene chloride results were less than the action level in all samples associated with method blank VBLK01 except TP19(5-6) and were qualified due to method blank contamination. UJ qualifiers were assigned to reflect blank contamination, system control issues, and/or to indicate that reported results were less than the reporting limits.

No contamination was present for SVOC, Pesticides, PCBs, Cyanide and Herbicides analyses.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB). For mercury (Hg) test runs, mercury was detected in CCB04 at -0.087 ug/L. The action level is set to 5 times the absolute value of the highest blank, or 0.04 ug/L. Values in the samples were above the action level so no qualification was necessary.

In the preparation blank, PB04904BL, the following analytes were detected:

Analyte	Method	Action level
Aluminum	1.256	6.28
Antimony	-0.587	-2.935
Barium	-0.326	-1.63
Calcium	1.16	5.8
Copper	-0.295	-1.475
Manganese	-0.086	-0.43
Nickel	0.289	1.445
Selenium	-0.886	-4.43
Silver	0.116	0.58
Zinc	-1.784	-8.92

In the associated samples, all results were non-detect or above the action level for all analytes with the exception of Antimony in TP20(4-5) and TP24(6-8). Antimony for these samples was qualified due to blank contamination.

For metals in solid samples, the CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB04	CCB05	CCB06

Aluminum	-10.7	66.6		5.4
Antimony	-4.9	5.7	5.3	
Arsenic		-6.7	-3.8	-6.6
Barium	-2.2	-1.0	-1.1	-1.7
Beryllium		0.7		
Cadmium	-3.7	-1.0	0.5	0.6
Calcium		24.2	21.9	94.1
Chromium			-0.8	0.8
Cobalt	1.4	1.4	-1.4	0.8
Iron	35.3			-49.4
Lead				3.9
Magnesium				39.6
Manganese	-0.5		-0.7	
Nickel			-2.7	
Potassium		-229.5		
Selenium	-5.4			-3.8
Silver	3.3		5.6	2.4
Sodium	508.9			537.6
Thallium		8.8		
Zinc	-13.6	-6.4	-17.5	-11.6

The action levels are applied as follows. The highest blank level is selected then multiplied by 5. It is then converted to solid units so that it can be applied to the solid sample results. The blank solutions are 0.1 L and the soil sample weight is 1.0 gram. For example, for aluminum:

66.6 ug/L x 5 x 0.1 L ÷ 1.0 gram = 33.3 ug/g or 33.3 ppm

Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

Sample	Antimony	Beryllium	Silver	Sodium	Thallium
TP19(5-6)					U+
TP19(5-6)D		U		U+	U+
TP20(4-5)	U+		U+		
TP24(6-8)	U			U+	
TP21(4-6)	U			U+	U

+ Results were qualified UJ to reflect field duplicate, MS/MSD accuracy and precision problems and/or results were less than the reporting limit.

For cyanide, the initial and continuing calibration and the preparation blank result were ND (<0.01 mg/L for water and < 0.50 mg/Kg for soil).

SOILS T2443

VOC method blanks reported non-detect, at less than the MDL, for all target analytes except for acetone and methylene chloride. In VBLK01, acetone was detected at 6.6J µg/Kg and methylene chloride was detected at 3.2J µg/Kg. These are common lab contaminants so the blank action level is set at ten times the blank level, or 66 µg/Kg and 32 µg/Kg, respectively. Methylene chloride results were ND in all samples and acetone was detected at less than the action level in all samples associated with method blank VBLK01 and were thus for blank contamination. The acetone results for SB27(14-16) and SB27(14-16)D were qualified UJ to reflect surrogate recovery and field duplicate precision problems.

All blank results for SVOC, Pesticides, PCBs, Herbicides and Cyanide were ND.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB). For mercury (Hg) test runs, mercury was not detected in any of the blanks.

In the preparation blank, PB04937BL, the following analytes were detected:

Analyte	Method	Action level
Aluminum	0.694	3.47
Antimony	0.427	2.135
Barium	0.090	0.45
Beryllium	0.011	0.055
Cadmium	0.062	0.31
Calcium	-0.812	-4.06
Chromium	-0.206	-1.03
Copper	-0.459	-2.295
Iron	-2.767	-13.835
Potassium	-7.057	-35.285
Silver	-0.124	-0.62
Sodium	-34.408	-172.04

In associated samples, all results were non-detect or above the action level for all analytes except Antimony in SB43(2-4) and Cadmium, Sodium in SB27(14-16). Results for these metals were qualified due to blank contamination. UJ qualifiers were assigned since results were less than the reporting limits.

For metals in solid samples, the CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB05	CCB06
Aluminum		48.2	41.3
Antimony		4.0	10.0
Arsenic	3.6	-7.8	-4.7
Barium	-0.7	-1.5	-0.9
Beryllium		0.7	0.8
Cadmium	-4.3	-0.6	
Calcium		10.8	5.9

Chromium		-2.5	-1.0
Cobalt	-1.0	-2.5	-0.4
Copper		-6.3	
Iron		-29.2	-41.3
Lead		-3.1	
Magnesium		-16.7	
Manganese	-0.6	-1.5	-0.9
Nickel			3.1
Potassium	-182.1	-202.6	-201.0
Selenium			-4.5
Silver		-2.1	
Sodium		-486.1	
Thallium		3.5	
Vanadium	-0.9		
Zinc		-1.2	

The action levels are applied as follows. The highest blank level is selected then multiplied by 5. It is then converted to solid units so that it can be applied to the solid sample results. The blank solutions are 0.1 L and the soil sample weight is 1.0 gram. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

Sample	Antimony	Arsenic	Beryllium	Cadmium	Sodium
SB27(14-16)				U+	U+
SB27(14-16)D		U	U+		
SB43(2-4)	U+			U	U+

+ Antimony, Beryllium, Cadmium and Sodium results were qualified to reflect results were less than the reporting limits.

SOILS T2457
VOC method blanks (VBLK01, VBLK02 and VBLK03) reported non-detect, for all target analytes except for acetone and methylene chloride. All acetone and methylene chloride results for samples were non-detect. No qualification is required.

No contamination was present in seimivolatile, pesticides, herbicides, PCBs, or cyanide method blanks.

For metals, several analytes were detected at various levels in the method blank.

For metals in solid samples, the method blank detected levels (in mg/KG) for each analyte are as follows:

Analyte	Method	Action level
Arsenic	0.510	2.55
Beryllium	0.008	0.040
Cadmium	0.073	0.365

Calcium	1.289	6.445
Cobalt	-0.171	-0.855
Lead	0.315	1.575
Manganese	0.048	0.4
Potassium	-9.827	49.135
Zinc	0.091	0.455

Arsenic results for SB20(14-16) were qualified due to method blank contamination.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB).

For metals in solid samples, the CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB15	CCB16	CCB17
Aluminum		6.3	7.2	12.3
Antimony		-8.8		
Arsenic	3.6	7.0	8.3	8.3
Barium	-0.7	1.8	2.0	3.0
Beryllium				0.3
Cadmium	-4.3	0.6	0.7	1.4
Calcium		19.0	21.3	28.3
Chromium		1.0	0.4	
Cobalt	-1.0	1.8	-0.5	0.8
Iron			44.8	
Lead		3.5	4.2	-2.7
Magnesium		0.5	11.6	
Manganese	-0.6	0.5	0.5	0.5
Potassium	-182.1	-83.0	-72.5	-154.3
Selenium				3.1
Sodium				-396.6
Vanadium	-0.9			
Zinc		1.6	1.5	1.1

The action levels are applied as follows. The highest blank level is selected then multiplied by 5. It is then converted to solid units so that it can be applied to the solid sample results. The blank solutions are 0.1 L and the soil sample weight is 1.0 gram. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

Sample	Arsenic	Cadmium
SB20(14-16)	U	
BALLAST-1		U

For mercury, contaminations were detected at various levels in the initial and continuing calibration blanks (ICB and CCB). Mercury (Hg) was detected in ICB at –0.108 ug/L and CCB02 at -0.176 ug/L. The action level for these two samples is set by converting to solid units based upon the relative volume and weight of the blank and sample, respectively, then multiplying by 5. The action level is 0.088 mg/Kg for samples SB20(14-16) and BALLAST-1. The mercury result for these two samples is well above the action level so no qualifiers were applied

For cyanide, the initial and continuing calibration blank results, and the preparation blank result were ND (< 0.50 mg/Kg for soil).

SOILS T2567
VOC method blanks (VBLK01-4/29/05, VBLK01-5/3/05, and VBLK02) reported non-detect, for all target analytes except for acetone and methylene chloride in VBLK01 4/26/05 and VBLK02. Acetone and methylene results for SB44(3-5) and SB44(14-15) were qualified due to method blank contamination. UJ qualifiers were assigned to reflect blank contamination and to indicate that reported results were less than the reporting limits.

No contamination was present in seimivolatile, pesticides, herbicides, PCBs, or cyanide method blanks.

For metals, several analytes were detected at various levels in the method blank.

For metals in solid samples, the method blank detected levels (in mg/Kg) for each analyte are as follows:

Analyte	Method Blank Results	Action level
Aluminum	7.031	35.15
Antimony	0.334	1.67
Barium	-0.778	3.89
Beryllium	.060	0.3
Cadmium	-0.221	1.105
Calcium	0.114	0.57
Copper	-0.140	-0.7
Iron	-1.833	9.165
Manganese	-0.148	0.74
Potassium	-23.055	115.27
Selenium	-0.927	4.635
Silver	-0.784	3.92
Sodium	-26.522	132.6
Vanadium	-0.168	0.84
Zinc	-1.02	5.1

Silver results for SB44(5-7) and SB44(14-15) were qualified due to method blank contamination. UJ qualifiers were applied for these results to reflect blank contamination and MS/MSD accuracy issues.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB).

For metals in solid samples, the CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB06	CCB07	CCB08
Aluminum	-12.4	105.4	90.5	87.4
Barium	-7.6	-4.8	-8.2	-7.8
Beryllium		1.0	0.9	0.9
Cadmium	0.5	-1.6	-2.4	-2.1
Calcium	-11.4	-14.6	-2.3	-8.3
Chromium	-0.4	-0.35		
Cobalt	-0.5	-0.5		
Lead		2.8	-4.8	
Magnesium		-8.7		
Manganese	-1.3	1.3	-1.9	-1.7
Nickel				1.7
Potassium		-272	-340.9	-382.3
Selenium		3.3	-6.2	-7.7
Silver	1.9			
Sodium	352.3			
Thallium		4.6		
Vanadium	-1.3	-2.0	-2.0	-2.3
Zinc	0.8	-9.2	-7.8	-9.5

The action levels are applied as follows. The highest blank level is selected then multiplied by 5. It is then converted to solid units so that it can be applied to the solid sample results. The blank solutions are 0.1 L and the soil sample weight is 1.0 gram. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

Sample	Beryllium
SB44(5-7)	U+
SB44(5-7)D	U+

+ UJ qualifiers were applied for these results to reflect blank contamination and to indicate that reported results were less than the reporting limits.

For mercury, contaminants were detected at various levels in the initial and continuing calibration blanks (ICB and CCB). Mercury (Hg) was detected in ICB at –0.057 ug/L and CCB05 at -0.042 ug/L. The action level for these two samples is set by converting to

solid units based upon the relative volume and weight of the blank and sample, respectively, then multiplying by 5. The mercury result for the samples is well above the action level so no qualifiers were applied

For cyanide, the initial and continuing calibration blank results, and the preparation blank result were ND (< 0.50 mg/Kg for soil).

SOILS T2609
VOC method blanks reported non-detect, at less than the MDL, for all target analytes except for acetone and methylene chloride. In VBLK01, acetone was detected at 12J µg/Kg and methylene chloride was detected at 16 µg/Kg . These are common lab contaminants so the blank action level is set at ten times the blank level, or 120 µg/Kg and 160 µg/Kg, respectively. Methylene chloride results were less than the action level in all samples associated with method blank VBLK01 and were thus qualified due to blank contamination. Acetone results were below the action level in SB49(13-15) and were also qualified due to blank contamination. UJ qualifier was applied to Acetone results for this sample since the results were below the reporting limit. In VBLK02, acetone was detected at 8J µg/Kg and methylene chloride was detected at 11 µg/Kg. These are common lab contaminants so the blank action level is set at ten times the blank level, or 80 µg/Kg and 110 µg/Kg, respectively. The methylene chloride and acetone results for SB49(3-5)RE were below the action levels and were qualified due to blank contamination. UJ qualifiers were actually applied to reflect blank contamination and surrogate recovery problems.

All blank results for SVOC and Cyanide were ND.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB).

In the preparation blank, PB05140BL, the following analytes were detected:

Analyte	Method	Action level
Aluminum	6.909	34.545
Barium	-0.250	-1.25
Beryllium	0.049	0.245
Cadmium	-0.171	-0.855
Calcium	0.989	4.945
Copper	-0.188	-0.94
Magnesium	0.977	4.885
Manganese	-0.082	-0.41
Nickel	-0.193	-0.965
Potassium	-35.367	-176.835
Sodium	-92.132	-460.66
Zinc	-0.440	2.2

In associated samples, all results were non-detect or above the action level for all analytes except beryllium and sodium in SB49(3-5), SB49(8-10)D and SB49(13-15). Results for

these compounds were qualified due to blank contamination. UJ qualifiers were assigned to reflect MS/MSD recovery problems and/or results were less than the reporting limit.

For metals in solid samples, the CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB01	CCB02	CCB09	CCB10
Aluminum				41.3	43.7
Antimony	-4.4				3.3
Arsenic					4.2
Barium	-2.4			-2.0	-1.8
Beryllium				0.2	0.2
Cadmium	-1.4			-1.9	-1.6
Calcium	-5.3			-1.3	28.3
Chromium					0.6
Cobalt	0.4			-0.7	
Copper					
Iron					37.1
Lead				-2.2	2.3
Magnesium					-19.3
Manganese	-0.8			0.2	
Nickel	-1.8			-2.9	-2.2
Mercury	0.062		0.051		
Potassium				-232.4	-234.0
Selenium					3.6
Silver				-7.5	-7.6
Sodium				-368.2	
Thallium				7.0	9.3
Vanadium				1.3	0.8
Zinc	-3.5			-3.5	-1.7

The action levels are applied as follows. The highest blank level is selected then multiplied by 5. It is then converted to solid units so that it can be applied to the solid sample results. The blank solutions are 0.1 L and the soil sample weight is 1.0 gram. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

Sample	Antimony	Arsenic	Mercury	Sodium
SB49(3-5)				U+
SB49(8-10)	U+	U+	U	
SB49(8-10)D	U+			U+
SB49(13-15)				U+

+ Antimony, Arsenic and Sodium results were qualified UJ to reflect blank contamination, accuracy issues, and/or results less than the reporting limit.

WATER T2851
VOC method blanks reported non-detect, at less than the MDL, for all target analytes except for methylene chloride. In VBLK01, methylene chloride was detected at 2.0J µg/L. Methylene chloride is a common lab contaminant so the blank action level is set at ten times the blank level, or 20 µg/L. Methylene chloride results were non-detect in the associated samples. The trip blank (TB-051605) was ND for all analytes. No qualification was necessary.

All blank results for SVOCs, Pesticides, PCBs, Herbicides and Cyanide were non-detect.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB).

In the preparation blank, PB05405BL, the following analytes were detected:

Analyte	Method	Action level
Aluminum	24.295	121.48
Barium	-1.880	9.4
Beryllium	0.1	0.5
Calcium	32.01	160.05
Cobalt	2.01	10.05
Magnesium	13.675	68.38
Manganese	0.8	4
Potassium	1533.115	7665.58
Silver	2.13	10.65
Sodium	503.04	2515.2
Vanadium	-1.065	5.33
Zinc	1.78	8.9

In associated samples, all results were non-detect or above the action level for all analytes except Aluminum in MW3-GW, Cobalt in all samples, Vanadium in MW3-GW and MW-5GW, Beryllium and Potassium in MW-5GW and MW-5GWD and Silver in MW-5GWD. These results were qualified due to blank contamination. UJ qualifiers were assigned to reflect MS/MSD, LCS recovery problems and/or results were less than the reporting limit.

The CCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB03	CCB04	CCB01	CCB02	CCB03
Aluminum	-20.6	28.0	34.9			
Antimony	-3.6					
Arsenic	-4.9					
Barium		-0.8	1.0			
Beryllium		0.4	0.1			
Cadmium	-4.7	-3.8	0.7			
Calcium	-1.3	14.4	14.6			
Chromium		1.5	-0.5			
Cobalt		1.8	0.9			

Iron		30.2				
Lead	-4.1	2.7	4.8			
Magnesium		13.0				
Manganese		0.2	0.6			
Nickel	-2.3					
Mercury				0.08	0.09	0.07
Potassium	-148.3	-287.8	-1592.3			
Selenium			6.4			
Silver		2.2				
Sodium		730.8				
Vanadium			-1.1			
Zinc	0.7	-3.2	4.8			

The action levels are applied as follows. The highest blank level is selected then multiplied by 5 and applied to the sample results. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

	MW3-GW	MW-5GW	MW-5GWD
Aluminum	U+		
Antimony	U+		
Arsenic		U+	U+
Beryllium		U+	U+
Cadmium		U+	
Chromium		U+	U+
Cobalt	U+	U+	U+
Lead	U		
Nickel			U+
Mercury	U+	U	U
Potassium		U+	U+
Selenium		U+	U+
Silver			U+
Vanadium	U+	U+	

+ Aluminum, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Nickel, Potassium, Selenium, Silver and Vanadium results and Mercury result were qualified UJ to reflect accuracy issues or results less than the reporting limits.

WATER T2877

VOC method blanks reported non-detect, at less than the MDL, for all target analytes except for methylene chloride. In VBLK01, methylene chloride was detected at 2.0J µg/L. Methylene chloride is a common lab contaminant so the blank action level is set at ten times the blank level, or 20 µg/L. Methylene chloride results were non-detect the

associated samples. The trip blank (TB-051605) was ND for all analytes. No qualification was necessary.

All blank results for SVOCs, Pesticides, PCBs, Herbicides and Cyanide were non-detect.

For metals, several analytes were detected at various levels in the initial and continuing calibration blanks (ICB and CCB).

In the preparation blank, PB05434BL, the following analytes were detected:

Analyte	Method	Action level
Aluminum	20.0	100
Antimony	11.0	55
Arsenic	5.0	25
Barium	1.0	5
Calcium	4.0	20

In associated samples, all results were non-detect or above the action level for all analytes except Arsenic. Arsenic was qualified due to blank contamination. UJ qualifiers were applied for to reflect accuracy issues and/or results less than the reporting limits.

TCCB and ICB detected levels (in ug/L) for each analyte are as follows:

Analyte	ICB01	CCB01	CCB02
Aluminum	6.0	6.8	
Antimony	7.3	3.9	
Barium	2.2	1.3	2.0
Cadmium	0.9	0.6	0.4
Calcium	7.0	15.8	7.8
Chromium	1.7	0.5	
Cobalt	1.7	0.6	1.1
Iron		-29.3	
Magnesium	12.1	12.6	
Manganese	0.6	0.3	0.4
Nickel	2.2		
Mercury			0.04
Potassium	80.4		
Selenium	6.0	9.4	5.1
Silver	2.1		
Thallium		5.8	9.1
Vanadium	1.2	1.1	
Zinc	1.4		-1.6

The action levels are applied as follows. The highest blank level is selected then multiplied by 5 and applied to the sample results. Qualifiers are applied only to those sample analytes that were analyzed in between a pair of CCB blanks that were contaminated with that analyte. Sample results were qualified as follows:

	Cadmium	Cobalt	Mercury	Silver
MW6-GW	U+		U+	
MW10-GW		U+		U+

+ Cadmium, Cobalt, Mercury and Silver results have already been qualified estimated J due to estimated results below the reporting limit. UJ qualifiers were applied for to reflect accuracy issues and/or results less than the reporting limits.

GC/MS Instrument Tune (GC/MS Mass Calibration and Ion Abundance Pattern)
ALL SOIL AND WATER SDGS
The VOC relative ion abundances for bromofluorobenzene (BFB) and the SVOC relative ion abundances for decafluorotriphenylphosphine (DFTPP) tunes were all within acceptance criteria for the project samples and associated laboratory QC samples.

Initial and Continuing Calibrations (ICAL/CCAL)
For VOC and SVOC analyses the QC criteria for relative response factor (RRF), relative standard deviation (%RSD) and percent difference (%D) identified in Table 5 of the ASP were applied to all target compounds reported by Chem Tech. In those cases where the reported compounds by Chem Tech were not listed in Table 5 of the ASP, the RRF of 0.05, %RSD of 30 and %D of 20% from the SW846 test methods and the National Functional Guidelines for Organic Review were applied.

SOILS T2404
For PCBs, Herbicides, Metals and Cyanide, the initial calibration and continuing calibrations were within ASP acceptance criteria. For VOC, the 20%D CCAL QC criteria were not met for Dichlorodifluoromethane, Trichlorofluoromethane, and 2,2-Dichloropropane. For SVOC, the 20%D CCAL QC criteria were not met for Benzoic Acid. Results for these compounds were qualified UJ for all samples.

For Pesticides, 4,4'-DDT, Endrin ketone and Methoxychlor in the initial calibration exceeded %RSD criteria on the confirmation column, but since all samples were ND and the primary column data was acceptable, no qualification was necessary.

SOILS T2443
For VOCs, PCBs, Herbicides, Metals and Cyanide, the initial calibration and continuing calibrations were within ASP acceptance criteria.

For SVOCs, the initial calibration was within limits. The continuing calibration for 4/23/05 associated with SB43(2-4) and 4/25/05 CCAL associated with SB27(14-16) and SB27(14-16)D had several compounds to exceed the %D criteria. Bis(2-chloroethyl)ether, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, 2,4-Dinitrophenol, and benzo(g,h,i)perylene were qualified J/UJ in samples SB27(14-16) and SB27(14-16)D. Benzoic acid was qualified UJ for SB43(2-4).

For Pesticides, 4,4'-DDT, Endrin ketone and Methoxychlor exceeded %RSD criteria on the confirmation column, but since all samples were non-detect and the primary column

data was acceptable, no qualification was necessary. Also, delta-BHC exceeded 20% RSD on the primary column, but was within limits on the confirmation column and was non-detect in all samples. No qualification was needed. In the continuing calibration, 4,4'DDT and Methoxychlor exceeded %D criteria on both columns in both bracketing standards, thus, these compounds were qualified UJ in all samples.

SOILS T2457
For VOCs, initial calibration criteria were met for all compounds. For VOC, the 20%D criteria was not met for Hexachlorobutadiene for CCAL ran on 4/23/05 which is associated with BALLAST-1. This compound was qualified UJ. For SVOC, the 20%D criteria was not met for CCAL ran on 4/28/05, which is associated with SB20(14-16). The following were qualified J/UJ: Bis(2-chloroethyl)ether, 1,3-Dichlorobenzene, Benzyl Alcohol, and 3+4 Methylphenols for SB20(14-16).

SOILS T2567
For VOCs, the initial calibration criteria were met for all compounds. Continuing calibration for SB44(5-7) and SB44(5-7)D were above the QC criteria for tetrachloroethene, vinyl acetate, and 1,2,3-trichloropropane. These results were qualified UJ. Continuing calibration for SB44(15-15) was above 20%D QC criteria for Dichlorofluoromethane, trans-1,2-Dichloroethene, Vinyl Acetate, 2,2-Dichloropropane, 1,1-Dichloropropene, Isopropylbenzene, n-Propylbenzene, tert_butylbenzene, sec_butylbenzene, p-Isopropyltoluene, n-butylbenzene, and Hexachlorobutadiene. Results for these compounds were qualified J/UJ for this sample.

For SVOCs, the initial calibration runs were within acceptance criteria. The CCAL for all samples were above the 20%D criteria for Benzoic Acid and 4-Nitrophenol. Results for these compound was qualified UJ for all samples.

SOILS T2609
For VOCs, the initial calibration was within limits. The continuing calibrations (CCALs) were within limits except dichlorodifluoromethane exceeded the 20%D acceptance criteria in the 05/05/05 CCAL; SB49(8-10), SB49(8-10)D and SB49(13-15). Results were qualified UJ. The 05/06/05 CCAL had several compounds that exceeded the %D criteria: 1,2,4-Trichlorobenzene, Hexachlorobutadiene, tert butyl alcohol, tetrachloroethene, isopropyl benzene, 1,2,4-Trimethylbenzene, sec-butylbenzene, p-isopropyltoluene, 1,4-dichlorobenzene, n-butylbenzene, and 1,2,3-trichlrorobenzene. These compounds were qualified UJ in SB49(3-5)RE.

For SVOCs, in the initial calibration, 1,2-dichlorobenzene, 4-chlorophenyl-phenylether and indeno(1,2,3-cd)pyrene exceeded the ASP %RSD criteria and were qualified J/UJ. In the continuing calibration (CCAL), 4-chlorophenyl-phenylether RRF criteria was below ASP limits. All samples for this analyte were ND and therefore, qualified rejected (R). The 20% D QC criteria for benzoic acid was exceeded for both CCAL and results for this compound were qualified UJ for all samples.

For metals and cyanide, the initial calibration and continuing calibrations were within ASP acceptance criteria.

WATER T2851
For VOCs, the initial calibration criteria were met for all compounds. Continuing calibration were above the QC criteria for Acrolein and 1,2,3-Trichlolorpropane. Results for these compounds were qualified UJ.

For SVOCs, the initial calibration runs were within acceptance criteria. The CCAL for sample MW3-GW were above the 20%D criteria for Nitrobenzene, Isophorone, and Azobenzene. The CCAL samples MW-5GW and MW-5GWD were above QC criteria for Nitrobenzene, Isophorone, and Benzoic Acid. Results for these compound were qualified UJ.

For Pesticides, 4,4'-DDT in the initial calibration exceeded %RSD criteria on the confirmation column and continuing calibration %D criteria on the confirmation column, but since all samples were non detect and the primary column data was acceptable, no qualification was necessary.

For PCBs, Herbicides, Metals and Cyanide, the initial calibration and continuing calibrations were within ASP acceptance criteria.

WATER T2877
For VOCs, the initial calibration criteria were met for all compounds. Continuing calibration were above the QC criteria for Acrolein and 1,2,3-Trichlolorpropane. Results for these compounds were qualified UJ.

For SVOCs, the initial calibration runs were within acceptance criteria. The CCAL for all samples were above the 20%D criteria for Nitrobenzene, Isophorone, and Benzoic Acid. Results for these compounds were qualified UJ.

For Pesticides, 4,4'-DDT in the initial calibration exceeded %RSD criteria on the confirmation column and continuing calibration %D criteria on the confirmation column, however, since all samples were non-detect and the primary column data was acceptable, no qualification was necessary. PEM data was within limits.

For PCBs, Herbicides, Metals and Cyanide, the initial calibration and continuing calibrations were within ASP acceptance criteria.

Field Duplicates and Laboratory Replicates
SOILS T2404
Samples TP19(5-6) and TP19(5-6)D were the sole field duplicate pair for this SDG. For VOCs, methylene chloride was non-detect in the original sample and detected at 3.6 ug/Kg in the duplicate. No qualification was necessary. For SVOC, Phenanthrene – 65,000 ug/Kg, 33,000 ug/Kg; Anthracene – 17,000 ug/Kg, 8600 ug/Kg and Pyrene – 63,000 ug/Kg, 37,000 ug/Kg. All of these had relative percent differences (RPD) greater

than 50% and thus were qualified J. The remaining positive results yielded RPD results of less than the maximum allowable RPD of 50% or were non-detect in one sample or were below the reporting limit. Fluoranthene was not qualified because it was reported at a higher dilution in TP19(5-6)DL. For pesticides and herbicides, both results were non-detect. For PCBs, AR1260 was detected in both samples with comparable results. For metals, all QC criteria were met with the exception for copper (67.6%), sodium (86.2%), thallium (112.9), and zinc (100.8%). For cyanide, the original sample was non-detect and the field duplicate result was 2.24 mg/Kg. No qualification is necessary.

Sample TP20(4-5) was used to generate the laboratory replicate. Antimony and silver were detected at 0.9134 mg/Kg, 1.4318 mg/Kg in the original sample and were non-detect at 0.3891, 0.0937 mg/Kg, respectively, in the replicate. Since the detected result is only about twice the MDL level, no qualification was made. For cyanide, both the original and replicate results were non-detect.

SOILS T2443
Samples SB27(14-16) and SB27(14-16)D were the sole field duplicate pair for this SDG. For VOCs, 2-butanone was detected in both samples at comparable concentrations. Acetone was also detected in both samples at 63 µg/Kg and 9.9J µg/Kg, respectively. Acetone exceeded the 50% RPD criteria. Results would have been qualified J; however, since Acetone also experienced blank contamination problems, results were qualified UJ.

For SVOC, Bis(2-chloroethyl)ether was detected at 1900 ug/Kg in the original sample, but was non-detect in the duplicate. No qualification was necessary. For pesticides, PCBs, Cyanide, and herbicides, both results were non-detect.
For metals, all QC criteria were met with the exception of calcium (106.9%), copper (122.9%), lead (103.7%), manganese (77.7%), nickel (54.2%) and potassium (54.4%). These results were qualified J.

SOILS T2457
No field duplicates were reported in this SDG

SOILS T2567
Original SB44(5-7) and field duplicate SB44(5-7)D results were evaluated to assess the precision of field sampling activities and the following were qualified due to %D>50%;
VOC's: benzene (66.6%), toluene (102%), o-xylene (102%), naphthalene (93.5%)
SVOCs: acenaphthylene (128%), fluorene (132%), anthracene (131%), fluoranthene (137%), benzo(a)anthracene (40%), chrysene (134%), benzo(b)fluoranthene (134%), benzo(k)fluoranthene (126%), benzo(a)pyrene (132%), indeno(1,2,3-cd)pyrene (135%), dibenz(a,h)anthracene (141%), benzo(g,hi)perylene (137%), naphthalene (140%), 2-methylnaphthalene (145%), phenanthrene (139%), pyrene (142%)
METALS: copper (107%), lead (130%), magnesium (60.9%).

SOILS T2609
Samples SB49(8-10) and SB49(8-10)D were the sole field duplicate pair for this SDG. For VOCs, several compounds were detected in both samples; however, were either

below the maximum 50% or the results were below the reporting limits. Naphthalene exceeded the RPD of 50% and thus was qualified estimated J.

For SVOCs and cyanide, both results were non-detect

For metals, all result pairs yielded relative percent differences (RPD) of less than the maximum allowable RPD of 50% except for barium (111.2%), chromium (57.5%), copper (88.1%), lead (77.6%), potassium (73.5%), vanadium (60.8%) and zinc (55.6%). These results were qualified J. The laboratory duplicate was within the acceptance criteria.

WATER T2851
Samples MW-5GW and MW-5GWD were the sole field duplicate pair for this SDG. For SVOC, Butylbenzylphthalate was detected in both samples, but was below the maximum RPD of 50%. No qualification was necessary.

For VOCs, Pesticides, PCBs, Herbicides and Cyanide, both results were non-detect.

For metals, the result pair (MW-5GW and MW-5GWD) yielded relative percent differences (RPD) of less than the maximum allowable 50% with the exception for aluminum (74.6). These results were qualified J. The laboratory duplicate was within the acceptance criteria.

Sample MW3-GW, was used to generate the laboratory replicate. Copper, lead, mercury and vanadium were detected in the original and duplicate and were above 20% RPD, respectively. Because the detected results were less than 5 times the CRDL, no qualification was necessary.

WATER T2877 – No field duplicates were reported for this SDG.

Stability of Internal Standard Response and Retention Times
Internal Standard Response and Retention Times
SOILS T2404
For VOCs and SVOCs, all ASP internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to –50% except for VOC. For SVOC, Samples TP19(5-6)D, TP19(5-6)DRE, TP21(4-6) and TP21(4-6)RE had area counts below acceptance criteria for 1,4-Dichlorobenzene-d4; however, since this is not an ASP recognized internal standard. No qualification was necessary. All retention times were within acceptance criteria of ±0.5 minutes.

SOILS T2443
For VOCs and SVOCs, all ASP internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to –50%. All retention times were within acceptance criteria of ±0.5 minutes.

SOILS T2457

For SVOCs, all internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to -50% except for perylene-d12 in samples BALLAST-1, BALLAST-1RE, SB20(14-16)MS, and SB20(14-16)MSD. The reanalysis of BALLAST-1 exhibited similar low area counts; therefore, the original analysis would be the preferred results to report. It should be noted that the associated compounds listed in the ASP for Perylene-d12 differ slightly from those defined by the laboratory's calibration data. All are the same with the exception that the ASP associates compounds di-n-octyl phthalate and indeno(1,2,3-cd)pyrene to Perylene-d12 and the laboratory associates these compounds to Chrysene-d12. Professional judgment was applied and the compounds associated by the lab were estimated and qualified J/UJ. No qualification was necessary for di-n-octyl phthalate and indeno(1,2,3-cd)pyrene results since they exhibited acceptable area counts for the laboratory's associated internal standard. All retention times were within acceptance criteria of $\pm$0.5 minutes for VOCs and SVOC. All area counts were also with acceptable QC limits for VOCs.

SOILS T2567
For SVOCs, all internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to -50% except for perylene-d12 in sample SB44(5-7)D. It should be noted that the associated compounds listed in the ASP for Perylene-d12 differ slightly from those defined by the laboratory's calibration data. All are the same with the exception that the ASP associates compounds di-n-octyl phthalate and indeno(1,2,3-cd)pyrene to Perylene-d12 and the laboratory associates these compounds to Chrysene-d12. Professional judgment was applied and the compounds associated by the lab were estimated and qualified J/UJ. No qualification was necessary for di-n-octyl phthalate and indeno(1,2,3-cd)pyrene results since they exhibited acceptable area counts for the laboratory's associated internal standard. All retention times were within acceptance criteria of $\pm$0.5 minutes for VOCs and SVOC. All area counts were also with acceptable QC limits for VOCs.

SOILS T2609
For VOCs, all ASP internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to –50% except for Chlorobenzene-d5 and 1,4-Dichlorobenzene-d4 in SB49(3-5)RE. 1,4-Dichlorobenzene-d4 is not an ASP recognized internal standard. All analytes related to Chlorobenzene-d5 were qualified UJ. All retention times were within acceptance criteria of ±0.5 minutes. It should be noted that area counts were low for all internal standards for the original analysis.

For SVOCs, all ASP internal standard areas for samples, calibration standards, and method blanks were within acceptance criteria of +100 to –50%. All retention times were within acceptance criteria of ±0.5 minutes.

WATER T2851- All ASP requirements were met. No data were qualified.
WATER T2877- All ASP requirements were met. No data were qualified.

Dilution and/or Reanalysis of Samples, Matrix Spikes, and Matrix Spike Duplicates
SOILS T2404

For VOCs, TP19(5-6) and TP21(4-6) were reanalyzed due to surrogate recoveries. The reanalysis' produced similar results, therefore, the original runs will be qualified and considered acceptable. For SVOCs, TP19(5-6) and TP20(4-5) were reanalyzed at a higher dilution since Fluoranthene and Butylbenzylphthalate respectively exceeded the calibration range. For PCBs, TP19(5-6)D was reanalyzed at a dilution for AR1260 because it exceeded the calibration range. It should be noted that in all cases the diluted reanalyzed results would be the preferred result to report since they were within calibration range of the instrument.

SOILS T2443
For PCBs, SB43(2-4) was reanalyzed at a dilution for AR1260 because it exceeded the calibration range. Dilution was performed with acceptable results and is considered the preferred result to report.

SOILS T2457
There was one sample dilution run for Aroclor 1260 for sample BALLAST-1 since the original analysis exceeded the instrument calibration range. The sample was diluted, their detection limit adjusted to the magnitude of the dilution factor and reanalyzed with acceptable results. It should be noted that in all cases the diluted or reanalyzed result would be the preferred result to report since they were within the calibration range of the instrument. The reanalyzed Aroclor 1260 results were qualified J since %D between primary and secondary column was exceeded. BALLAST-1 was also reanalyzed for the SVOC fraction due to internal standard problems. Both original and reanalysis experienced low area counts and since there were no improvement, the original analysis is the preferred results to report.

SOILS T2567
There were sample dilution runs for samples SB44(5-7) and SB44(5-7)D for both Volatile and Semivolatile fractions due to various compounds exceeding the laboratory's instrument's calibration range. The samples were diluted, their detection limit adjusted to the magnitude of the dilution factor and reanalyzed with acceptable results. It should be noted that in all cases the diluted reanalyzed results would be the preferred results to report since they were within the calibration range of the instrument.

SOILS T2609
For VOCs, SB49(3-5) was reanalyzed due to surrogate recovery and internal standard area recovery outside of acceptance criteria. It is recommended that the reanalyzed results be used in lieu of the original results.

WATER T2851 and T2877 No dilutions/reanalysis were necessary.

Miscellaneous Pesticides/PCB QC Parameters
ALL SOIL AND WATER SDGS
The PEM results were not included in the package for the initial calibration or the sample run sequence. The run logs listed the PEMs samples as O.K. in the comment section, therefore no qualifiers were applied to the project samples.

SOILS T2567
PCB compound Aroclor 1254 results for SB44(3-5) were qualified J due to high %D between primary and secondary column confirmation analysis

Miscellaneous Metals QC Parameters
SOILS T2404
The Contract Required Detection Limit (CRDL) standard results for ICP and mercury were within QC acceptance limits of 75-125%. The interference check sample results for three sets of A and AB solutions were within the acceptance range of 80-120%. AB solution test results were not provided for potassium and sodium.

Exceedances of the 75-125% acceptable recovery range for the post-digestion spike of sample TP20(4-5) is described within the matrix spike section of this report. All other analytes were within acceptance criteria. The serial dilution exceeded the 10%D criteria for Cobalt, Lead, and Potassium. Results for these compounds were qualified J for all samples. Chem Tech did not assign E qualifiers, however mentioned the anomalies for lead in the case narrative.

SOILS T2443
The Contract Required Detection Limit (CRDL) standard results for ICP and mercury were within QC acceptance limits of 75-125%. The interference check sample results for three sets of A and AB solutions were within the acceptance range of 80-120%. AB solution test results were not provided for potassium and sodium.

The post-digestion spike and serial dilution was spiked in a sample that was part of a different SDG; therefore, results were not evaluated.

SOILS T2457
The serial dilution exceeded the 10%D QC criteria for lead and potassium. Results for these compounds were qualified J. Chem Tech did not assign E qualifiers, however mentioned the anomalies in the case narrative.

SOILS T2567
For the serial dilution sample, SB44(5-7)D, analytes detected in the undiluted sample at levels of >50 times their respective MDL were considered for qualification. Of these, five analytes exceeded the maximum %D acceptance criterion of 10%. They are barium (20.5%), cobalt (19.0%), potassium (62.0%), vanadium (16.5%), and zinc (11.9%) all results were positive and qualified J. It should be noted that Chem Tech did not flag their data with the customary E qualifier; however, they did mention the anomalies in the case narrative.

SOILS T2609
The Contract Required Detection Limit (CRDL) standard results for ICP and mercury were within QC acceptance limits of 75-125%. The interference check sample results for

three sets of A and AB solutions were within the acceptance range of 80-120%. AB solution test results were not provided for potassium and sodium

For the serial dilution sample, SB49(13-15), analytes detected in the undiluted sample at levels of >50 times their respective MDLs were considered. Of these, two analytes exceeded the maximum %D acceptance criteria of 10%, barium (10.6%) and chromium (18.2%). Theses analytes were qualified J/UJ in all samples. It should be noted that Chem Tech did not flag their data with the customary E qualifier; however, did mention in case narrative that Chromium did not meet serial dilution criteria. They also stated in case narrative that Lead did not meet acceptance criteria; however, sample results were not greater than the 50X the MDL so the 10%D criteria does not apply. They failed to mention Barium in the case narrative.

WATER T2851, T2877 - The Contract Required Detection Limit (CRDL) standard results for ICP and mercury were within QC acceptance limits of 75-125%. The interference check sample results were within the acceptance range of 80-120%. AB solution test results were not provided for potassium and sodium.

WATER – For the serial dilution sample, (MW3-GW), analytes detected in the undiluted sample at levels of >50 times their respective MDLs were considered. Of these, two analytes exceeded the maximum %D acceptance criterion of 10%. They were: potassium (38.1%) and sodium (16.6%). Sample results were qualified J/UJ. Analytes for which the dilution brought the analyte concentration to below its MDL were also not considered. No E flags were applied to the data; however, potassium was noted in the case narrative, sodium was not mentioned.

WATER T2877 - For the serial dilution sample, (MW10-GW), analytes detected in the undiluted sample at levels of >50 times their respective MDLs were considered. Of these, four analytes exceeded the maximum %D acceptance criterion of 10%. They were: barium (29.8%), potassium (22.6%), sodium (15.3%) and zinc (19.0%). Sample results are qualified estimated J for positive detects and UJ for non-detects. Analytes for which the dilution brought the analyte concentration to below its MDL were also not considered. No E flags were applied to the data; however, sodium was noted in the case narrative, the other metals were not mentioned.

References

EPA Data Validation Functional Guidelines for Evaluating Organics Analysis, October 1999.
EPA Data Validation Functional Guidelines for Evaluating Inorganics Analysis, July 2002.
New York State Department of Environmental Conservation, Analytical Services Protocol, June 2000.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-9**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00103

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5/05
Volume(s) Analyzed: 0.0010 Liter(s)

Pi 1 = -1.7 Pf 1 = 3.5

D.F. = 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	700	ND	410	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	700	ND	140	
[illegible]-87-3	Chloromethane	ND	700	ND	340	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	700	ND	100	
75-01-4	Vinyl Chloride	ND	700	ND	270	
106-99-0	1,3-Butadiene	ND	700	ND	320	
74-83-9	Bromomethane	ND	700	ND	180	
75-00-3	Chloroethane	ND	700	ND	270	
64-17-5	Ethanol	ND	7,000	ND	3,700	
67-64-1	Acetone	ND	7,000	ND	2,900	
75-69-4	Trichlorofluoromethane	ND	700	ND	120	
67-63-0	Isopropyl Alcohol	ND	700	ND	280	
75-35-4	1,1-Dichloroethene	ND	700	ND	180	
75-09-2	Methylene chloride	ND	700	ND	200	
76-13-1	Trichlorotrifluoroethane	ND	700	ND	91	
75-15-0	Carbon Disulfide	ND	700	ND	220	
156-60-5	trans-1,2-Dichloroethene	ND	700	ND	180	
75-34-3	1,1-Dichloroethane	ND	700	ND	170	
1634-04-4	Methyl tert-Butyl Ether	ND	700	ND	190	
108-05-4	Vinyl Acetate	ND	1,400	ND	400	
78-93-3	2-Butanone (MEK)	ND	700	ND	240	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-9**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00103

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5/05
Volume(s) Analyzed: 0.0010 Liter(s)

Pi l = -1.7 Pf l = 3.5

D.F. = 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	700	ND	180	
141-78-6	Ethyl Acetate	ND	700	ND	190	
[illegible]-54-3	n-Hexane	**84,000**	700	**24,000**	200	
[illegible]-66-3	Chloroform	ND	700	ND	140	
109-99-9	Tetrahydrofuran	ND	700	ND	240	
107-06-2	1,2-Dichloroethane	ND	700	ND	170	
71-55-6	1,1,1-Trichloroethane	ND	700	ND	130	
71-43-2	Benzene	ND	700	ND	220	
56-23-5	Carbon Tetrachloride	ND	700	ND	110	
110-82-7	Cyclohexane	**9,300**	700	**2,700**	200	
78-87-5	1,2-Dichloropropane	ND	700	ND	150	
75-27-4	Bromodichloromethane	ND	700	ND	100	
79-01-6	Trichloroethene	ND	700	ND	130	
123-91-1	1,4-Dioxane	ND	700	ND	190	
142-82-5	n-Heptane	**22,000**	700	**5,300**	170	
10061-01-5	cis-1,3-Dichloropropene	ND	700	ND	150	
108-10-1	4-Methyl-2-pentanone	ND	700	ND	170	
10061-02-6	trans-1,3-Dichloropropene	ND	700	ND	150	
79-00-5	1,1,2-Trichloroethane	ND	700	ND	130	
108-88-3	Toluene	**700**	700	**190**	190	
591-78-6	2-Hexanone	ND	700	ND	170	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-9**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00103

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5/05
Volume(s) Analyzed: 0.0010 Liter(s)

Pi l = -1.7 Pf l = 3.5

D.F. = 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	700	ND	82	
106-93-4	1,2-Dibromoethane	ND	700	ND	91	
[illegible]-18-4	Tetrachloroethene	ND	700	ND	100	
[illegible]-90-7	Chlorobenzene	ND	700	ND	150	
100-41-4	Ethylbenzene	ND	700	ND	160	
136777-61-2	*m,p*-Xylenes	ND	1,400	ND	320	
75-25-2	Bromoform	ND	700	ND	68	
100-42-5	Styrene	ND	700	ND	160	
95-47-6	o-Xylene	ND	700	ND	160	
79-34-5	1,1,2,2-Tetrachloroethane	ND	700	ND	100	
622-96-8	4-Ethyltoluene	ND	700	ND	140	
108-67-8	1,3,5-Trimethylbenzene	ND	700	ND	140	
95-63-6	1,2,4-Trimethylbenzene	ND	700	ND	140	
100-44-7	Benzyl Chloride	ND	700	ND	140	
541-73-1	1,3-Dichlorobenzene	ND	700	ND	120	
106-46-7	1,4-Dichlorobenzene	ND	700	ND	120	
95-50-1	1,2-Dichlorobenzene	ND	700	ND	120	
120-82-1	1,2,4-Trichlorobenzene	ND	700	ND	94	
87-68-3	Hexachlorobutadiene	ND	700	ND	66	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-1**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00141

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5 - 4/6/05
Volume(s) Analyzed: 0.010 Liter(s)
0.0010 Liter(s)

Pi 1 = -1.8 Pf 1 = 3.5

D.F. = 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	71	ND	41	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	71	ND	14	
[illegible]-87-3	Chloromethane	ND	71	ND	34	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	71	ND	10	
75-01-4	Vinyl Chloride	ND	71	ND	28	
106-99-0	1,3-Butadiene	ND	71	ND	32	
74-83-9	Bromomethane	ND	71	ND	18	
75-00-3	Chloroethane	ND	71	ND	27	
64-17-5	Ethanol	ND	710	ND	370	
67-64-1	Acetone	ND	710	ND	300	
75-69-4	Trichlorofluoromethane	ND	71	ND	13	
67-63-0	Isopropyl Alcohol	ND	71	ND	29	
75-35-4	1,1-Dichloroethene	ND	71	ND	18	
75-09-2	Methylene chloride	ND	71	ND	20	
76-13-1	Trichlorotrifluoroethane	ND	71	ND	9.2	
75-15-0	Carbon Disulfide	ND	71	ND	23	
156-60-5	trans-1,2-Dichloroethene	ND	71	ND	18	
75-34-3	1,1-Dichloroethane	ND	71	ND	17	
1634-04-4	Methyl tert-Butyl Ether	ND	71	ND	20	
108-05-4	Vinyl Acetate	ND	140	ND	40	
78-93-3	2-Butanone (MEK)	ND	71	ND	24	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-1**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00141

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5 - 4/6/05
Volume(s) Analyzed: 0.010 Liter(s)
0.0010 Liter(s)

Pi I = -1.8 Pf I = 3.5

D.F. = 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	71	ND	18	
141-78-6	Ethyl Acetate	ND	71	ND	20	
[illegible]-54-3	n-Hexane	**53,000**	71	**15,000**	20	
[illegible]-66-3	Chloroform	ND	71	ND	14	
109-99-9	Tetrahydrofuran	ND	71	ND	24	
107-06-2	1,2-Dichloroethane	ND	71	ND	17	
71-55-6	1,1,1-Trichloroethane	ND	71	ND	13	
71-43-2	Benzene	**1,000**	71	**320**	22	
56-23-5	Carbon Tetrachloride	ND	71	ND	11	
110-82-7	Cyclohexane	**4,000**	71	**1,200**	20	
78-87-5	1,2-Dichloropropane	ND	71	ND	15	
75-27-4	Bromodichloromethane	ND	71	ND	11	
79-01-6	Trichloroethene	ND	71	ND	13	
123-91-1	1,4-Dioxane	ND	71	ND	20	
142-82-5	n-Heptane	**7,700**	71	**1,900**	17	
10061-01-5	cis-1,3-Dichloropropene	ND	71	ND	16	
108-10-1	4-Methyl-2-pentanone	ND	71	ND	17	
10061-02-6	trans-1,3-Dichloropropene	ND	71	ND	16	
79-00-5	1,1,2-Trichloroethane	ND	71	ND	13	
108-88-3	Toluene	**210**	71	**55**	19	
591-78-6	2-Hexanone	ND	71	ND	17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-1**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00141

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5 - 4/6/05
Volume(s) Analyzed: 0.010 Liter(s)
0.0010 Liter(s)

Pi 1 = -1.8 Pf 1 = 3.5

D.F. = 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	71	ND	8.3	
106-93-4	1,2-Dibromoethane	ND	71	ND	9.2	
[illegible]-18-4	Tetrachloroethene	ND	71	ND	10	
[illegible]08-90-7	Chlorobenzene	ND	71	ND	15	
100-41-4	Ethylbenzene	ND	71	ND	16	
136777-61-2	*m,p*-Xylenes	ND	140	ND	32	
75-25-2	Bromoform	ND	71	ND	6.8	
100-42-5	Styrene	ND	71	ND	17	
95-47-6	o-Xylene	ND	71	ND	16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	71	ND	10	
622-96-8	4-Ethyltoluene	ND	71	ND	14	
108-67-8	1,3,5-Trimethylbenzene	ND	71	ND	14	
95-63-6	1,2,4-Trimethylbenzene	ND	71	ND	14	
100-44-7	Benzyl Chloride	ND	71	ND	14	
541-73-1	1,3-Dichlorobenzene	ND	71	ND	12	
106-46-7	1,4-Dichlorobenzene	ND	71	ND	12	
95-50-1	1,2-Dichlorobenzene	ND	71	ND	12	
120-82-1	1,2,4-Trichlorobenzene	ND	71	ND	9.5	
87-68-3	Hexachlorobutadiene	ND	71	ND	6.6	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-11**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00438

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi I = -1.3 Pf I = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**20**	2.7	**11**	1.6	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	2.7	ND	0.55	
[illegible]-87-3	Chloromethane	ND	2.7	ND	1.3	
14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.7	ND	0.39	
75-01-4	Vinyl Chloride	ND	2.7	ND	1.1	
106-99-0	1,3-Butadiene	ND	2.7	ND	1.2	
74-83-9	Bromomethane	ND	2.7	ND	0.70	
75-00-3	Chloroethane	ND	2.7	ND	1.0	
64-17-5	Ethanol	ND	27	ND	14	
67-64-1	Acetone	**71**	27	**30**	11	
75-69-4	Trichlorofluoromethane	ND	2.7	ND	0.48	
67-63-0	Isopropyl Alcohol	ND	2.7	ND	1.1	
75-35-4	1,1-Dichloroethene	ND	2.7	ND	0.69	
75-09-2	Methylene chloride	ND	2.7	ND	0.78	
76-13-1	Trichlorotrifluoroethane	ND	2.7	ND	0.36	
75-15-0	Carbon Disulfide	**7.3**	2.7	**2.3**	0.87	
156-60-5	trans-1,2-Dichloroethene	ND	2.7	ND	0.69	
75-34-3	1,1-Dichloroethane	ND	2.7	ND	0.67	
1634-04-4	Methyl tert-Butyl Ether	ND	2.7	ND	0.75	
108-05-4	Vinyl Acetate	ND	5.4	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	2.7	ND	0.92	

ND = Compound was analyzed for, but not detected above the **laboratory-reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-11**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00438

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi I = -1.3 Pf I = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.7	ND	0.69	
141-78-6	Ethyl Acetate	**3.9**	2.7	**1.1**	0.76	
?-54-3	n-Hexane	**17**	2.7	**4.8**	0.77	
-66-3	Chloroform	**130**	2.7	**27**	0.56	
109-99-9	Tetrahydrofuran	ND	2.7	ND	0.92	
107-06-2	1,2-Dichloroethane	ND	2.7	ND	0.67	
71-55-6	1,1,1-Trichloroethane	ND	2.7	ND	0.50	
71-43-2	Benzene	**2.8**	2.7	**0.87**	0.85	
56-23-5	Carbon Tetrachloride	ND	2.7	ND	0.43	
110-82-7	Cyclohexane	**10**	2.7	**3.1**	0.79	
78-87-5	1,2-Dichloropropane	ND	2.7	ND	0.59	
75-27-4	Bromodichloromethane	ND	2.7	ND	0.41	
79-01-6	Trichloroethene	ND	2.7	ND	0.51	
123-91-1	1,4-Dioxane	ND	2.7	ND	0.76	
142-82-5	n-Heptane	**13**	2.7	**3.1**	0.66	
10061-01-5	cis-1,3-Dichloropropene	ND	2.7	ND	0.60	
108-10-1	4-Methyl-2-pentanone	ND	2.7	ND	0.66	
10061-02-6	trans-1,3-Dichloropropene	ND	2.7	ND	0.60	
79-00-5	1,1,2-Trichloroethane	ND	2.7	ND	0.50	
108-88-3	Toluene	**11**	2.7	**3.0**	0.72	
591-78-6	2-Hexanone	ND	2.7	ND	0.66	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-11**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00438

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi I = -1.3 Pf I = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	2.7	ND	0.32	
106-93-4	1,2-Dibromoethane	ND	2.7	ND	0.35	
7-18-4	Tetrachloroethene	**11**	2.7	**1.7**	0.40	
8-90-7	Chlorobenzene	ND	2.7	ND	0.59	
100-41-4	Ethylbenzene	ND	2.7	ND	0.63	
136777-61-2	*m,p* -Xylenes	**9.7**	5.4	**2.2**	1.3	
75-25-2	Bromoform	ND	2.7	ND	0.26	
100-42-5	Styrene	ND	2.7	ND	0.64	
95-47-6	o-Xylene	ND	2.7	ND	0.63	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.7	ND	0.40	
622-96-8	4-Ethyltoluene	ND	2.7	ND	0.55	
108-67-8	1,3,5-Trimethylbenzene	ND	2.7	ND	0.55	
95-63-6	1,2,4-Trimethylbenzene	**2.8**	2.7	**0.56**	0.55	
100-44-7	Benzyl Chloride	ND	2.7	ND	0.53	
541-73-1	1,3-Dichlorobenzene	ND	2.7	ND	0.45	
106-46-7	1,4-Dichlorobenzene	ND	2.7	ND	0.45	
95-50-1	1,2-Dichlorobenzene	ND	2.7	ND	0.45	
120-82-1	1,2,4-Trichlorobenzene	ND	2.7	ND	0.37	
87-68-3	Hexachlorobutadiene	ND	2.7	ND	0.26	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00134

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/12/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -13.6 Pf 1 = 3.5
Pi 2 = 1.8 Pf 2 = 5.0 D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
87-3	Chloromethane	ND	0.50	ND	0.24	
14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	Isopropyl Alcohol	ND	0.50	ND	0.20	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene chloride	ND	0.50	ND	0.14	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	0.50	ND	0.16	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	ND	0.50	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00134

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/12/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -13.6 Pf 1 = 3.5
Pi 2 = 1.8 Pf 2 = 5.0 D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
[illegible]-54-3	n-Hexane	ND	0.50	ND	0.14	
[illegible]7-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673
CAS Sample ID: P2500673-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00134

Date Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/12/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -13.6 Pf 1 = 3.5
Pi 2 = 1.8 Pf 2 = 5.0 D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
136777-61-2	*m,p* -Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500673

Methane

Test Code: Modified EPA TO-3
Instrument ID: HP5890II/GC8/FID
Analyst: Zheng Wang
Sampling Media: Summa Canister(s)
Test Notes:

Date(s) Collected: 3/31/05
Date Received: 4/1/05
Date Analyzed: 4/5/05
Volume(s) Analyzed: 1.0 ml

Client Sample ID	CAS Sample ID	D.F.	Methane Concentration in ppmV		Data Qualifier
			Result	MRL	
SG-9	P2500673-001	1.40	**9,400**	3.5	
SG-9	P2500673-001DUP	1.40	**9,500**	3.5	
SG-1	P2500673-002	1.41	**4,700**	3.5	
SG-11	P2500673-003	1.36	**3.0**	0.68	
Trip Blank	P2500673-004	NA	**0.56**	0.50	
ıod Blank	P050405-MB	1.00	ND	0.50	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG37**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00302

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -1.5 Pf I = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**7.1**	0.69	**4.1**	0.40	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.7**	0.69	**0.75**	0.14	
[illegible]-87-3	Chloromethane	ND	0.69	ND	0.33	
-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.69	ND	0.099	
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
106-99-0	1,3-Butadiene	ND	0.69	ND	0.31	
74-83-9	Bromomethane	ND	0.69	ND	0.18	
75-00-3	Chloroethane	ND	0.69	ND	0.26	
64-17-5	Ethanol	**200**	6.9	**100**	3.7	
67-64-1	Acetone	**150**	6.9	**63**	2.9	
75-69-4	Trichlorofluoromethane	**15**	0.69	**2.7**	0.12	
67-63-0	Isopropyl Alcohol	**32**	0.69	**13**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.69	ND	0.17	
75-09-2	Methylene chloride	**1.4**	0.69	**0.41**	0.20	
76-13-1	Trichlorotrifluoroethane	**0.69**	0.69	**0.090**	0.090	
75-15-0	Carbon Disulfide	**15**	0.69	**4.7**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.69	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.69	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.69	ND	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**20**	0.69	**6.8**	0.23	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG37**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00302

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi 1 = -1.5 Pf 1 = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.69	ND	0.17	
141-78-6	Ethyl Acetate	ND	0.69	ND	0.19	
-54-3	n-Hexane	**6.2**	0.69	**1.8**	0.20	
67-66-3	Chloroform	**1.5**	0.69	**0.31**	0.14	
109-99-9	Tetrahydrofuran	ND	0.69	ND	0.23	
107-06-2	1,2-Dichloroethane	ND	0.69	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.69	ND	0.13	
71-43-2	Benzene	**6.0**	0.69	**1.9**	0.22	
56-23-5	Carbon Tetrachloride	ND	0.69	ND	0.11	
110-82-7	Cyclohexane	**6.2**	0.69	**1.8**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.69	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.69	ND	0.10	
79-01-6	Trichloroethene	**3.2**	0.69	**0.60**	0.13	
123-91-1	1,4-Dioxane	**0.75**	0.69	**0.21**	0.19	
142-82-5	n-Heptane	**9.7**	0.69	**2.4**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.69	ND	0.15	
108-10-1	4-Methyl-2-pentanone	**2.6**	0.69	**0.63**	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.69	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.69	ND	0.13	
108-88-3	Toluene	**68**	0.69	**18**	0.18	
591-78-6	2-Hexanone	**2.7**	0.69	**0.67**	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG37**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00302

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.5 Pf l = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.69	ND	0.081	
106-93-4	1,2-Dibromoethane	ND	0.69	ND	0.090	
-18-4	Tetrachloroethene	**67**	0.69	**9.8**	0.10	
08-90-7	Chlorobenzene	ND	0.69	ND	0.15	
100-41-4	Ethylbenzene	**6.1**	0.69	**1.4**	0.16	
136777-61-2	*m,p* -Xylenes	**21**	1.4	**4.8**	0.32	
75-25-2	Bromoform	ND	0.69	ND	0.067	
100-42-5	Styrene	**0.72**	0.69	**0.17**	0.16	
95-47-6	o-Xylene	**6.8**	0.69	**1.6**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.69	ND	0.10	
622-96-8	4-Ethyltoluene	**1.6**	0.69	**0.33**	0.14	
108-67-8	1,3,5-Trimethylbenzene	**1.5**	0.69	**0.31**	0.14	
95-63-6	1,2,4-Trimethylbenzene	**4.3**	0.69	**0.88**	0.14	
100-44-7	Benzyl Chloride	ND	0.69	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**7.5**	0.69	**1.3**	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.69	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.69	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.69	ND	0.093	
87-68-3	Hexachlorobutadiene	ND	0.69	ND	0.065	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG38**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00416

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.6 Pf l = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**34**	0.70	**20**	0.40	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.1**	0.70	**1.0**	0.14	
87-3	Chloromethane	ND	0.70	ND	0.34	
-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.70	ND	0.099	
75-01-4	Vinyl Chloride	ND	0.70	ND	0.27	
106-99-0	1,3-Butadiene	**1.1**	0.70	**0.51**	0.31	**M**
74-83-9	Bromomethane	ND	0.70	ND	0.18	
75-00-3	Chloroethane	ND	0.70	ND	0.26	
64-17-5	Ethanol	**340**	7.0	**180**	3.7	
67-64-1	Acetone	**89**	7.0	**38**	2.9	
75-69-4	Trichlorofluoromethane	**15**	0.70	**2.6**	0.12	
67-63-0	Isopropyl Alcohol	**52**	0.70	**21**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.70	ND	0.18	
75-09-2	Methylene chloride	ND	0.70	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.70	ND	0.091	
75-15-0	Carbon Disulfide	**24**	0.70	**7.8**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.70	ND	0.18	
75-34-3	1,1-Dichloroethane	ND	0.70	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.70	ND	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**3.4**	0.70	**1.2**	0.24	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG38**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00416

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi 1 = -1.6 Pf 1 = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.70	ND	0.18	
141-78-6	Ethyl Acetate	ND	0.70	ND	0.19	
[illegible]-54-3	n-Hexane	**12**	0.70	**3.4**	0.20	
[illegible]-66-3	Chloroform	ND	0.70	ND	0.14	
109-99-9	Tetrahydrofuran	ND	0.70	ND	0.24	
107-06-2	1,2-Dichloroethane	ND	0.70	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.70	ND	0.13	
71-43-2	Benzene	**5.3**	0.70	**1.7**	0.22	
56-23-5	Carbon Tetrachloride	ND	0.70	ND	0.11	
110-82-7	Cyclohexane	**8.4**	0.70	**2.4**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.70	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.70	ND	0.10	
79-01-6	Trichloroethene	**1.7**	0.70	**0.31**	0.13	
123-91-1	1,4-Dioxane	ND	0.70	ND	0.19	
142-82-5	n-Heptane	**10**	0.70	**2.4**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.70	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.70	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.70	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ND	0.13	
108-88-3	Toluene	**110**	0.70	**30**	0.18	
591-78-6	2-Hexanone	ND	0.70	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG38**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00416

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.6 Pf l = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.70	ND	0.082	
106-93-4	1,2-Dibromoethane	ND	0.70	ND	0.090	
[illegible]-18-4	Tetrachloroethene	**18**	0.70	**2.7**	0.10	
[illegible]08-90-7	Chlorobenzene	ND	0.70	ND	0.15	
100-41-4	Ethylbenzene	**12**	0.70	**2.7**	0.16	
136777-61-2	*m,p*-Xylenes	**34**	1.4	**7.9**	0.32	
75-25-2	Bromoform	ND	0.70	ND	0.067	
100-42-5	Styrene	**1.1**	0.70	**0.26**	0.16	
95-47-6	o-Xylene	**11**	0.70	**2.6**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.70	ND	0.10	
622-96-8	4-Ethyltoluene	**1.3**	0.70	**0.26**	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.70	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**2.5**	0.70	**0.51**	0.14	
100-44-7	Benzyl Chloride	ND	0.70	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**80**	0.70	**13**	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.70	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.70	ND	0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	0.70	ND	0.094	
87-68-3	Hexachlorobutadiene	ND	0.70	ND	0.065	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG45**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00063

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.0 Pf l = 3.5

D.F. = 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**7.2**	0.67	**4.2**	0.39	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**7.5**	0.67	**1.5**	0.13	
87-3	Chloromethane	ND	0.67	ND	0.32	
14-2	1,2 Dichloro-1,1,2,2-tetrafluoroethane	ND	0.67	ND	0.095	
75-01-4	Vinyl Chloride	ND	0.67	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.67	ND	0.30	
74-83-9	Bromomethane	ND	0.67	ND	0.17	
75-00-3	Chloroethane	ND	0.67	ND	0.25	
64-17-5	Ethanol	**350**	6.7	**180**	3.5	
67-64-1	Acetone	**28**	6.7	**12**	2.8	
75-69-4	Trichlorofluoromethane	**32**	0.67	**5.7**	0.12	
67-63-0	Isopropyl Alcohol	**50**	0.67	**20**	0.27	
75-35-4	1,1-Dichloroethene	ND	0.67	ND	0.17	
75-09-2	Methylene chloride	ND	0.67	ND	0.19	
76-13-1	Trichlorotrifluoroethane	ND	0.67	ND	0.087	
75-15-0	Carbon Disulfide	**1.2**	0.67	**0.38**	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.67	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.67	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.67	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.38	
78-93-3	2-Butanone (MEK)	**1.1**	0.67	**0.39**	0.23	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG45**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00063

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.0 Pf l = 3.5

D.F. = 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.67	ND	0.17	
141-78-6	Ethyl Acetate	ND	0.67	ND	0.18	
[illegible]-54-3	n-Hexane	**1.4**	0.67	**0.39**	0.19	
[illegible]-66-3	Chloroform	**3.7**	0.67	**0.76**	0.14	
109-99-9	Tetrahydrofuran	ND	0.67	ND	0.23	
107-06-2	1,2-Dichloroethane	ND	0.67	ND	0.16	
71-55-6	1,1,1-Trichloroethane	**0.82**	0.67	**0.15**	0.12	
71-43-2	Benzene	ND	0.67	ND	0.21	
56-23-5	Carbon Tetrachloride	ND	0.67	ND	0.11	
110-82-7	Cyclohexane	**1.2**	0.67	**0.34**	0.19	
78-87-5	1,2-Dichloropropane	ND	0.67	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.67	ND	0.099	
79-01-6	Trichloroethene	**1.6**	0.67	**0.29**	0.12	
123-91-1	1,4-Dioxane	ND	0.67	ND	0.18	
142-82-5	n-Heptane	ND	0.67	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.67	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.67	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.67	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.67	ND	0.12	
108-88-3	Toluene	**61**	0.67	**16**	0.18	
591-78-6	2-Hexanone	ND	0.67	ND	0.16	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG45**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00063

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.0 Pf l = 3.5

D.F. = 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.67	ND	0.078	
106-93-4	1,2-Dibromoethane	ND	0.67	ND	0.087	
7-18-4	Tetrachloroethene	**19**	0.67	**2.8**	0.098	
08-90-7	Chlorobenzene	ND	0.67	ND	0.14	
100-41-4	Ethylbenzene	**5.1**	0.67	**1.2**	0.15	
136777-61-2	*m,p*-Xylenes	**14**	1.3	**3.2**	0.31	
75-25-2	Bromoform	ND	0.67	ND	0.064	
100-42-5	Styrene	**2.5**	0.67	**0.58**	0.16	
95-47-6	o-Xylene	**4.6**	0.67	**1.1**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.67	ND	0.097	
622-96-8	4-Ethyltoluene	ND	0.67	ND	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.67	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**1.4**	0.67	**0.29**	0.14	
100-44-7	Benzyl Chloride	ND	0.67	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**29**	0.67	**4.8**	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.67	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.67	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.67	ND	0.090	
87-68-3	Hexachlorobutadiene	ND	0.67	ND	0.062	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG46**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00364

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi 1 = -1.5 Pf 1 = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**24**	0.69	**14**	0.40	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.9**	0.69	**1.2**	0.14	
[illegible]-87-3	Chloromethane	ND	0.69	ND	0.33	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.69	ND	0.099	
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
106-99-0	1,3-Butadiene	ND	0.69	ND	0.31	
74-83-9	Bromomethane	ND	0.69	ND	0.18	
75-00-3	Chloroethane	ND	0.69	ND	0.26	
64-17-5	Ethanol	**160**	6.9	**87**	3.7	
67-64-1	Acetone	**95**	6.9	**40**	2.9	
75-69-4	Trichlorofluoromethane	**35**	0.69	**6.3**	0.12	
67-63-0	Isopropyl Alcohol	**23**	0.69	**9.5**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.69	ND	0.17	
75-09-2	Methylene chloride	ND	0.69	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.69	ND	0.090	
75-15-0	Carbon Disulfide	**15**	0.69	**4.8**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.69	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.69	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.69	ND	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**8.4**	0.69	**2.9**	0.23	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG46**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00364

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -1.5 Pf I = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.69	ND	0.17	
141-78-6	Ethyl Acetate	**0.73**	0.69	**0.20**	0.19	
[illegible]-54-3	n-Hexane	**32**	0.69	**9.1**	0.20	
[illegible]7-66-3	Chloroform	**0.84**	0.69	**0.17**	0.14	
109-99-9	Tetrahydrofuran	**0.90**	0.69	**0.30**	0.23	
107-06-2	1,2-Dichloroethane	ND	0.69	ND	0.17	
71-55-6	1,1,1-Trichloroethane	**0.69**	0.69	**0.13**	0.13	
71-43-2	Benzene	**2.7**	0.69	**0.86**	0.22	
56-23-5	Carbon Tetrachloride	ND	0.69	ND	0.11	
110-82-7	Cyclohexane	**4.4**	0.69	**1.3**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.69	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.69	ND	0.10	
79-01-6	Trichloroethene	ND	0.69	ND	0.13	
123-91-1	1,4-Dioxane	ND	0.69	ND	0.19	
142-82-5	n-Heptane	**32**	0.69	**7.9**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.69	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.69	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.69	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.69	ND	0.13	
108-88-3	Toluene	**31**	0.69	**8.2**	0.18	
591-78-6	2-Hexanone	ND	0.69	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG46**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00364

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12 - 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -1.5 Pf I = 3.5

D.F. = 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.69	ND	0.081	
106-93-4	1,2-Dibromoethane	ND	0.69	ND	0.090	
127-18-4	Tetrachloroethene	**10**	0.69	**1.5**	0.10	
108-90-7	Chlorobenzene	ND	0.69	ND	0.15	
100-41-4	Ethylbenzene	**33**	0.69	**7.5**	0.16	
136777-61-2	*m,p*-Xylenes	**8.7**	1.4	**2.0**	0.32	
75-25-2	Bromoform	ND	0.69	ND	0.067	
100-42-5	Styrene	**500**	0.69	**120**	0.16	
95-47-6	o-Xylene	**2.7**	0.69	**0.63**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.69	ND	0.10	
622-96-8	4-Ethyltoluene	**2.9**	0.69	**0.59**	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.69	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**2.0**	0.69	**0.42**	0.14	
100-44-7	Benzyl Chloride	ND	0.69	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**9.5**	0.69	**1.6**	0.11	
106-46-7	1,4-Dichlorobenzene	**0.70**	0.69	**0.12**	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.69	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.69	ND	0.093	
87-68-3	Hexachlorobutadiene	ND	0.69	ND	0.065	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG47**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00076

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -1.4 Pf I = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**2.9**	0.69	**1.7**	0.40	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.1**	0.69	**0.83**	0.14	
87-3	Chloromethane	ND	0.69	ND	0.33	
-14-2	1,2-Dichloro-1,1,2,2 tetrafluoroethane	ND	0.69	ND	0.098	
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
106-99-0	1,3-Butadiene	ND	0.69	ND	0.31	
74-83-9	Bromomethane	ND	0.69	ND	0.18	
75-00-3	Chloroethane	ND	0.69	ND	0.26	
64-17-5	Ethanol	**83**	6.9	**44**	3.6	
67-64-1	Acetone	**77**	6.9	**33**	2.9	
75-69-4	Trichlorofluoromethane	**20**	0.69	**3.5**	0.12	
67-63-0	Isopropyl Alcohol	**11**	0.69	**4.3**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.69	ND	0.17	
75-09-2	Methylene chloride	ND	0.69	ND	0.20	
76-13-1	Trichlorotrifluoroethane	**0.78**	0.69	**0.10**	0.089	
75-15-0	Carbon Disulfide	**1.9**	0.69	**0.62**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.69	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.69	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.69	ND	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**2.7**	0.69	**0.91**	0.23	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG47**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00076

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = -1.4 Pf l = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.69	ND	0.17	
141-78-6	Ethyl Acetate	**1.5**	0.69	**0.41**	0.19	
)-54-3	n-Hexane	**2.9**	0.69	**0.82**	0.19	
67-66-3	Chloroform	**3.0**	0.69	**0.61**	0.14	
109-99-9	Tetrahydrofuran	**2.0**	0.69	**0.68**	0.23	
107-06-2	1,2-Dichloroethane	ND	0.69	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.69	ND	0.13	
71-43-2	Benzene	**0.73**	0.69	**0.23**	0.21	
56-23-5	Carbon Tetrachloride	ND	0.69	ND	0.11	
110-82-7	Cyclohexane	**6.3**	0.69	**1.8**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.69	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.69	ND	0.10	
79-01-6	Trichloroethene	ND	0.69	ND	0.13	
123-91-1	1,4-Dioxane	ND	0.69	ND	0.19	
142-82-5	n-Heptane	**3.5**	0.69	**0.86**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.69	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.69	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.69	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.69	ND	0.13	
108-88-3	Toluene	**12**	0.69	**3.1**	0.18	
591-78-6	2-Hexanone	ND	0.69	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG47**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00076

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -1.4 Pf I = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.69	ND	0.080	
106-93-4	1,2-Dibromoethane	ND	0.69	ND	0.089	
7-18-4	Tetrachloroethene	**7.5**	0.69	**1.1**	0.10	**B**
8-90-7	Chlorobenzene	ND	0.69	ND	0.15	
100-41-4	Ethylbenzene	**2.0**	0.69	**0.47**	0.16	
136777-61-2	*m,p* -Xylenes	**7.6**	1.4	**1.8**	0.32	
75-25-2	Bromoform	ND	0.69	ND	0.066	
100-42-5	Styrene	ND	0.69	ND	0.16	
95-47-6	o-Xylene	**2.0**	0.69	**0.46**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.69	ND	0.10	
622-96-8	4-Ethyltoluene	**1.3**	0.69	**0.26**	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.69	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**3.0**	0.69	**0.61**	0.14	
100-44-7	Benzyl Chloride	ND	0.69	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**2.0**	0.69	**0.33**	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.69	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.69	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.69	ND	0.092	
87-68-3	Hexachlorobutadiene	ND	0.69	ND	0.064	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
B = Analyte found in method blank.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG54**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00623

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -0.6 Pf l = 3.5

D.F. = 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**11**	0.65	**6.6**	0.37	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.5**	0.65	**0.51**	0.13	
87-3	Chloromethane	ND	0.65	ND	0.31	
-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.65	ND	0.092	
75-01-4	Vinyl Chloride	ND	0.65	ND	0.25	
106-99-0	1,3-Butadiene	ND	0.65	ND	0.29	
74-83-9	Bromomethane	ND	0.65	ND	0.17	
75-00-3	Chloroethane	ND	0.65	ND	0.24	
64-17-5	Ethanol	**200**	6.5	**110**	3.4	
67-64-1	Acetone	**49**	6.5	**21**	2.7	
75-69-4	Trichlorofluoromethane	**7.9**	0.65	**1.4**	0.11	
67-63-0	Isopropyl Alcohol	**30**	0.65	**12**	0.26	
75-35-4	1,1-Dichloroethene	ND	0.65	ND	0.16	
75-09-2	Methylene chloride	ND	0.65	ND	0.19	
76-13-1	Trichlorotrifluoroethane	ND	0.65	ND	0.084	
75-15-0	Carbon Disulfide	**2.7**	0.65	**0.87**	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.65	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.65	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.65	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.37	
78-93-3	2-Butanone (MEK)	**1.3**	0.65	**0.43**	0.22	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG54**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00623

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -0.6 Pf I = 3.5

D.F. = 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.65	ND	0.16	
141-78-6	Ethyl Acetate	**0.81**	0.65	**0.23**	0.18	
)-54-3	n-Hexane	**20**	0.65	**5.6**	0.18	
67-66-3	Chloroform	**4.1**	0.65	**0.84**	0.13	
109-99-9	Tetrahydrofuran	ND	0.65	ND	0.22	
107-06-2	1,2-Dichloroethane	ND	0.65	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.65	ND	0.12	
71-43-2	Benzene	**0.83**	0.65	**0.26**	0.20	
56-23-5	Carbon Tetrachloride	ND	0.65	ND	0.10	
110-82-7	Cyclohexane	**2.3**	0.65	**0.66**	0.19	
78-87-5	1,2-Dichloropropane	ND	0.65	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.65	ND	0.096	
79-01-6	Trichloroethene	ND	0.65	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.65	ND	0.18	
142-82-5	n-Heptane	**4.0**	0.65	**0.98**	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.65	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.65	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.65	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.65	ND	0.12	
108-88-3	Toluene	**28**	0.65	**7.4**	0.17	
591-78-6	2-Hexanone	ND	0.65	ND	0.16	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG54**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00623

Date Collected: 4/4/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -0.6 Pf I = 3.5

D.F. = 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.65	ND	0.076	
106-93-4	1,2-Dibromoethane	ND	0.65	ND	0.084	
[illegible]-18-4	Tetrachloroethene	**5.7**	0.65	**0.83**	0.095	
[illegible]08-90-7	Chlorobenzene	ND	0.65	ND	0.14	
100-41-4	Ethylbenzene	**3.4**	0.65	**0.79**	0.15	
136777-61-2	*m,p*-Xylenes	**11**	1.3	**2.5**	0.30	
75-25-2	Bromoform	ND	0.65	ND	0.062	
100-42-5	Styrene	ND	0.65	ND	0.15	
95-47-6	o-Xylene	**3.9**	0.65	**0.91**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.65	ND	0.094	
622-96-8	4-Ethyltoluene	**0.97**	0.65	**0.20**	0.13	
108-67-8	1,3,5-Trimethylbenzene	**0.66**	0.65	**0.13**	0.13	
95-63-6	1,2,4-Trimethylbenzene	**2.2**	0.65	**0.45**	0.13	
100-44-7	Benzyl Chloride	ND	0.65	ND	0.12	
541-73-1	1,3-Dichlorobenzene	**24**	0.65	**3.9**	0.11	
106-46-7	1,4-Dichlorobenzene	**0.67**	0.65	**0.11**	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.65	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.65	ND	0.087	
87-68-3	Hexachlorobutadiene	ND	0.65	ND	0.061	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG49**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00616

Date Collected: 4/5/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -1.4 Pf I = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**27**	0.69	**16**	0.40	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.69	**0.46**	0.14	
87-3	Chloromethane	ND	0.69	ND	0.33	
-14-2	1,2-Dichloro-1,1,2,2 tetrafluoroethane	ND	0.69	ND	0.098	
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
106-99-0	1,3-Butadiene	ND	0.69	ND	0.31	
74-83-9	Bromomethane	ND	0.69	ND	0.18	
75-00-3	Chloroethane	ND	0.69	ND	0.26	
64-17-5	Ethanol	**140**	6.9	**76**	3.6	
67-64-1	Acetone	**190**	6.9	**78**	2.9	
75-69-4	Trichlorofluoromethane	**1.5**	0.69	**0.26**	0.12	
67-63-0	Isopropyl Alcohol	**29**	0.69	**12**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.69	ND	0.17	
75-09-2	Methylene chloride	ND	0.69	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.69	ND	0.089	
75-15-0	Carbon Disulfide	**13**	0.69	**4.0**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.69	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.69	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	**0.69**	0.69	**0.19**	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**10**	0.69	**3.4**	0.23	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; result may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG49**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00616

Date Collected: 4/5/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -1.4 Pf I = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.69	ND	0.17	
141-78-6	Ethyl Acetate	**1.2**	0.69	**0.33**	0.19	
)-54-3	n-Hexane	**3.4**	0.69	**0.95**	0.19	
-66-3	Chloroform	**1.1**	0.69	**0.23**	0.14	
109-99-9	Tetrahydrofuran	**4.9**	0.69	**1.7**	0.23	
107-06-2	1,2-Dichloroethane	ND	0.69	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.69	ND	0.13	
71-43-2	Benzene	**8.2**	0.69	**2.6**	0.21	
56-23-5	Carbon Tetrachloride	ND	0.69	ND	0.11	
110-82-7	Cyclohexane	**19**	0.69	**5.5**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.69	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.69	ND	0.10	
79-01-6	Trichloroethene	**0.92**	0.69	**0.17**	0.13	
123-91-1	1,4-Dioxane	ND	0.69	ND	0.19	
142-82-5	n-Heptane	**9.3**	0.69	**2.3**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.69	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.69	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.69	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.69	ND	0.13	
108-88-3	Toluene	**52**	0.69	**14**	0.18	
591-78-6	2-Hexanone	ND	0.69	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG49**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00616

Date Collected: 4/5/05
Date Received: 4/8/05
Date Analyzed: 4/12/05 & 4/14/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -1.4 Pf l = 3.5

D.F. = 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.69	ND	0.080	
106-93-4	1,2-Dibromoethane	ND	0.69	ND	0.089	
'-18-4	Tetrachloroethene	**11**	0.69	**1.6**	0.10	
08-90-7	Chlorobenzene	ND	0.69	ND	0.15	
100-41-4	Ethylbenzene	**5.7**	0.69	**1.3**	0.16	
136777-61-2	*m,p* -Xylenes	**18**	1.4	**4.1**	0.32	
75-25-2	Bromoform	ND	0.69	ND	0.066	
100-42-5	Styrene	**0.71**	0.69	**0.17**	0.16	
95-47-6	o-Xylene	**5.2**	0.69	**1.2**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.69	ND	0.10	
622-96-8	4-Ethyltoluene	**1.0**	0.69	**0.21**	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.69	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**1.9**	0.69	**0.39**	0.14	
100-44-7	Benzyl Chloride	ND	0.69	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**31**	0.69	**5.2**	0.11	
106-46-7	1,4-Dichlorobenzene	**0.96**	0.69	**0.16**	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.69	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.69	ND	0.092	
87-68-3	Hexachlorobutadiene	ND	0.69	ND	0.064	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **TRIP BLANK**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-009

Test Code: EPA TO 15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00363

Date Collected: NA
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -14.6 Pf 1 = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
[illegible]87-3	Chloromethane	ND	0.50	ND	0.24	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	Isopropyl Alcohol	ND	0.50	ND	0.20	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene chloride	ND	0.50	ND	0.14	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	0.50	ND	0.16	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	ND	0.50	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **TRIP BLANK**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00363

Date Collected: NA
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = -14.6 Pf l = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
[illegible]-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	**0.56**	0.50	**0.15**	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **TRIP BLANK**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742
CAS Sample ID: P2500742-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00363

Date Collected: NA
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -14.6 Pf I = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
[illegible]-18-4	Tetrachloroethene	**0.85**	0.50	**0.13**	0.074	
[illegible]8-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
136777-61-2	*m,p* -Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Project ID: **Motthaven SCA/114926**

CAS Project ID: P2500742

Methane

Test Code: Modified EPA TO-3
Instrument ID: HP5890II/GC8/FID
Analyst: Regan Lau
Sampling Media: Summa Canister(s)
Test Notes:

Date(s) Collected: 4/4 - 4/5/05
Date Received: 4/8/05
Date Analyzed: 4/13/05
Volume(s) Analyzed: 1.0 ml

Client Sample ID	CAS Sample ID	D.F.	Methane Concentration in ppmV		Data Qualifier
			Result	MRL	
SG37	P2500742-001	1.38	**1.7**	0.69	
SG38	P2500742-002	1.39	**1.6**	0.69	
SG45	P2500742-003	1.33	**1.7**	0.66	
SG46	P2500742-004	1.38	**3.6**	0.69	
SG47	P2500742-005	1.37	**2.9**	0.68	
[illegible]4	P2500742-006	1.29	**2.9**	0.65	
[illegible]49	P2500742-007	1.37	**7.6**	0.68	
TRIP BLANK	P2500742-009	NA	**0.52**	0.50	
Method Blank	P050413-MB	1.00	ND	0.50	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-19**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00199

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi 1 = -1.3 Pf 1 = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.9**	2.7	**3.4**	1.6	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**7.1**	2.7	**1.4**	0.55	
[illegible]-87-3	Chloromethane	ND	2.7	ND	1.3	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	2.7	ND	0.39	
75-01-4	Vinyl Chloride	ND	2.7	ND	1.1	
106-99-0	1,3-Butadiene	ND	2.7	ND	1.2	
74-83-9	Bromomethane	ND	2.7	ND	0.70	
75-00-3	Chloroethane	ND	2.7	ND	1.0	
64-17-5	Ethanol	ND	27	ND	14	
67-64-1	Acetone	**60**	27	**25**	11	
75-69-4	Trichlorofluoromethane	ND	2.7	ND	0.48	
67-63-0	Isopropyl Alcohol	**3.9**	2.7	**1.6**	1.1	
75-35-4	1,1-Dichloroethene	ND	2.7	ND	0.69	
75-09-2	Methylene chloride	ND	2.7	ND	0.78	
76-13-1	Trichlorotrifluoroethane	ND	2.7	ND	0.36	
75-15-0	Carbon Disulfide	**11**	2.7	**3.6**	0.87	
156-60-5	trans-1,2-Dichloroethene	ND	2.7	ND	0.69	
75-34-3	1,1-Dichloroethane	ND	2.7	ND	0.67	
1634-04-4	Methyl tert-Butyl Ether	ND	2.7	ND	0.75	
108-05-4	Vinyl Acetate	ND	5.4	ND	1.5	
78-93-3	2-Butanone (MEK)	**5.0**	2.7	**1.7**	0.92	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-19**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00199

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi l = -1.3 Pf l = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.7	ND	0.69	
141-78-6	Ethyl Acetate	ND	2.7	ND	0.76	
[illegible]-54-3	n-Hexane	**2.7**	2.7	**0.77**	0.77	
[illegible]-66-3	Chloroform	ND	2.7	ND	0.56	
109-99-9	Tetrahydrofuran	ND	2.7	ND	0.92	
107-06-2	1,2-Dichloroethane	ND	2.7	ND	0.67	
71-55-6	1,1,1-Trichloroethane	ND	2.7	ND	0.50	
71-43-2	Benzene	**3.7**	2.7	**1.2**	0.85	
56-23-5	Carbon Tetrachloride	ND	2.7	ND	0.43	
110-82-7	Cyclohexane	**4.9**	2.7	**1.4**	0.79	
78-87-5	1,2-Dichloropropane	ND	2.7	ND	0.59	
75-27-4	Bromodichloromethane	ND	2.7	ND	0.41	
79-01-6	Trichloroethene	ND	2.7	ND	0.51	
123-91-1	1,4-Dioxane	ND	2.7	ND	0.76	
142-82-5	n-Heptane	**4.4**	2.7	**1.1**	0.66	
10061-01-5	cis-1,3-Dichloropropene	ND	2.7	ND	0.60	
108-10-1	4-Methyl-2-pentanone	ND	2.7	ND	0.66	
10061-02-6	trans-1,3-Dichloropropene	ND	2.7	ND	0.60	
79-00-5	1,1,2-Trichloroethane	ND	2.7	ND	0.50	
108-88-3	Toluene	**12**	2.7	**3.2**	0.72	
591-78-6	2-Hexanone	ND	2.7	ND	0.66	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-19**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00199

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 0.25 Liter(s)

Pi I = -1.3 Pf I = 3.5

D.F. = 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	2.7	ND	0.32	
106-93-4	1,2-Dibromoethane	ND	2.7	ND	0.35	
[illegible]-18-4	Tetrachloroethene	**19**	2.7	**2.9**	0.40	
108-90-7	Chlorobenzene	ND	2.7	ND	0.59	
100-41-4	Ethylbenzene	ND	2.7	ND	0.63	
136777-61-2	*m,p*-Xylenes	**7.1**	5.4	**1.6**	1.3	
75-25-2	Bromoform	ND	2.7	ND	0.26	
100-42-5	Styrene	ND	2.7	ND	0.64	
95-47-6	o-Xylene	ND	2.7	ND	0.63	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.7	ND	0.40	
622-96-8	4-Ethyltoluene	ND	2.7	ND	0.55	
108-67-8	1,3,5-Trimethylbenzene	ND	2.7	ND	0.55	
95-63-6	1,2,4-Trimethylbenzene	ND	2.7	ND	0.55	
100-44-7	Benzyl Chloride	ND	2.7	ND	0.53	
541-73-1	1,3-Dichlorobenzene	ND	2.7	ND	0.45	
106-46-7	1,4-Dichlorobenzene	ND	2.7	ND	0.45	
95-50-1	1,2-Dichlorobenzene	ND	2.7	ND	0.45	
120-82-1	1,2,4-Trichlorobenzene	ND	2.7	ND	0.37	
87-68-3	Hexachlorobutadiene	ND	2.7	ND	0.26	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-20**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00345

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05 & 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -0.9 Pf I = 3.5

D.F. = 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**50**	0.66	**29**	0.38	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.2**	0.66	**0.85**	0.13	
[illegible]87-3	Chloromethane	ND	0.66	ND	0.32	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.66	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.66	ND	0.30	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.66	ND	0.25	
64-17-5	Ethanol	ND	6.6	ND	3.5	
67-64-1	Acetone	**320**	6.6	**140**	2.8	**M**
75-69-4	Trichlorofluoromethane	**6.4**	0.66	**1.1**	0.12	
67-63-0	Isopropyl Alcohol	**15**	0.66	**6.0**	0.27	
75-35-4	1,1-Dichloroethene	**6.6**	0.66	**1.7**	0.17	
75-09-2	Methylene chloride	ND	0.66	ND	0.19	
76-13-1	Trichlorotrifluoroethane	**3.6**	0.66	**0.47**	0.086	
75-15-0	Carbon Disulfide	**2.4**	0.66	**0.76**	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	ND	0.17	
75-34-3	1,1-Dichloroethane	**5.0**	0.66	**1.2**	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.66	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.38	
78-93-3	2-Butanone (MEK)	**2.3**	0.66	**0.77**	0.22	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-20**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00345

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05 & 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi I = -0.9 Pf I = 3.5

D.F. = 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**15**	0.66	**3.8**	0.17	
141-78-6	Ethyl Acetate	**3.7**	0.66	**1.0**	0.18	
[illegible]0-54-3	n-Hexane	**69**	0.66	**20**	0.19	
[illegible]-66-3	Chloroform	**41**	0.66	**8.4**	0.14	
109-99-9	Tetrahydrofuran	**3.3**	0.66	**1.1**	0.22	
107-06-2	1,2-Dichloroethane	ND	0.66	ND	0.16	
71-55-6	1,1,1-Trichloroethane	**39**	0.66	**7.2**	0.12	
71-43-2	Benzene	**2.1**	0.66	**0.65**	0.21	
56-23-5	Carbon Tetrachloride	ND	0.66	ND	0.10	
110-82-7	Cyclohexane	**17**	0.66	**4.9**	0.19	
78-87-5	1,2-Dichloropropane	ND	0.66	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.66	ND	0.099	
79-01-6	Trichloroethene	**240**	0.66	**45**	0.12	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
142-82-5	n-Heptane	**25**	0.66	**6.2**	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.66	ND	0.12	
108-88-3	Toluene	**11**	0.66	**3.0**	0.18	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-20**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00345

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05 & 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Pi l = -0.9 Pf l = 3.5

D.F. = 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.66	ND	0.078	
106-93-4	1,2-Dibromoethane	ND	0.66	ND	0.086	
7-18-4	Tetrachloroethene	**26**	0.66	**3.9**	0.097	
8-90-7	Chlorobenzene	ND	0.66	ND	0.14	
100-41-4	Ethylbenzene	**4.7**	0.66	**1.1**	0.15	
136777-61-2	*m,p* -Xylenes	**19**	1.3	**4.4**	0.30	
75-25-2	Bromoform	ND	0.66	ND	0.064	
100-42-5	Styrene	**1.1**	0.66	**0.26**	0.16	
95-47-6	o-Xylene	**7.1**	0.66	**1.6**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	ND	0.096	
622-96-8	4-Ethyltoluene	**3.5**	0.66	**0.72**	0.13	
108-67-8	1,3,5-Trimethylbenzene	**3.6**	0.66	**0.74**	0.13	
95-63-6	1,2,4-Trimethylbenzene	**13**	0.66	**2.7**	0.13	
100-44-7	Benzyl Chloride	ND	0.66	ND	0.13	
541-73-1	1,3-Dichlorobenzene	**1.0**	0.66	**0.17**	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.66	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.66	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.089	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.062	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-21**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00401

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = 0.3 Pf l = 3.5

D.F. = 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**8.3**	0.61	**4.8**	0.35	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.1**	0.61	**0.63**	0.12	
87-3	Chloromethane	ND	0.61	ND	0.29	
-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.61	ND	0.087	
75-01-4	Vinyl Chloride	ND	0.61	ND	0.24	
106-99-0	1,3-Butadiene	**0.62**	0.61	**0.28**	0.27	**M**
74-83-9	Bromomethane	ND	0.61	ND	0.16	
75-00-3	Chloroethane	ND	0.61	ND	0.23	
64-17-5	Ethanol	**8.0**	6.1	**4.2**	3.2	
67-64-1	Acetone	**48**	6.1	**20**	2.5	
75-69-4	Trichlorofluoromethane	**4.7**	0.61	**0.83**	0.11	
67-63-0	Isopropyl Alcohol	**0.92**	0.61	**0.37**	0.25	
75-35-4	1,1-Dichloroethene	ND	0.61	ND	0.15	
75-09-2	Methylene chloride	ND	0.61	ND	0.17	
76-13-1	Trichlorotrifluoroethane	ND	0.61	ND	0.079	
75-15-0	Carbon Disulfide	**5.0**	0.61	**1.6**	0.19	
156-60-5	trans-1,2-Dichloroethene	ND	0.61	ND	0.15	
75-34-3	1,1-Dichloroethane	ND	0.61	ND	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	0.61	ND	0.17	
108-05-4	Vinyl Acetate	ND	1.2	ND	0.34	
78-93-3	2-Butanone (MEK)	**3.8**	0.61	**1.3**	0.21	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-21**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00401

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = 0.3 Pf l = 3.5

D.F. = 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.61	ND	0.15	
141-78-6	Ethyl Acetate	**5.0**	0.61	**1.4**	0.17	
[illegible]-54-3	n-Hexane	**2.9**	0.61	**0.81**	0.17	
[illegible]-66-3	Chloroform	**0.79**	0.61	**0.16**	0.12	
109-99-9	Tetrahydrofuran	**3.5**	0.61	**1.2**	0.21	
107-06-2	1,2-Dichloroethane	ND	0.61	ND	0.15	
71-55-6	1,1,1-Trichloroethane	ND	0.61	ND	0.11	
71-43-2	Benzene	**3.3**	0.61	**1.0**	0.19	
56-23-5	Carbon Tetrachloride	ND	0.61	ND	0.096	
110-82-7	Cyclohexane	**7.2**	0.61	**2.1**	0.18	
78-87-5	1,2-Dichloropropane	ND	0.61	ND	0.13	
75-27-4	Bromodichloromethane	ND	0.61	ND	0.090	
79-01-6	Trichloroethene	ND	0.61	ND	0.11	
123-91-1	1,4-Dioxane	**0.67**	0.61	**0.18**	0.17	**M**
142-82-5	n-Heptane	**3.9**	0.61	**0.94**	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.61	ND	0.13	
108-10-1	4-Methyl-2-pentanone	ND	0.61	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.61	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.61	ND	0.11	
108-88-3	Toluene	**8.5**	0.61	**2.2**	0.16	
591-78-6	2-Hexanone	ND	0.61	ND	0.15	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
" " = Matrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-21**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00401

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = 0.3 Pf l = 3.5

D.F. = 1.21

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.61	ND	0.071	
106-93-4	1,2-Dibromoethane	ND	0.61	ND	0.079	
7-18-4	Tetrachloroethene	**10**	0.61	**1.5**	0.089	
8-90-7	Chlorobenzene	ND	0.61	ND	0.13	
100-41-4	Ethylbenzene	**1.5**	0.61	**0.34**	0.14	
136777-61-2	*m,p*-Xylenes	**5.6**	1.2	**1.3**	0.28	
75-25-2	Bromoform	ND	0.61	ND	0.059	
100-42-5	Styrene	ND	0.61	ND	0.14	
95-47-6	o-Xylene	**1.5**	0.61	**0.35**	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.61	ND	0.088	
622-96-8	4-Ethyltoluene	**1.2**	0.61	**0.25**	0.12	
108-67-8	1,3,5-Trimethylbenzene	ND	0.61	ND	0.12	
95-63-6	1,2,4-Trimethylbenzene	**1.7**	0.61	**0.35**	0.12	
100-44-7	Benzyl Chloride	ND	0.61	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.61	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	0.61	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	0.61	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	0.61	ND	0.082	
87-68-3	Hexachlorobutadiene	ND	0.61	ND	0.057	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-29**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00613

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -0.4 Pf 1 = 3.5

D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**5.6**	0.64	**3.2**	0.37	M
75-71-8	Dichlorodifluoromethane (CFC 12)	**6.8**	0.64	**1.4**	0.13	
74-87-3	Chloromethane	ND	0.64	ND	0.31	
14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.64	ND	0.091	
75-01-4	Vinyl Chloride	ND	0.64	ND	0.25	
106-99-0	1,3-Butadiene	ND	0.64	ND	0.29	
74-83-9	Bromomethane	ND	0.64	ND	0.16	
75-00-3	Chloroethane	ND	0.64	ND	0.24	
64-17-5	Ethanol	**6.6**	6.4	**3.5**	3.4	
67-64-1	Acetone	**34**	6.4	**14**	2.7	
75-69-4	Trichlorofluoromethane	**13**	0.64	**2.3**	0.11	
67-63-0	Isopropyl Alcohol	ND	0.64	ND	0.26	
75-35-4	1,1-Dichloroethene	ND	0.64	ND	0.16	
75-09-2	Methylene chloride	ND	0.64	ND	0.18	
76-13-1	Trichlorotrifluoroethane	**0.66**	0.64	**0.086**	0.083	
75-15-0	Carbon Disulfide	**6.0**	0.64	**1.9**	0.20	
156-60-5	trans-1,2-Dichloroethene	ND	0.64	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.64	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.64	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.36	
78-93-3	2-Butanone (MEK)	**3.1**	0.64	**1.1**	0.22	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-29**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00613

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -0.4 Pf 1 = 3.5

D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.64	ND	0.16	
141-78-6	Ethyl Acetate	**1.7**	0.64	**0.48**	0.18	
110-54-3	n-Hexane	**10**	0.64	**2.9**	0.18	
67-66-3	Chloroform	**0.69**	0.64	**0.14**	0.13	
109-99-9	Tetrahydrofuran	**2.3**	0.64	**0.78**	0.22	
107-06-2	1,2-Dichloroethane	ND	0.64	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.64	ND	0.12	
71-43-2	Benzene	**3.5**	0.64	**1.1**	0.20	
56-23-5	Carbon Tetrachloride	ND	0.64	ND	0.10	
110-82-7	Cyclohexane	**4.8**	0.64	**1.4**	0.18	
78-87-5	1,2-Dichloropropane	ND	0.64	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.64	ND	0.095	
79-01-6	Trichloroethene	**0.91**	0.64	**0.17**	0.12	
123-91-1	1,4-Dioxane	ND	0.64	ND	0.18	
142-82-5	n-Heptane	**5.7**	0.64	**1.4**	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.64	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.64	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.64	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.64	ND	0.12	
108-88-3	Toluene	**9.8**	0.64	**2.6**	0.17	
591-78-6	2-Hexanone	ND	0.64	ND	0.16	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-29**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00613

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/8/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = -0.4 Pf l = 3.5

D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.64	ND	0.075	
106-93-4	1,2-Dibromoethane	ND	0.64	ND	0.083	
7-18-4	Tetrachloroethene	**26**	0.64	**3.9**	0.094	
8-90-7	Chlorobenzene	ND	0.64	ND	0.14	
100-41-4	Ethylbenzene	**1.7**	0.64	**0.40**	0.15	
136777-61-2	*m,p* -Xylenes	**5.5**	1.3	**1.3**	0.29	
75-25-2	Bromoform	ND	0.64	ND	0.061	
100-42-5	Styrene	ND	0.64	ND	0.15	
95-47-6	o-Xylene	**1.7**	0.64	**0.39**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.64	ND	0.093	
622-96-8	4-Ethyltoluene	**0.84**	0.64	**0.17**	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.64	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	**1.8**	0.64	**0.37**	0.13	
100-44-7	Benzyl Chloride	ND	0.64	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.64	ND	0.11	
106-46-7	1,4-Dichlorobenzene	**2.9**	0.64	**0.49**	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.64	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.64	ND	0.086	
87-68-3	Hexachlorobutadiene	ND	0.64	ND	0.060	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-28**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00342

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.10 Liter(s)

Pi l = -1.1 Pf l = 3.5

D.F. = 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	6.7	ND	3.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	**28**	6.7	**5.7**	1.4	
[illegible]-87-3	Chloromethane	ND	6.7	ND	3.2	
[illegible]-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	6.7	ND	0.96	
75-01-4	Vinyl Chloride	ND	6.7	ND	2.6	
106-99-0	1,3-Butadiene	ND	6.7	ND	3.0	
74-83-9	Bromomethane	ND	6.7	ND	1.7	
75-00-3	Chloroethane	ND	6.7	ND	2.5	
64-17-5	Ethanol	ND	67	ND	36	
67-64-1	Acetone	ND	67	ND	28	
75-69-4	Trichlorofluoromethane	**63**	6.7	**11**	1.2	
67-63-0	Isopropyl Alcohol	ND	6.7	ND	2.7	
75-35-4	1,1-Dichloroethene	ND	6.7	ND	1.7	
75-09-2	Methylene chloride	ND	6.7	ND	1.9	
76-13-1	Trichlorotrifluoroethane	ND	6.7	ND	0.87	
75-15-0	Carbon Disulfide	**9.5**	6.7	**3.1**	2.2	
156-60-5	trans-1,2-Dichloroethene	ND	6.7	ND	1.7	
75-34-3	1,1-Dichloroethane	ND	6.7	ND	1.7	
1634-04-4	Methyl tert-Butyl Ether	ND	6.7	ND	1.9	
108-05-4	Vinyl Acetate	ND	13	ND	3.8	
78-93-3	2-Butanone (MEK)	ND	6.7	ND	2.3	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-28**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00342

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.10 Liter(s)

Pi l = -1.1 Pf l = 3.5

D.F. = 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	6.7	ND	1.7	
141-78-6	Ethyl Acetate	ND	6.7	ND	1.9	
]-54-3	n-Hexane	ND	6.7	ND	1.9	
-66-3	Chloroform	ND	6.7	ND	1.4	
109-99-9	Tetrahydrofuran	ND	6.7	ND	2.3	
107-06-2	1,2-Dichloroethane	ND	6.7	ND	1.7	
71-55-6	1,1,1-Trichloroethane	ND	6.7	ND	1.2	
71-43-2	Benzene	ND	6.7	ND	2.1	
56-23-5	Carbon Tetrachloride	ND	6.7	ND	1.1	
110-82-7	Cyclohexane	ND	6.7	ND	1.9	
78-87-5	1,2-Dichloropropane	ND	6.7	ND	1.5	
75-27-4	Bromodichloromethane	ND	6.7	ND	1.0	
79-01-6	Trichloroethene	ND	6.7	ND	1.2	
123-91-1	1,4-Dioxane	ND	6.7	ND	1.9	
142-82-5	n-Heptane	ND	6.7	ND	1.6	
10061-01-5	cis-1,3-Dichloropropene	ND	6.7	ND	1.5	
108-10-1	4-Methyl-2-pentanone	ND	6.7	ND	1.6	
10061-02-6	trans-1,3-Dichloropropene	ND	6.7	ND	1.5	
79-00-5	1,1,2-Trichloroethane	ND	6.7	ND	1.2	
108-88-3	Toluene	**9.6**	6.7	**2.6**	1.8	
591-78-6	2-Hexanone	ND	6.7	ND	1.6	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-28**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00342

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 0.10 Liter(s)

Pi I = -1.1 Pf I = 3.5

D.F. = 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	6.7	ND	0.79	
106-93-4	1,2-Dibromoethane	ND	6.7	ND	0.87	
127-18-4	Tetrachloroethene	**11**	6.7	**1.7**	0.99	
108-90-7	Chlorobenzene	ND	6.7	ND	1.5	
100-41-4	Ethylbenzene	**35**	6.7	**8.2**	1.5	
136777-61-2	*m,p* -Xylenes	ND	13	ND	3.1	
75-25-2	Bromoform	ND	6.7	ND	0.65	
100-42-5	Styrene	**47**	6.7	**11**	1.6	
95-47-6	o-Xylene	ND	6.7	ND	1.5	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.7	ND	0.98	
622-96-8	4-Ethyltoluene	ND	6.7	ND	1.4	
108-67-8	1,3,5-Trimethylbenzene	ND	6.7	ND	1.4	
95-63-6	1,2,4-Trimethylbenzene	ND	6.7	ND	1.4	
100-44-7	Benzyl Chloride	ND	6.7	ND	1.3	
541-73-1	1,3-Dichlorobenzene	ND	6.7	ND	1.1	
106-46-7	1,4-Dichlorobenzene	ND	6.7	ND	1.1	
95-50-1	1,2-Dichlorobenzene	ND	6.7	ND	1.1	
120-82-1	1,2,4-Trichlorobenzene	ND	6.7	ND	0.90	
87-68-3	Hexachlorobutadiene	ND	6.7	ND	0.63	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-27**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00473

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi l = -1.6 Pf l = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**8.6**	0.70	**5.0**	0.40	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.6**	0.70	**0.94**	0.14	
[illegible]-87-3	Chloromethane	ND	0.70	ND	0.34	
[illegible]14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.70	ND	0.099	
75-01-4	Vinyl Chloride	ND	0.70	ND	0.27	
106-99-0	1,3-Butadiene	**1.3**	0.70	**0.59**	0.31	
74-83-9	Bromomethane	ND	0.70	ND	0.18	
75-00-3	Chloroethane	ND	0.70	ND	0.26	
64-17-5	Ethanol	ND	7.0	ND	3.7	
67-64-1	Acetone	**52**	7.0	**22**	2.9	
75-69-4	Trichlorofluoromethane	**9.5**	0.70	**1.7**	0.12	
67-63-0	Isopropyl Alcohol	**0.90**	0.70	**0.37**	0.28	
75-35-4	1,1-Dichloroethene	ND	0.70	ND	0.18	
75-09-2	Methylene chloride	ND	0.70	ND	0.20	
76-13-1	Trichlorotrifluoroethane	**0.93**	0.70	**0.12**	0.091	
75-15-0	Carbon Disulfide	**7.0**	0.70	**2.3**	0.22	
156-60-5	trans-1,2-Dichloroethene	ND	0.70	ND	0.18	
75-34-3	1,1-Dichloroethane	ND	0.70	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.70	ND	0.19	
108-05-4	Vinyl Acetate	ND	1.4	ND	0.39	
78-93-3	2-Butanone (MEK)	**3.9**	0.70	**1.3**	0.24	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-27**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00473

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -1.6 Pf I = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.70	ND	0.18	
141-78-6	Ethyl Acetate	**0.83**	0.70	**0.23**	0.19	
110-54-3	n-Hexane	**9.3**	0.70	**2.6**	0.20	
67-66-3	Chloroform	**0.70**	0.70	**0.14**	0.14	
109-99-9	Tetrahydrofuran	ND	0.70	ND	0.24	
107-06-2	1,2-Dichloroethane	ND	0.70	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.70	ND	0.13	
71-43-2	Benzene	**6.8**	0.70	**2.1**	0.22	
56-23-5	Carbon Tetrachloride	ND	0.70	ND	0.11	
110-82-7	Cyclohexane	**7.0**	0.70	**2.0**	0.20	
78-87-5	1,2-Dichloropropane	ND	0.70	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.70	ND	0.10	
79-01-6	Trichloroethene	ND	0.70	ND	0.13	
123-91-1	1,4-Dioxane	ND	0.70	ND	0.19	
142-82-5	n-Heptane	**8.5**	0.70	**2.1**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.70	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.70	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.70	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ND	0.13	
108-88-3	Toluene	**14**	0.70	**3.8**	0.18	
591-78-6	2-Hexanone	ND	0.70	ND	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **SG-27**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00473

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -1.6 Pf 1 = 3.5

D.F. = 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.70	ND	0.082	
106-93-4	1,2-Dibromoethane	ND	0.70	ND	0.090	
7-18-4	Tetrachloroethene	**18**	0.70	**2.7**	0.10	
8-90-7	Chlorobenzene	ND	0.70	ND	0.15	
100-41-4	Ethylbenzene	**2.7**	0.70	**0.62**	0.16	
136777-61-2	*m,p* -Xylenes	**8.4**	1.4	**1.9**	0.32	
75-25-2	Bromoform	ND	0.70	ND	0.067	
100-42-5	Styrene	**0.75**	0.70	**0.18**	0.16	
95-47-6	o-Xylene	**2.6**	0.70	**0.59**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.70	ND	0.10	
622-96-8	4-Ethyltoluene	**1.4**	0.70	**0.29**	0.14	
108-67-8	1,3,5-Trimethylbenzene	**0.96**	0.70	**0.20**	0.14	
95-63-6	1,2,4-Trimethylbenzene	**2.9**	0.70	**0.59**	0.14	
100-44-7	Benzyl Chloride	ND	0.70	ND	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.70	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.70	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.70	ND	0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	0.70	ND	0.094	
87-68-3	Hexachlorobutadiene	ND	0.70	ND	0.065	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00050

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -14.6 Pf I = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	Isopropyl Alcohol	ND	0.50	ND	0.20	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene chloride	ND	0.50	ND	0.14	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	0.50	ND	0.16	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	**0.84**	0.50	**0.28**	0.17	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00050

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -14.6 Pf I = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
[illegible]0-54-3	n-Hexane	ND	0.50	ND	0.14	
[illegible]66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Trip Blank**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00050

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/6/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -14.6 Pf I = 3.5

D.F. = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
7-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
8-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
136777-61-2	*m,p* -Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Dup040105**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00572

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -0.8 Pf I = 3.5

D.F. = 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**6.2**	0.66	**3.6**	0.38	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**7.5**	0.66	**1.5**	0.13	
74-87-3	Chloromethane	**0.76**	0.66	**0.37**	0.32	
14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.66	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.66	ND	0.30	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.66	ND	0.25	
64-17-5	Ethanol	ND	6.6	ND	3.5	
67-64-1	Acetone	**39**	6.6	**16**	2.8	
75-69-4	Trichlorofluoromethane	**15**	0.66	**2.6**	0.12	
67-63-0	Isopropyl Alcohol	ND	0.66	ND	0.27	
75-35-4	1,1-Dichloroethene	ND	0.66	ND	0.17	
75-09-2	Methylene chloride	ND	0.66	ND	0.19	
76-13-1	Trichlorotrifluoroethane	ND	0.66	ND	0.086	
75-15-0	Carbon Disulfide	**6.7**	0.66	**2.2**	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.66	ND	0.16	
1634-04-4	Methyl tert Butyl Ether	ND	0.66	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.37	
78-93-3	2-Butanone (MEK)	**5.3**	0.66	**1.8**	0.22	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Mattrix interference; results may be biased high.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Dup040105**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-008

Test Code: EPA TO 15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00572

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi I = -0.8 Pf I = 3.5

D.F. = 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.66	ND	0.17	
141-78-6	Ethyl Acetate	**5.5**	0.66	**1.5**	0.18	
?-54-3	n-Hexane	**11**	0.66	**3.2**	0.19	
-66-3	Chloroform	**0.76**	0.66	**0.16**	0.13	
109-99-9	Tetrahydrofuran	**4.6**	0.66	**1.6**	0.22	
107-06-2	1,2-Dichloroethane	ND	0.66	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.66	ND	0.12	
71-43-2	Benzene	**3.6**	0.66	**1.1**	0.21	
56-23-5	Carbon Tetrachloride	ND	0.66	ND	0.10	
110-82-7	Cyclohexane	**5.4**	0.66	**1.6**	0.19	
78-87-5	1,2-Dichloropropane	ND	0.66	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.66	ND	0.098	
79-01-6	Trichloroethene	ND	0.66	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
142-82-5	n-Heptane	**6.4**	0.66	**1.6**	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.66	ND	0.12	
108-88-3	Toluene	**11**	0.66	**2.9**	0.17	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALTYICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **Dup040105**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691
CAS Sample ID: P2500691-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00572

Date Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/7/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -0.8 Pf 1 = 3.5

D.F. = 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.66	ND	0.077	
106-93-4	1,2-Dibromoethane	ND	0.66	ND	0.085	
7-18-4	Tetrachloroethene	**29**	0.66	**4.2**	0.097	
5-90-7	Chlorobenzene	ND	0.66	ND	0.14	
100-41-4	Ethylbenzene	**1.9**	0.66	**0.45**	0.15	
136777-61-2	*m,p*-Xylenes	**6.3**	1.3	**1.4**	0.30	
75-25-2	Bromoform	ND	0.66	ND	0.063	
100-42-5	Styrene	ND	0.66	ND	0.15	
95-47-6	o-Xylene	**1.9**	0.66	**0.44**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	ND	0.095	
622-96-8	4-Ethyltoluene	**0.88**	0.66	**0.18**	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	**2.2**	0.66	**0.45**	0.13	
100-44-7	Benzyl Chloride	ND	0.66	ND	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.66	ND	0.11	
106-46-7	1,4-Dichlorobenzene	**3.9**	0.66	**0.65**	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.66	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.088	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.061	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____ Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Project ID: **SCA - Motthaven/114926**

CAS Project ID: P2500691

Methane

Test Code: Modified EPA TO-3
Instrument ID: HP5890II/GC8/FID
Analyst: Regan Lau
Sampling Media: Summa Canister(s)
Test Notes:

Date(s) Collected: 4/1/05
Date Received: 4/4/05
Date Analyzed: 4/11/05
Volume(s) Analyzed: 1.0 ml

Client Sample ID	CAS Sample ID	D.F.	Methane Concentration in ppmV		Data Qualifier
			Result	MRL	
SG-19	P2500691-001	1.36	**1.8**	0.68	
SG-20	P2500691-002	1.32	**7.1**	0.66	
SG-21	P2500691-003	1.21	**2.1**	0.61	
SG-29	P2500691-004	1.27	**1.6**	0.64	
SG-28	P2500691-005	1.34	**1.2**	0.67	
[illegible]27	P2500691-006	1.39	**1.3**	0.69	
[illegible]p Blank	P2500691-007	NA	ND	0.50	
Dup040105	P2500691-008	1.31	**1.7**	0.65	
Method Blank	P050411-MB	1.00	ND	0.50	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:_____Date:_____

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

C : Shaw E & I, Inc.
Client Sample ID: PSGI-9
Client Project ID: NYCSCA - Motthaven/114926

CAS Project ID: P2501948
CAS Sample ID: P2501948-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00056

Date Collected: 8/17/05
Date Received: 8/19/05
Date(s) Analyzed: 8/22/05
Volume(s) Analyzed: 0.50 Liter(s)
0.10 Liter(s)

Pi 1 = 0.0 Pf 1 = 3.5

Can D.F. = 1.24

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**89**	1.2	**52**	0.72	**M**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.6**	1.2	**0.54**	0.25	
74-87-3	Chloromethane	**1.4**	1.2	**0.68**	0.60	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.2	ND	0.18	
75-01-4	Vinyl Chloride	ND	1.2	ND	0.49	
-99-0	1,3-Butadiene	**2.8**	1.2	**1.3**	0.56	**M**
74-83-9	Bromomethane	ND	1.2	ND	0.32	
75-00-3	Chloroethane	ND	1.2	ND	0.47	
64-17-5	Ethanol	ND	12	ND	6.6	
67-64-1	Acetone	**71**	12	**30**	5.2	
75-69-4	Trichlorofluoromethane	**6.2**	1.2	**1.1**	0.22	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.2	ND	0.50	
75-35-4	1,1-Dichloroethene	ND	1.2	ND	0.31	
75-09-2	Methylene chloride	ND	1.2	ND	0.36	
76-13-1	Trichlorotrifluoroethane	ND	1.2	ND	0.16	
75-15-0	Carbon Disulfide	**24**	1.2	**7.7**	0.40	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	ND	0.31	
75-34-3	1,1-Dichloroethane	ND	1.2	ND	0.31	
1634-04-4	Methyl tert-Butyl Ether	ND	1.2	ND	0.34	
108-05-4	Vinyl Acetate	**9.2**	2.5	**2.6**	0.70	**M**
78-93-3	2-Butanone (MEK)	**9.2**	1.2	**3.1**	0.42	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By: RC Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Shaw E & I, Inc.**
Client Sample ID: **PSGI-9**
Client Project ID: **NYCSCA - Motthaven/114926**

CAS Project ID: P2501948
CAS Sample ID: P2501948-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00056

Date Collected: 8/17/05
Date Received: 8/19/05
Date(s) Analyzed: 8/22/05
Volume(s) Analyzed: 0.50 Liter(s)
0.10 Liter(s)

Pi 1 = 0.0 Pf 1 = 3.5

Can D.F. = 1.24

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.2	ND	0.31	
141-78-6	Ethyl Acetate	ND	1.2	ND	0.34	
110-54-3	n-Hexane	**6.4**	1.2	**1.8**	0.35	
[illegible]-66-3	Chloroform	**510**	1.2	**100**	0.25	
[illegible]-99-9	Tetrahydrofuran (THF)	ND	1.2	ND	0.42	
107-06-2	1,2-Dichloroethane	ND	1.2	ND	0.31	
71-55-6	1,1,1-Trichloroethane	**2.7**	1.2	**0.49**	0.23	
71-43-2	Benzene	**4.2**	1.2	**1.3**	0.39	
56-23-5	Carbon Tetrachloride	ND	1.2	ND	0.20	
110-82-7	Cyclohexane	**6.1**	1.2	**1.8**	0.36	
78-87-5	1,2-Dichloropropane	ND	1.2	ND	0.27	
75-27-4	Bromodichloromethane	**2.3**	1.2	**0.35**	0.19	
79-01-6	Trichloroethene	ND	1.2	ND	0.23	
123-91-1	1,4-Dioxane	ND	1.2	ND	0.34	
142-82-5	n-Heptane	**3.0**	1.2	**0.73**	0.30	
10061-01-5	cis-1,3-Dichloropropene	ND	1.2	ND	0.27	
108-10-1	4-Methyl-2-pentanone	**1.6**	1.2	**0.38**	0.30	
10061-02-6	trans-1,3-Dichloropropene	ND	1.2	ND	0.27	
79-00-5	1,1,2-Trichloroethane	ND	1.2	ND	0.23	
108-88-3	Toluene	**11**	1.2	**2.8**	0.33	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 8/23/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: Shaw E & I, Inc.
Client Sample ID: PSGI-10
Client Project ID: SCA Mott Haven/114926

CAS Project ID: P2502278
CAS Sample ID: P2502278-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00129

Date Collected: 9/21/05
Date Received: 9/22/05
Date(s) Analyzed: 9/24/05 & 9/26/05
Volume(s) Analyzed: 1.00 Liter(s)
0.15 Liter(s)

Pi 1 = -0.4 Pf 1 = 3.5

Can D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	6.0	0.64	3.5	0.37	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.8	0.64	0.58	0.13	
74-87-3	Chloromethane	0.71	0.64	0.34	0.31	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.64	ND	0.091	
75-01-4	Vinyl Chloride	ND	0.64	ND	0.25	
106-99-0	1,3-Butadiene	ND	0.64	ND	0.29	
74-83-9	Bromomethane	ND	0.64	ND	0.16	
75-00-3	Chloroethane	ND	0.64	ND	0.24	
64-17-5	Ethanol	120	6.4	65	3.4	
67-64-1	Acetone	63	6.4	27	2.7	
75-69-4	Trichlorofluoromethane	7.5	0.64	1.3	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	4.9	0.64	2.0	0.26	
75-35-4	1,1-Dichloroethene	ND	0.64	ND	0.16	
75-09-2	Methylene chloride	ND	0.64	ND	0.18	
76-13-1	Trichlorotrifluoroethane	ND	0.64	ND	0.083	
75-15-0	Carbon Disulfide	3.9	0.64	1.2	0.20	
156-60-5	trans-1,2-Dichloroethene	ND	0.64	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.64	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.64	ND	0.18	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.36	
78-93-3	2-Butanone (MEK)	9.3	0.64	3.2	0.22	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
L = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: KH Date: 9/30/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: Shaw E & I, Inc.
Client Sample ID: PSGI-10
Client Project ID: SCA Mott Haven/114926

CAS Project ID: P2502278
CAS Sample ID: P2502278-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00129

Date Collected: 9/21/05
Date Received: 9/22/05
Date(s) Analyzed: 9/24/05 & 9/26/05
Volume(s) Analyzed: 1.00 Liter(s)
0.15 Liter(s)

Pi 1 = -0.4 Pf 1 = 3.5

Can D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.64	ND	0.16	
1-78-6	Ethyl Acetate	0.87	0.64	0.24	0.18	
110-54-3	n-Hexane	3.9	0.64	1.1	0.18	
67-66-3	Chloroform	3.2	0.64	0.65	0.13	
109-99-9	Tetrahydrofuran (THF)	14	0.64	4.6	0.22	
107-06-2	1,2-Dichloroethane	ND	0.64	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.64	ND	0.12	
71-43-2	Benzene	1.2	0.64	0.37	0.20	
56-23-5	Carbon Tetrachloride	ND	0.64	ND	0.10	
110-82-7	Cyclohexane	6.4	0.64	1.9	0.18	
78-87-5	1,2-Dichloropropane	ND	0.64	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.64	ND	0.095	
79-01-6	Trichloroethene	ND	0.64	ND	0.12	
123-91-1	1,4-Dioxane	0.72	0.64	0.20	0.18	
142-82-5	n-Heptane	1.4	0.64	0.35	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.64	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.64	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.64	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.64	ND	0.12	
108-88-3	Toluene	28	0.64	7.4	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: KuH Date: 09/29/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: Shaw E & I, Inc.
Client Sample ID: PSGI-10
Client Project ID: SCA Mott Haven/114926

CAS Project ID: P2502278
CAS Sample ID: P2502278-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00129

Date Collected: 9/21/05
Date Received: 9/22/05
Date(s) Analyzed: 9/24/05 & 9/26/05
Volume(s) Analyzed: 1.00 Liter(s)
0.15 Liter(s)

Pi 1 = -0.4 Pf 1 = 3.5

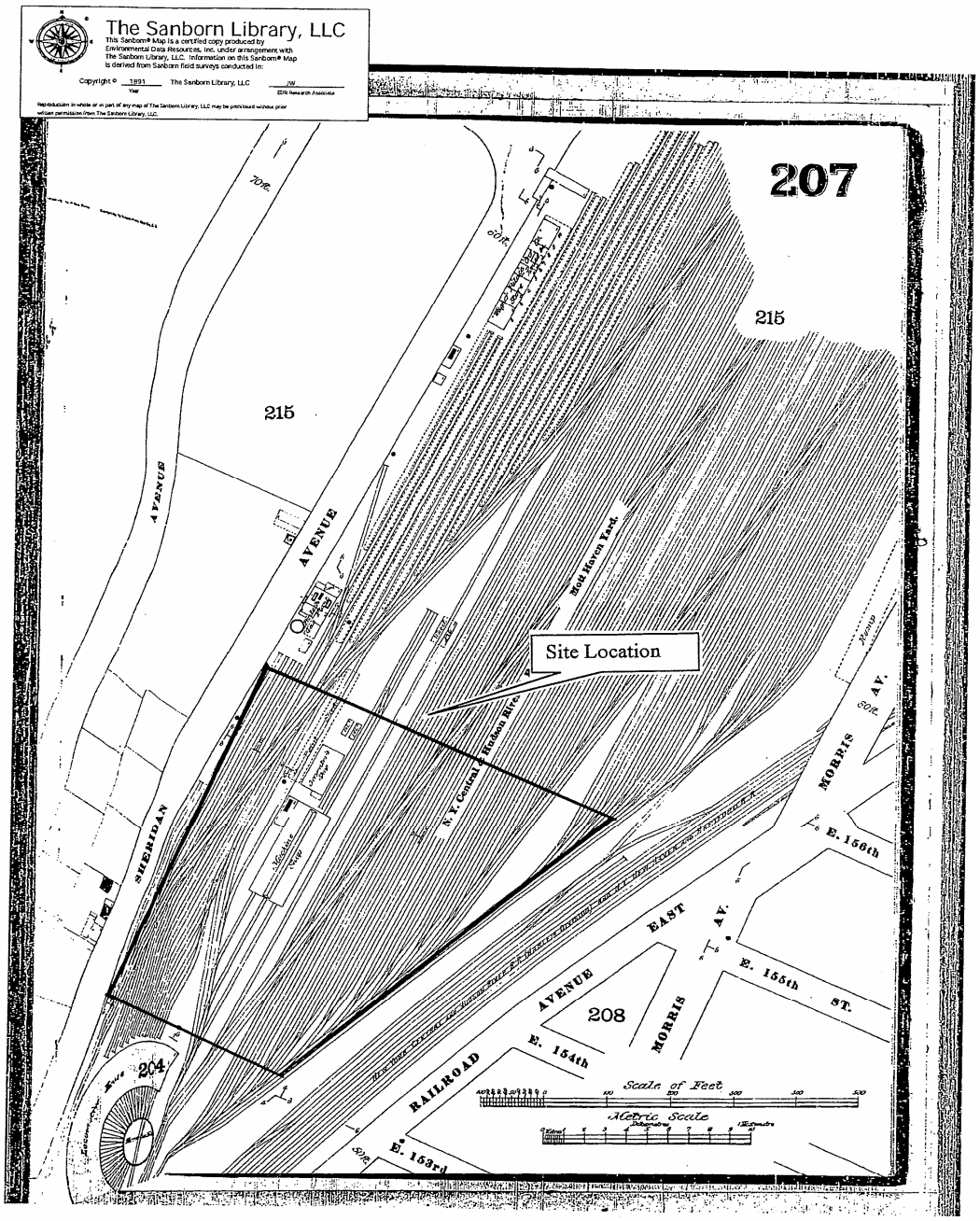
Can D.F. = 1.27

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
591-78-6	2-Hexanone	8.2	0.64	2.0	0.16	
124-48-1	Dibromochloromethane	ND	0.64	ND	0.075	
6-93-4	1,2-Dibromoethane	ND	0.64	ND	0.083	
127-18-4	Tetrachloroethene	24	0.64	3.6	0.094	
108-90-7	Chlorobenzene	ND	0.64	ND	0.14	
100-41-4	Ethylbenzene	3.8	0.64	0.88	0.15	
136777-61-2	*m,p*-Xylenes	15	1.3	3.5	0.29	
75-25-2	Bromoform	ND	0.64	ND	0.061	
100-42-5	Styrene	1.7	0.64	0.41	0.15	
95-47-6	o-Xylene	5.2	0.64	1.2	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.64	ND	0.093	
622-96-8	4-Ethyltoluene	1.4	0.64	0.29	0.13	
108-67-8	1,3,5-Trimethylbenzene	1.0	0.64	0.21	0.13	
95-63-6	1,2,4-Trimethylbenzene	3.5	0.64	0.72	0.13	
100-44-7	Benzyl Chloride	ND	0.64	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.64	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.64	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.64	ND	0.11	
120-82-1	1,2,4-Trichlorobenzene	ND	0.64	ND	0.086	
87-68-3	Hexachlorobutadiene	ND	0.64	ND	0.060	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: KWH Date: 09/29/05

APPENDIX G
HISTORIC SANBORN MAPS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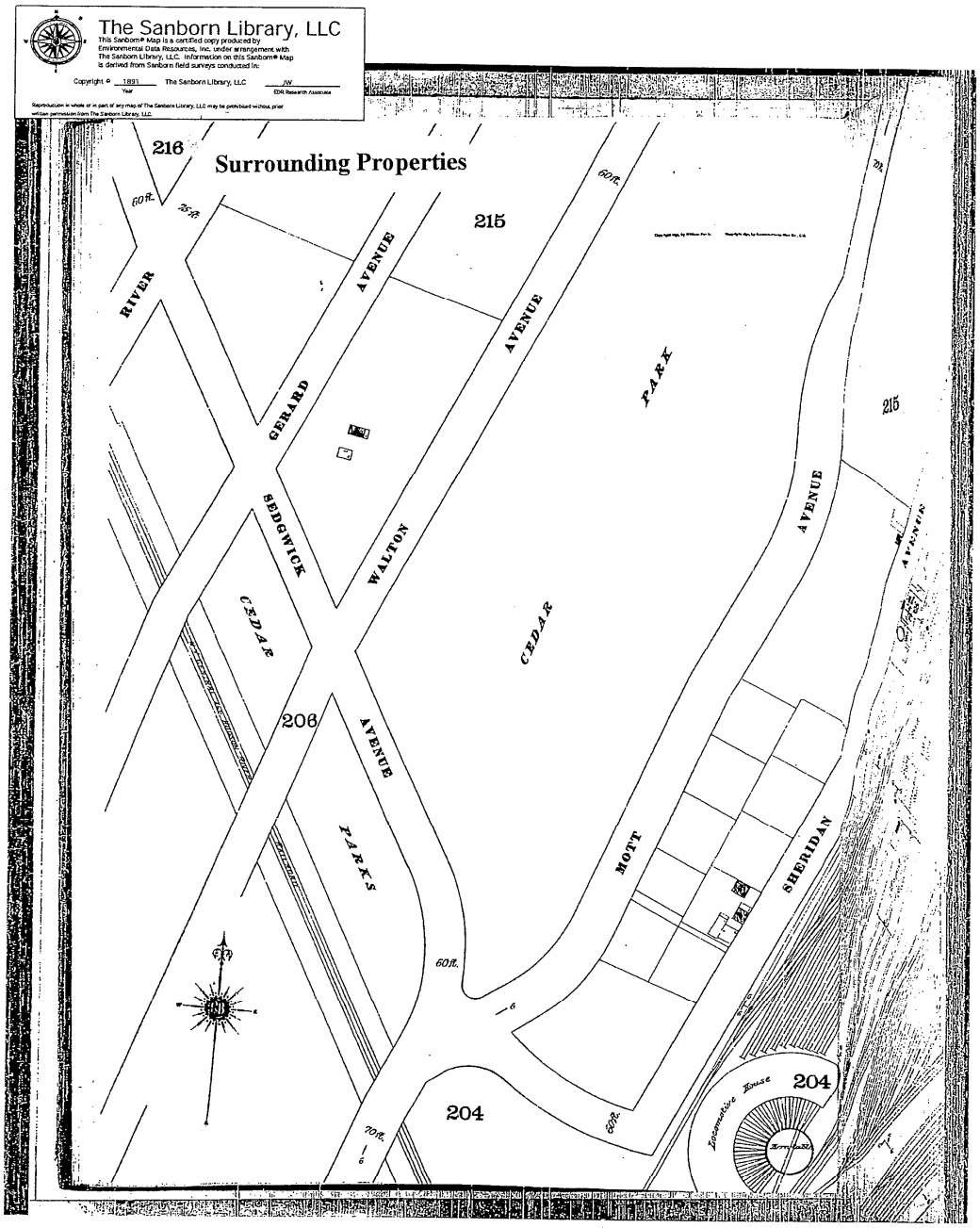
207
215
215
208
204
Site Location
SHERIDAN AVENUE
AVENUE
MORRIS AV.
EAST AVENUE
MORRIS AVENUE
RAILROAD
E. 156th
E. 155th ST.
E. 154th
E. 153rd
N. Y. Central & Hudson Riv. R.R.
Reid Haven Land
Scale of Feet
Metric Scale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Year EDR Research Associate
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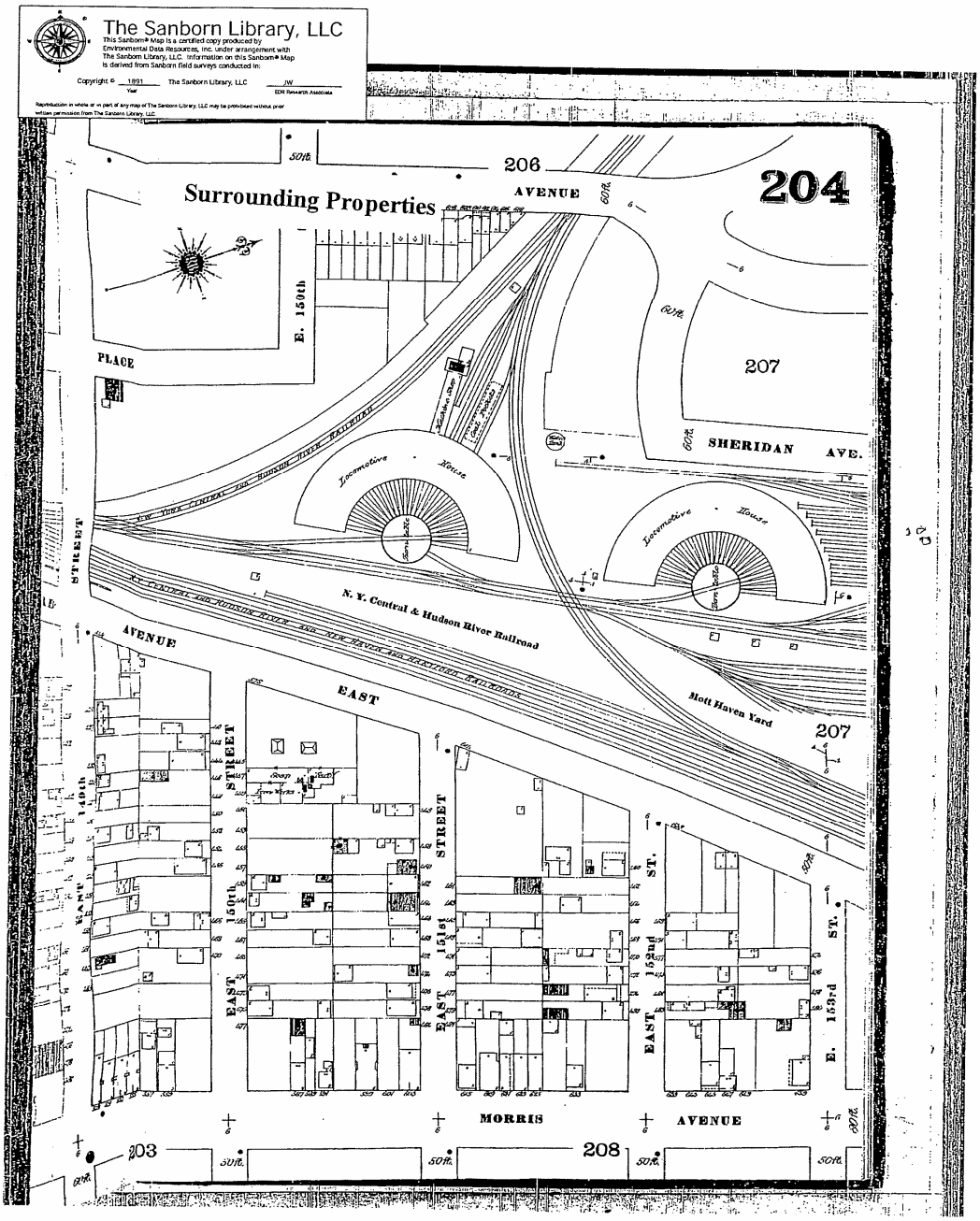
Surrounding Properties
216
215
204
206
RIVER
AVENUE
GERARD
SEDGWICK
WALTON
CEDAR
PARK
PARKS
MOTT
SHERIDAN
60ft.
70ft.
80ft.
Locomotive House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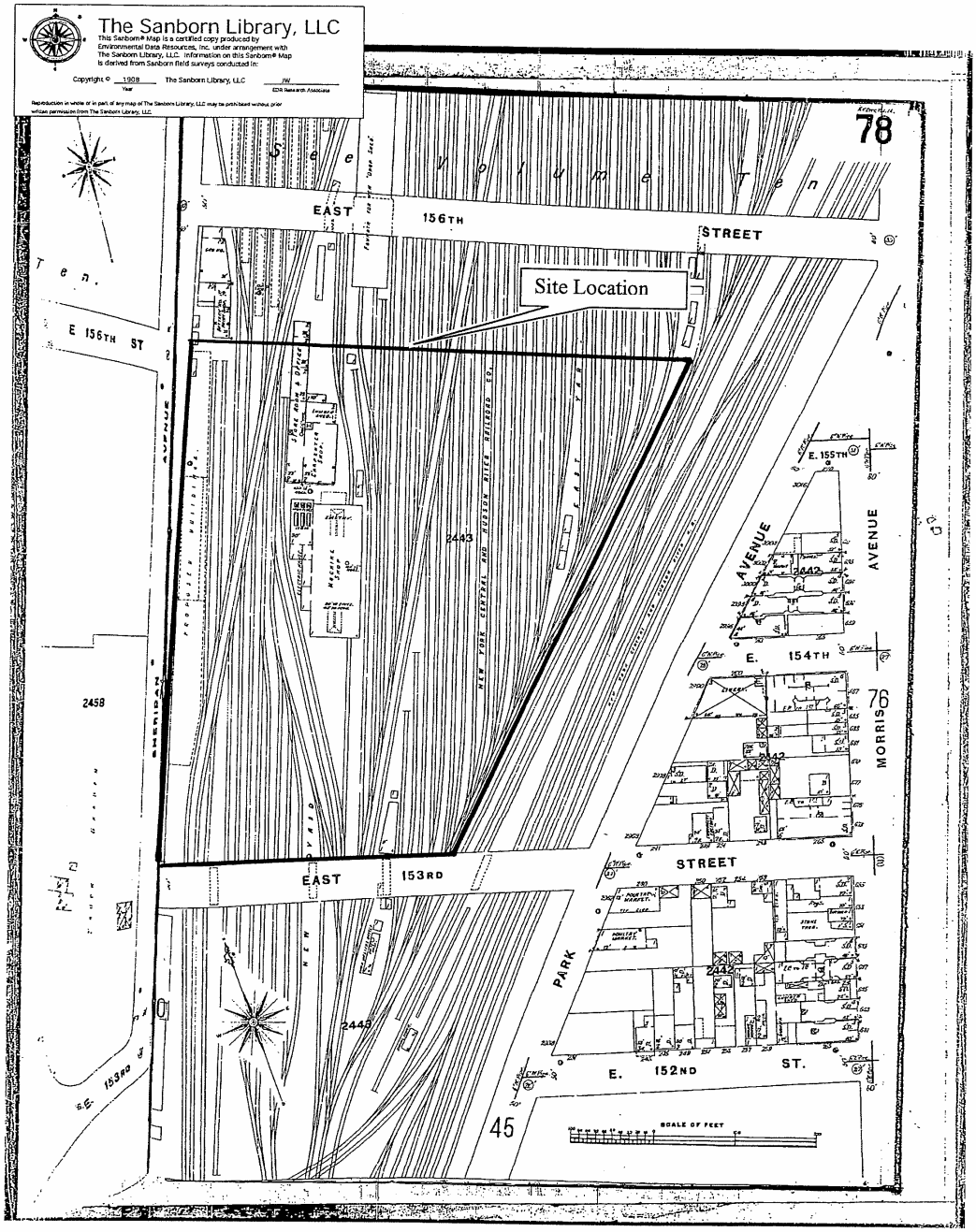
Surrounding Properties
204
206
AVENUE
207
SHERIDAN AVE.
E. 150th
PLACE
STREET
AVENUE
EAST
STREET
150th
151st
152nd
E. 153rd
ST.
MORRIS
AVENUE
203
208
207
N. Y. Central & Hudson River Railroad
Mott Haven Yard
Locomotive House
50ft.
60ft.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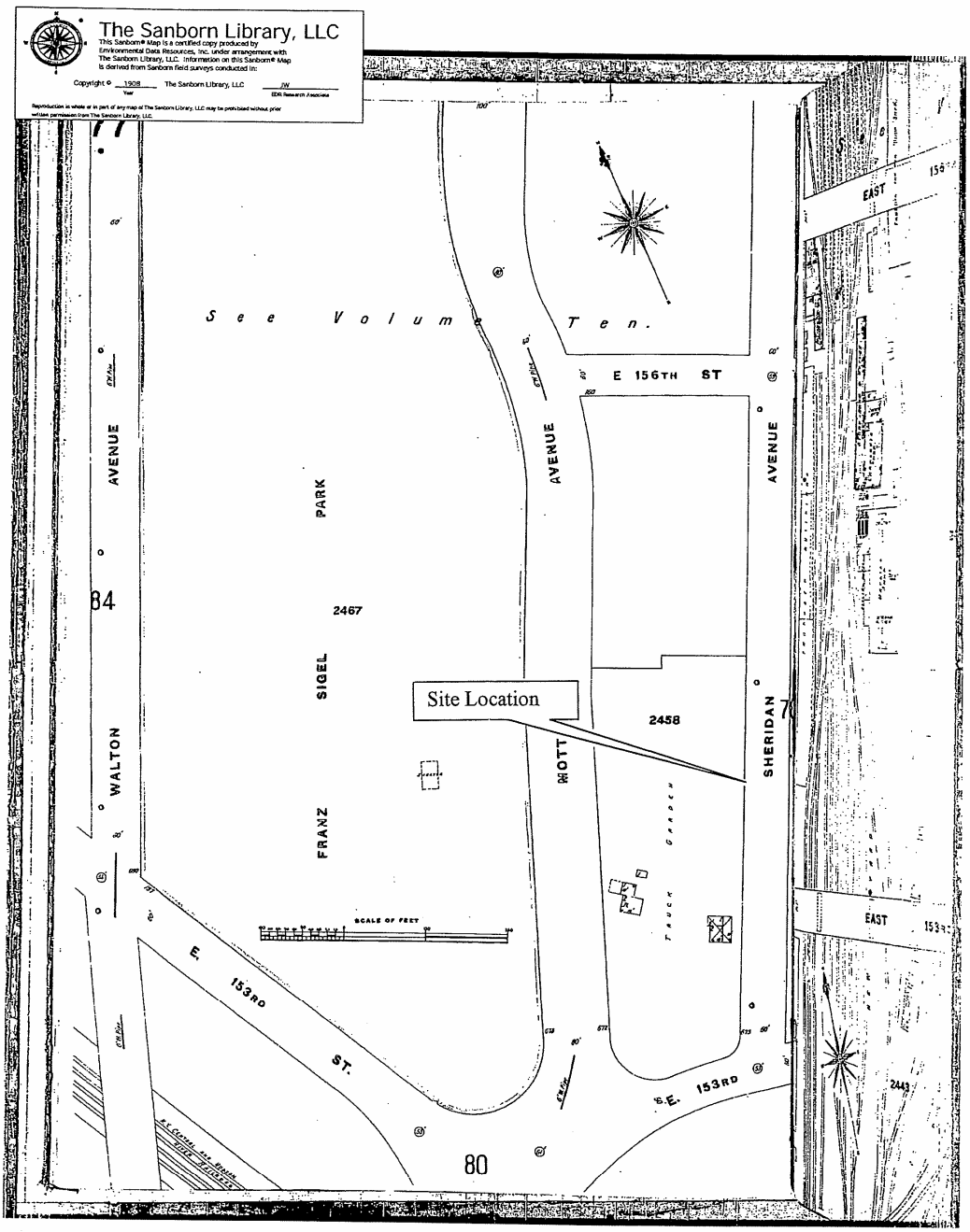
78
See Volume Ten
EAST 156TH STREET
Site Location
E 156TH ST
AVENUE
2443
2458
2448
EAST 153RD
E. 155TH
E. 154TH
E. 152ND ST.
STREET
PARK
MORRIS
76
45
SCALE OF FEET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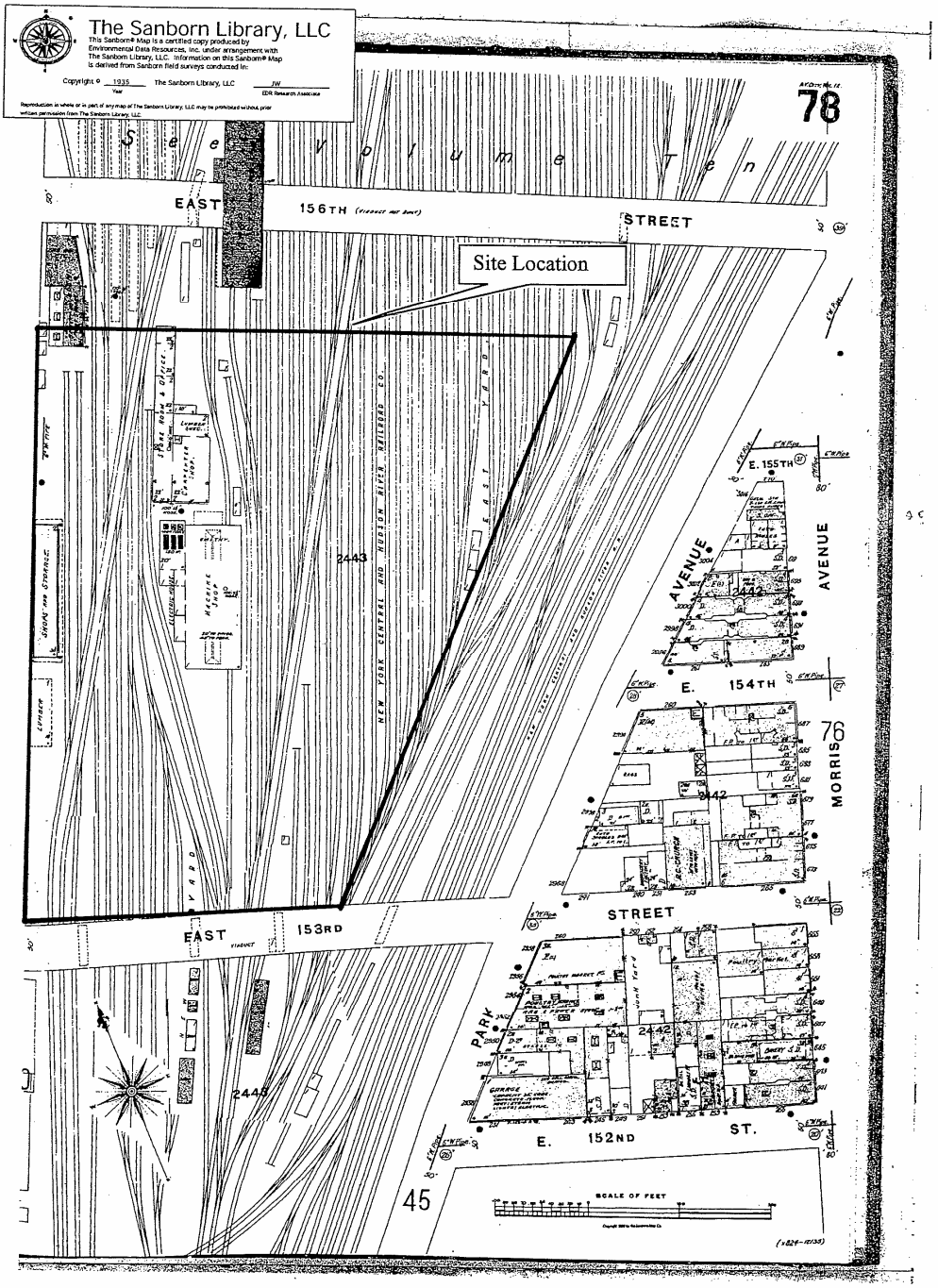
See Volume Ten.
E 156TH ST
AVENUE
PARK
SIGEL
FRANZ
WALTON
SCOTT
SHERIDAN
Site Location
2467
2458
84
80
EAST
E. 153RD ST.
S.E. 153RD
SCALE OF FEET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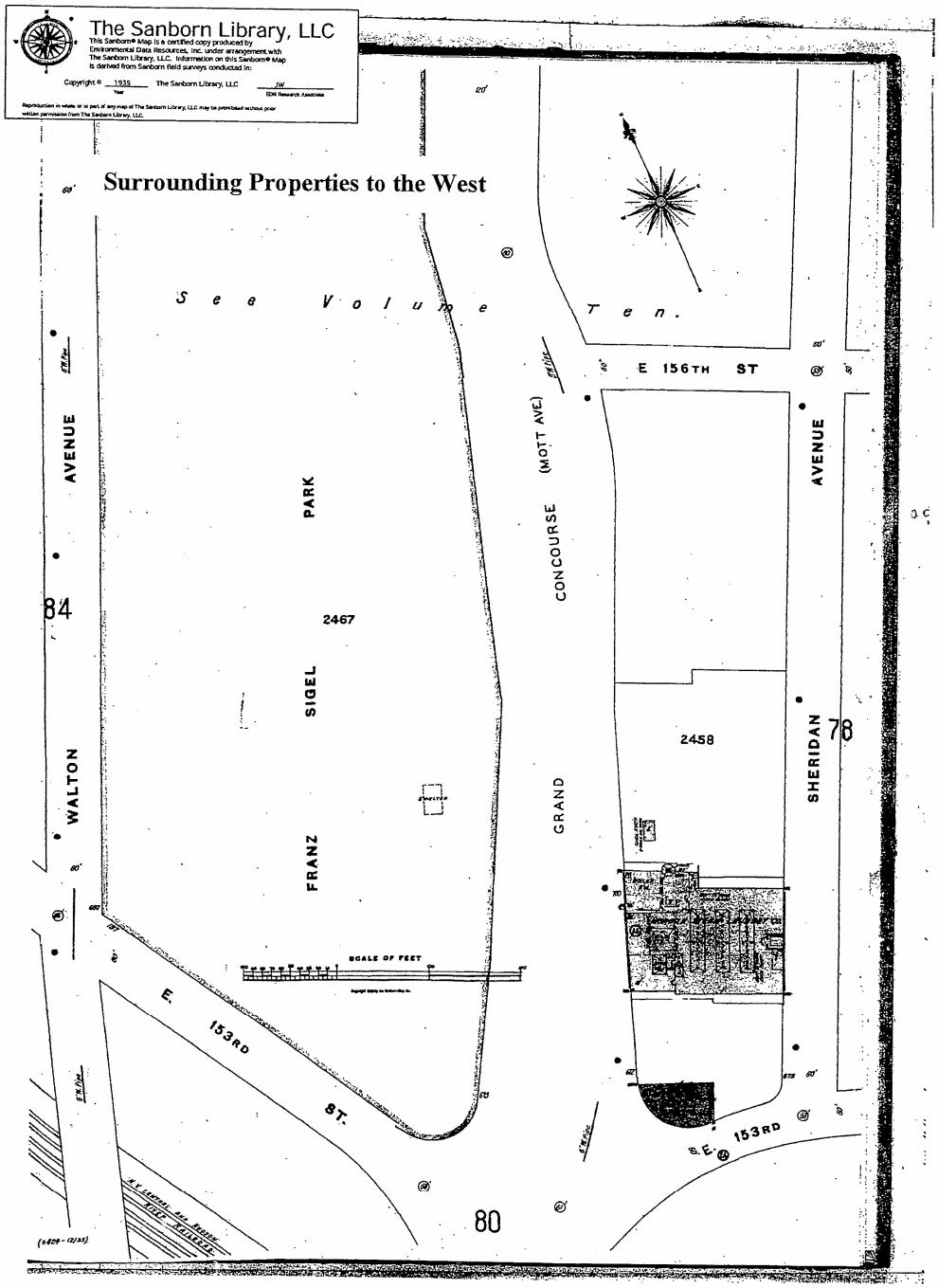
78
See Volume Ten
EAST 156TH STREET
Site Location
2443
NEW YORK CENTRAL AND HUDSON RIVER RAILROAD CO.
EAST 153RD STREET
2442
PARK AVENUE
E. 155TH
E. 154TH
E. 152ND ST.
MORRIS AVENUE
76
45
SCALE OF FEET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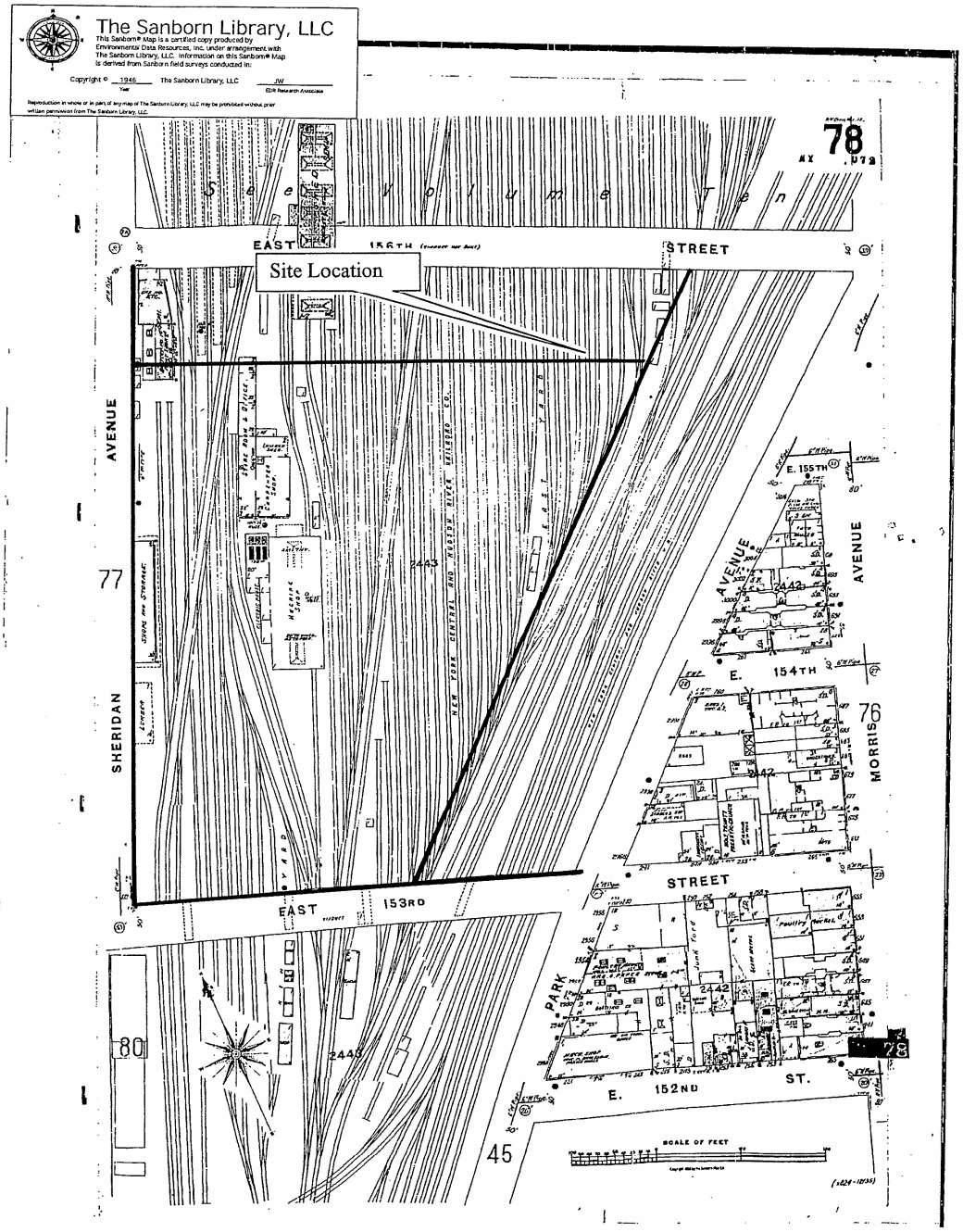
Surrounding Properties to the West
See Volume Ten.
E 156TH ST
AVENUE
PARK
SIGEL
FRANZ
WALTON
CONCOURSE (MOTT AVE)
GRAND
SHERIDAN
AVENUE
2467
2458
84
78
80
SCALE OF FEET
E. 153RD ST.
E. 153RD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DM
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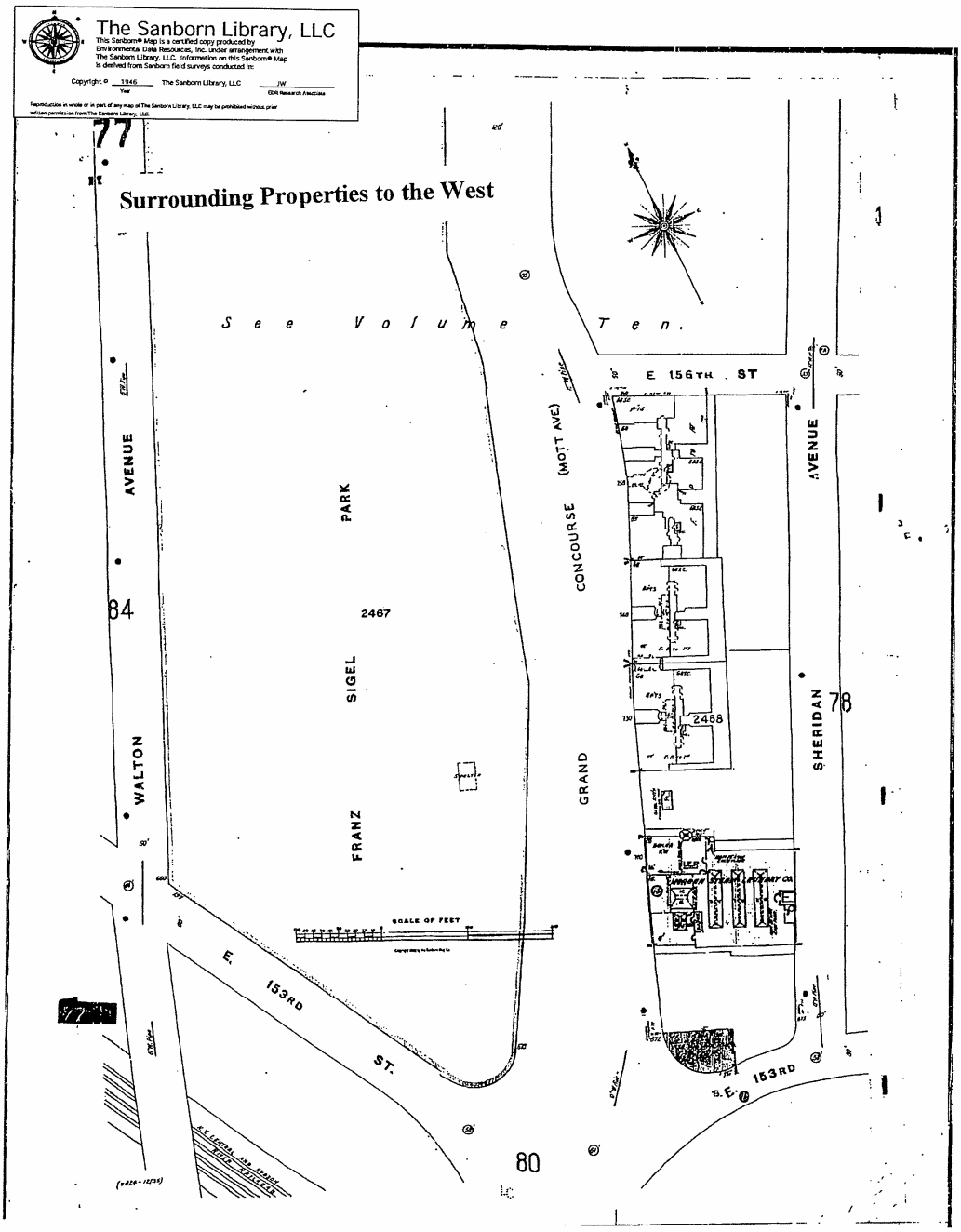
Site Location
Sheet Number Ten
78
EAST 156TH STREET
SHERIDAN AVENUE
77
2443
NEW YORK CENTRAL AND HUDSON RIVER RAILROAD CO.
EAST 153RD STREET
80
2445
E. 155TH
AVENUE
2442
E. 154TH
76
MORRIS
STREET
PARK
E. 152ND ST.
79
45
SCALE OF FEET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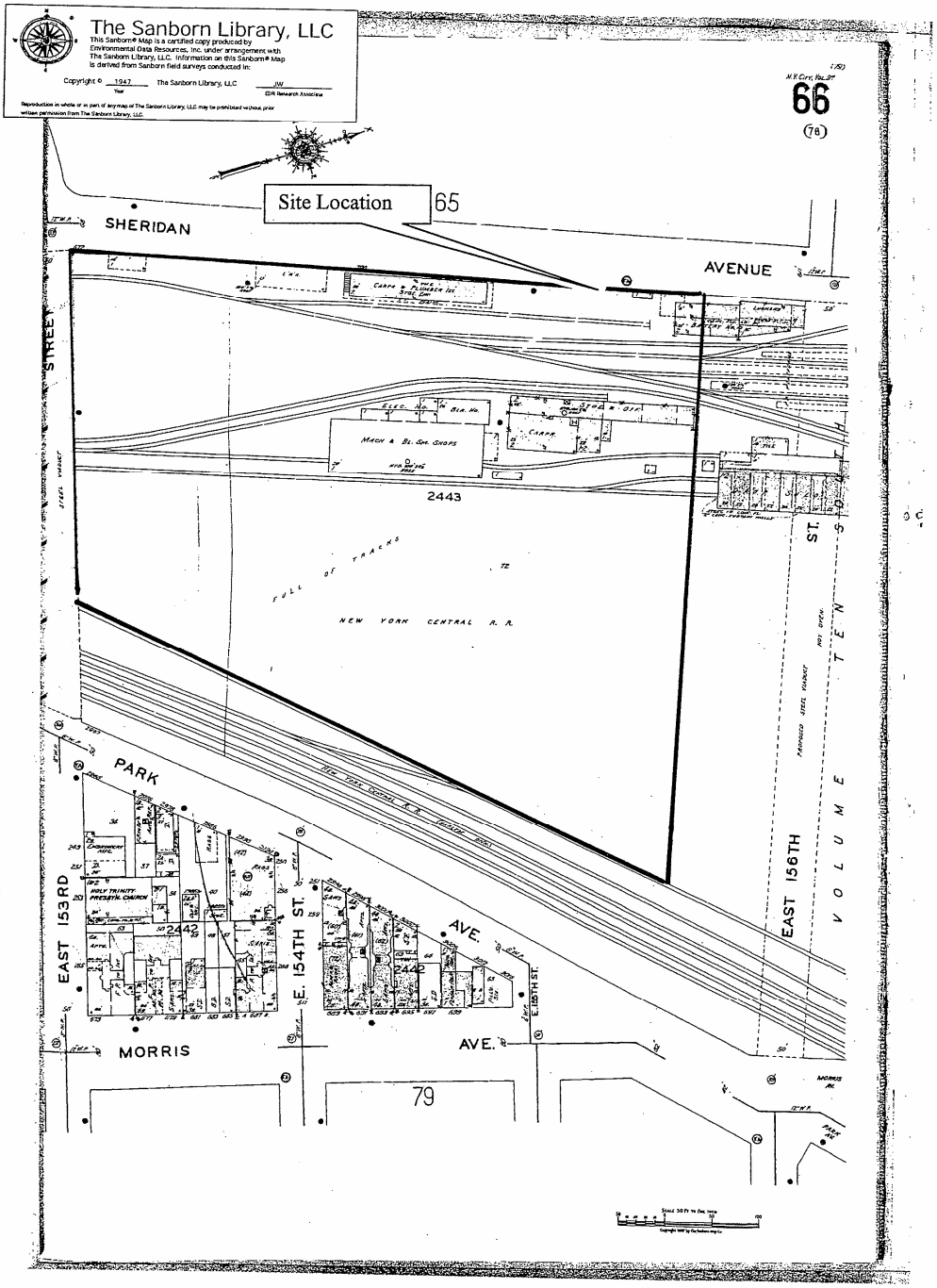
77
Surrounding Properties to the West
See Volume Ten.
E 156TH ST
AVENUE
PARK
SIGEL
FRANZ
WALTON
CONCOURSE
(MOTT AVE)
GRAND
AVENUE
SHERIDAN
84
2467
2468
78
80
SCALE OF FEET
E. 153RD ST.
S.E. 153RD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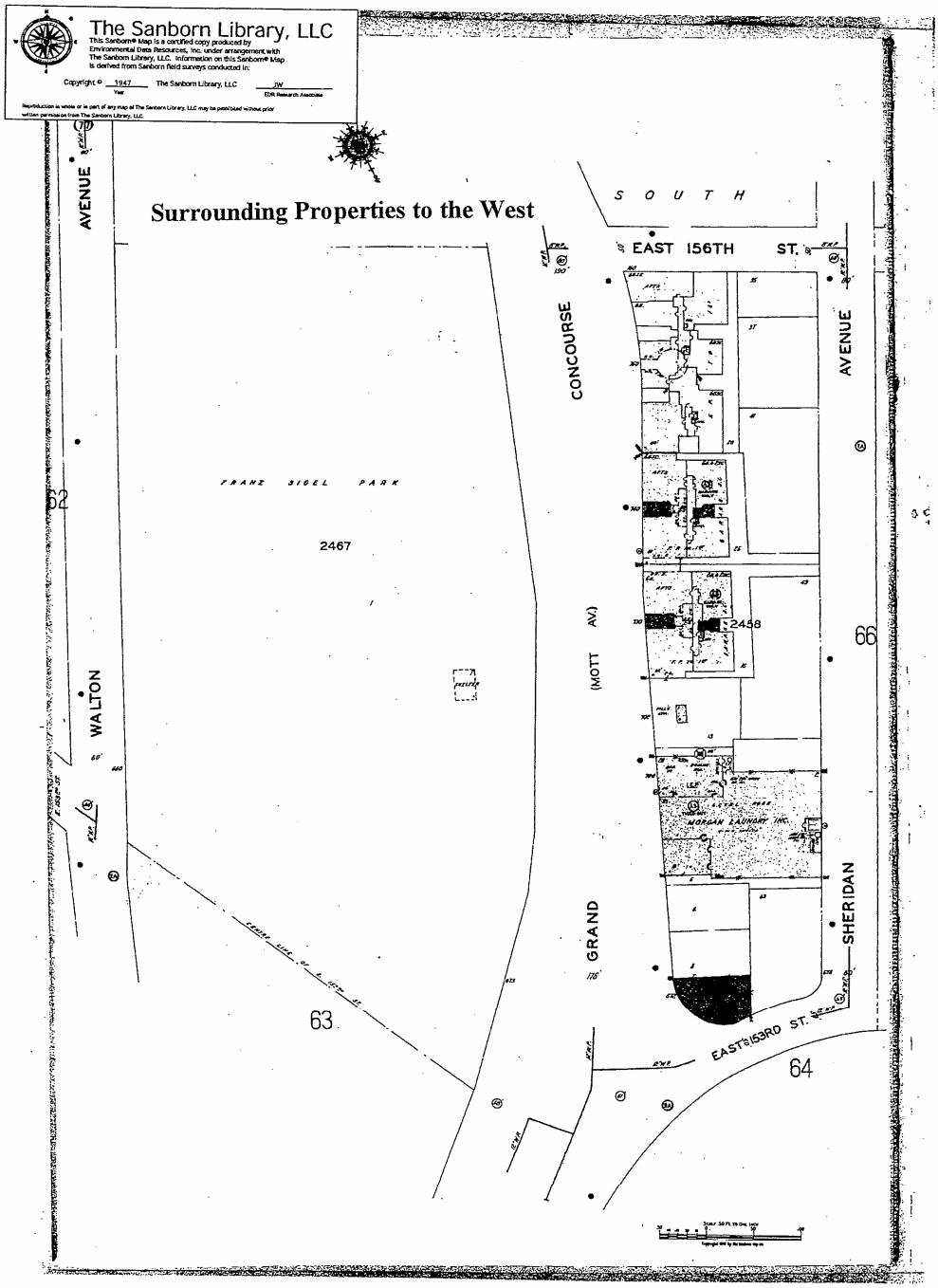
66
(78)
Site Location
65
SHERIDAN
AVENUE
STREET
2443
FULL OF TRACKS
NEW YORK CENTRAL R. R.
PARK
EAST 153RD
E. 154TH ST.
AVE.
EAST 156TH
ST.
VOLUME
MORRIS
AVE.
79
2442
2440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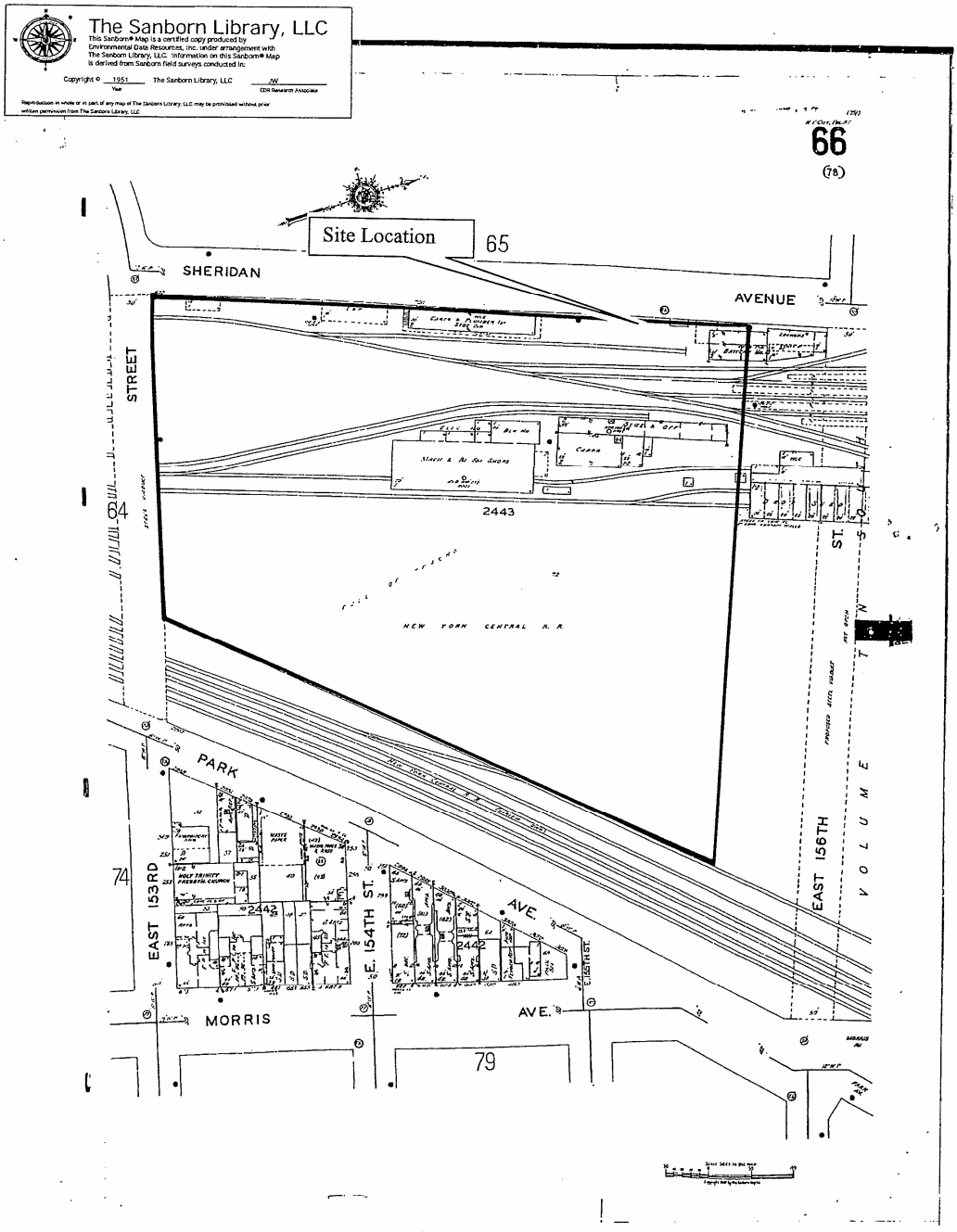
Surrounding Properties to the West
AVENUE
S O U T H
EAST 156TH ST.
CONCOURSE
AVENUE
FRANZ SIGEL PARK
2467
62
WALTON
(MOTT AV.)
2458
66
GRAND
SHERIDAN
63
EAST 153RD ST.
64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66
(78)
Site Location
65
SHERIDAN
AVENUE
STREET
64
2443
ST.
NEW YORK CENTRAL R. R.
PARK
74
EAST 153RD
E. 154TH ST.
2442
AVE.
EAST 156TH
VOLUME
MORRIS
AVE.
79

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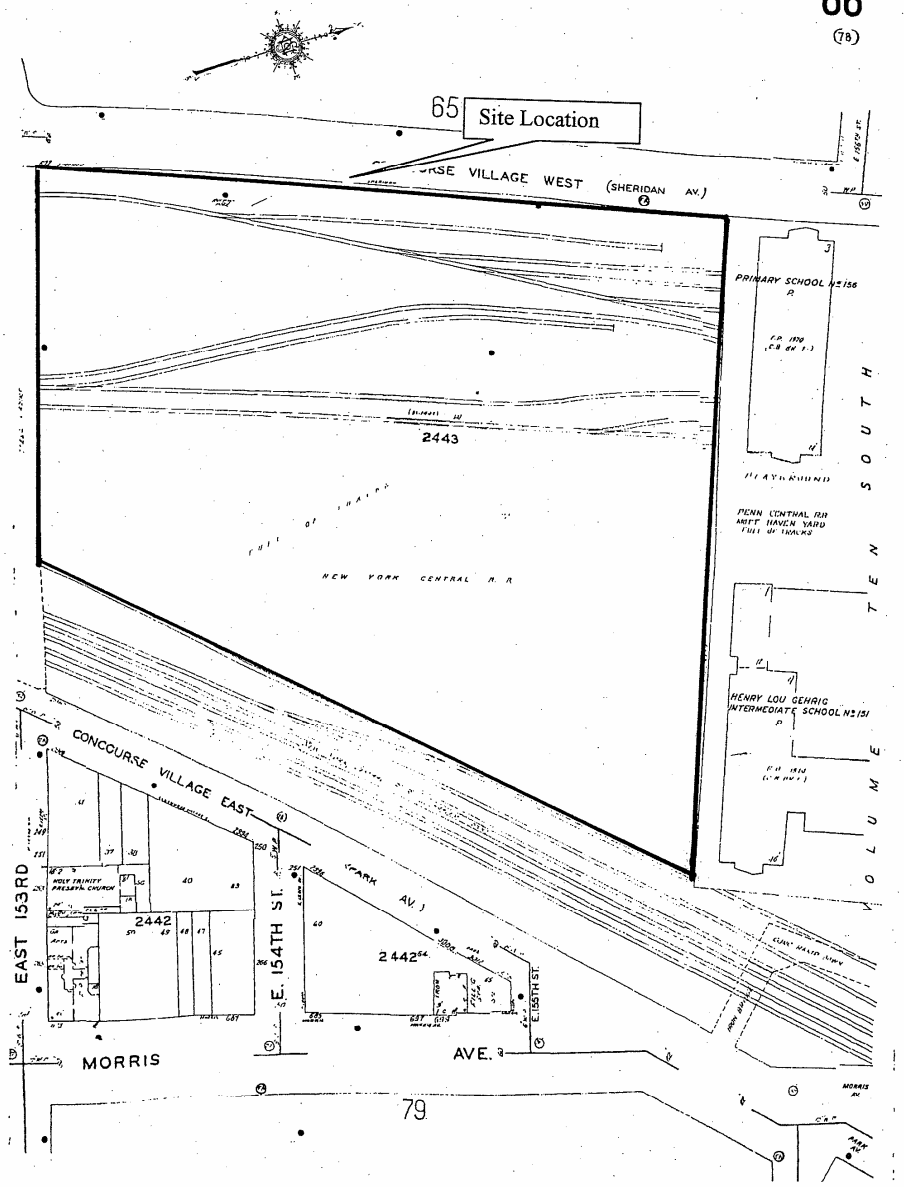
(78)



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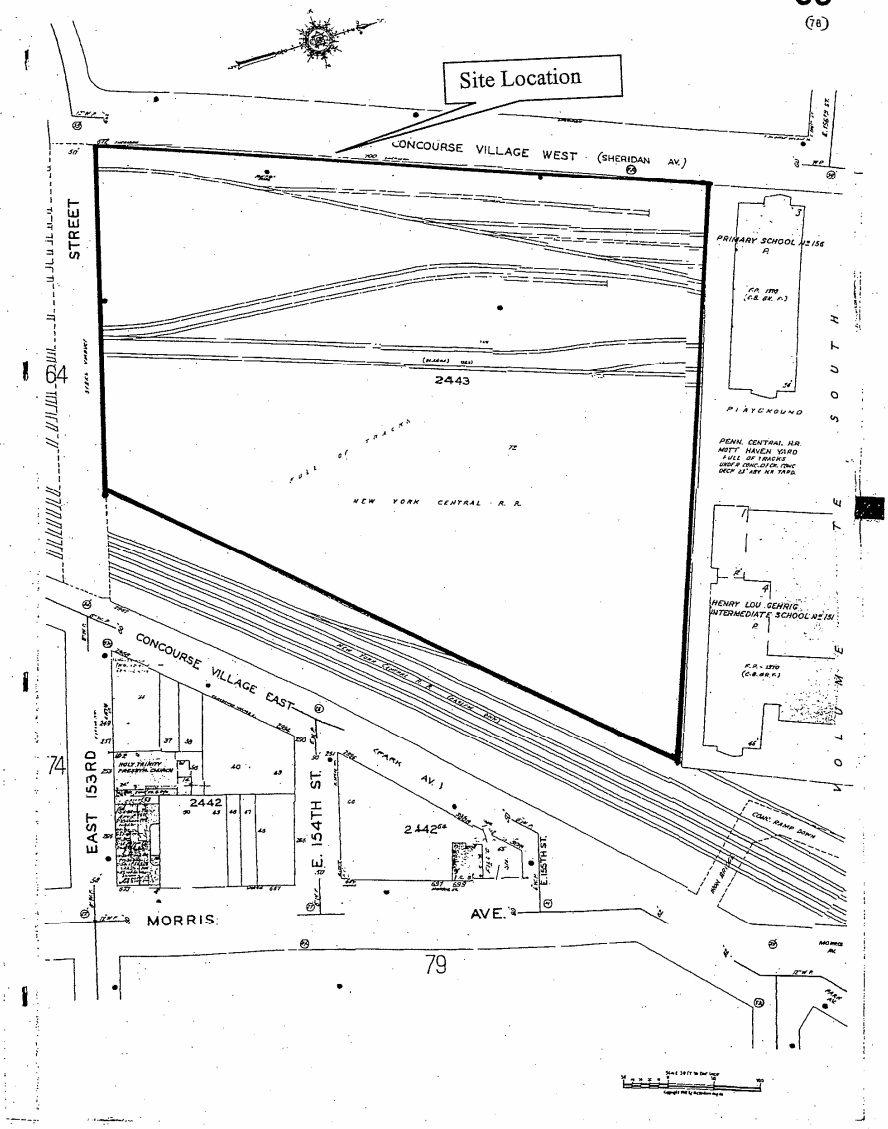

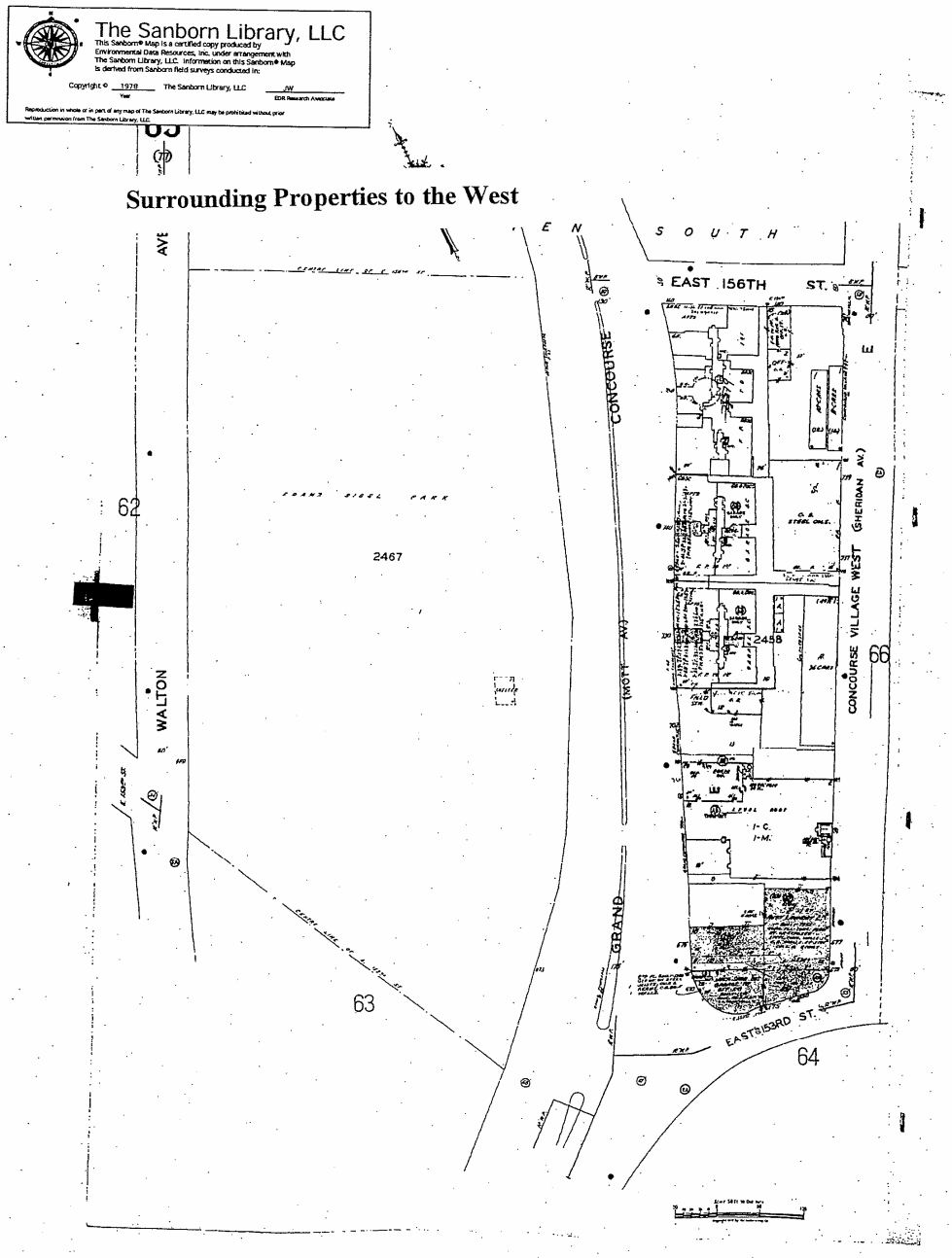
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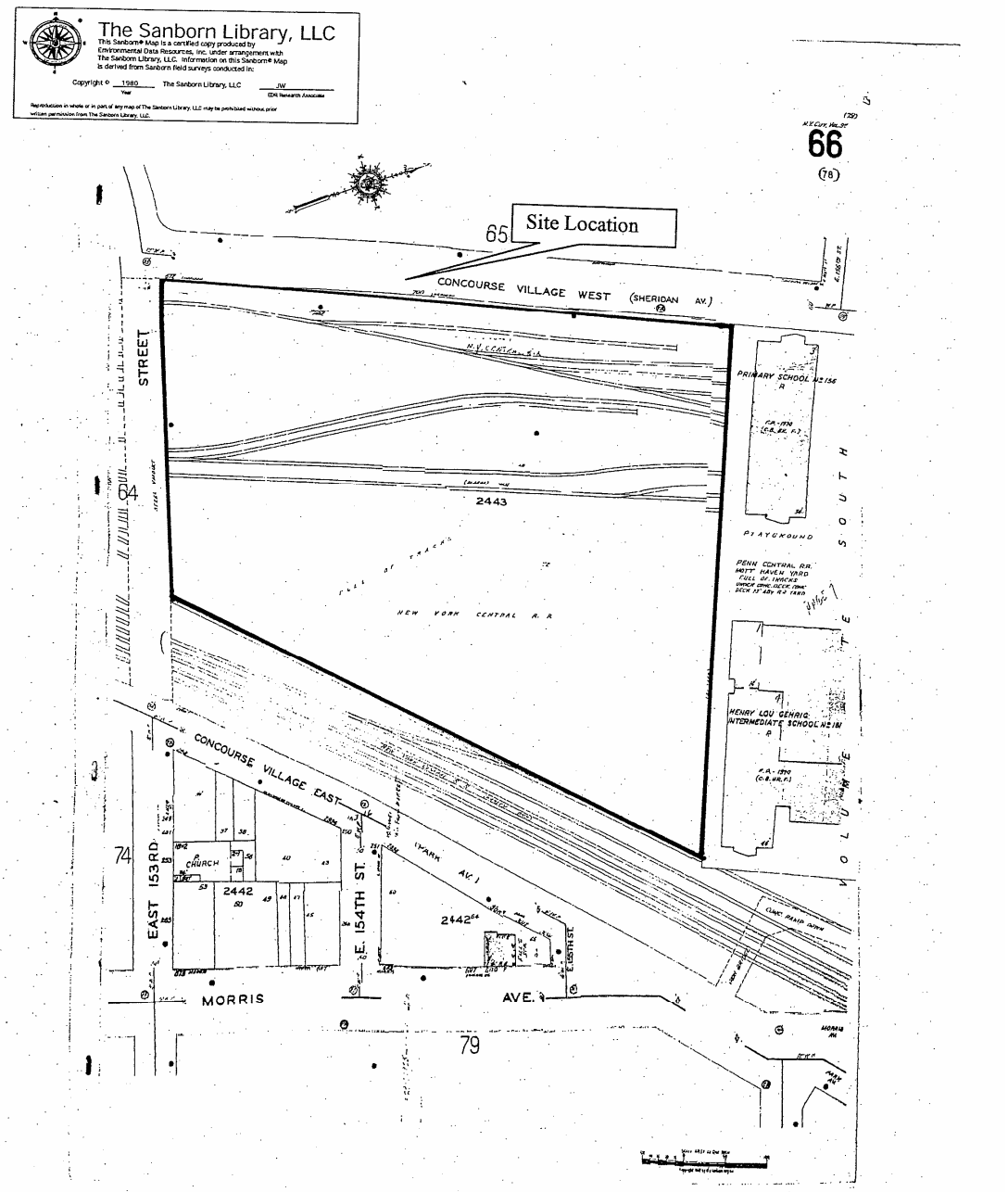
Surrounding Properties to the West
S O U T H
EAST 156TH ST.
E
CONCOURSE
CONCOURSE VILLAGE WEST (SHERIDAN AV.)
GRAND (MOTT AV.)
WALTON AVE
62
63
64
66
2467
2455
EASTBOURNE ST.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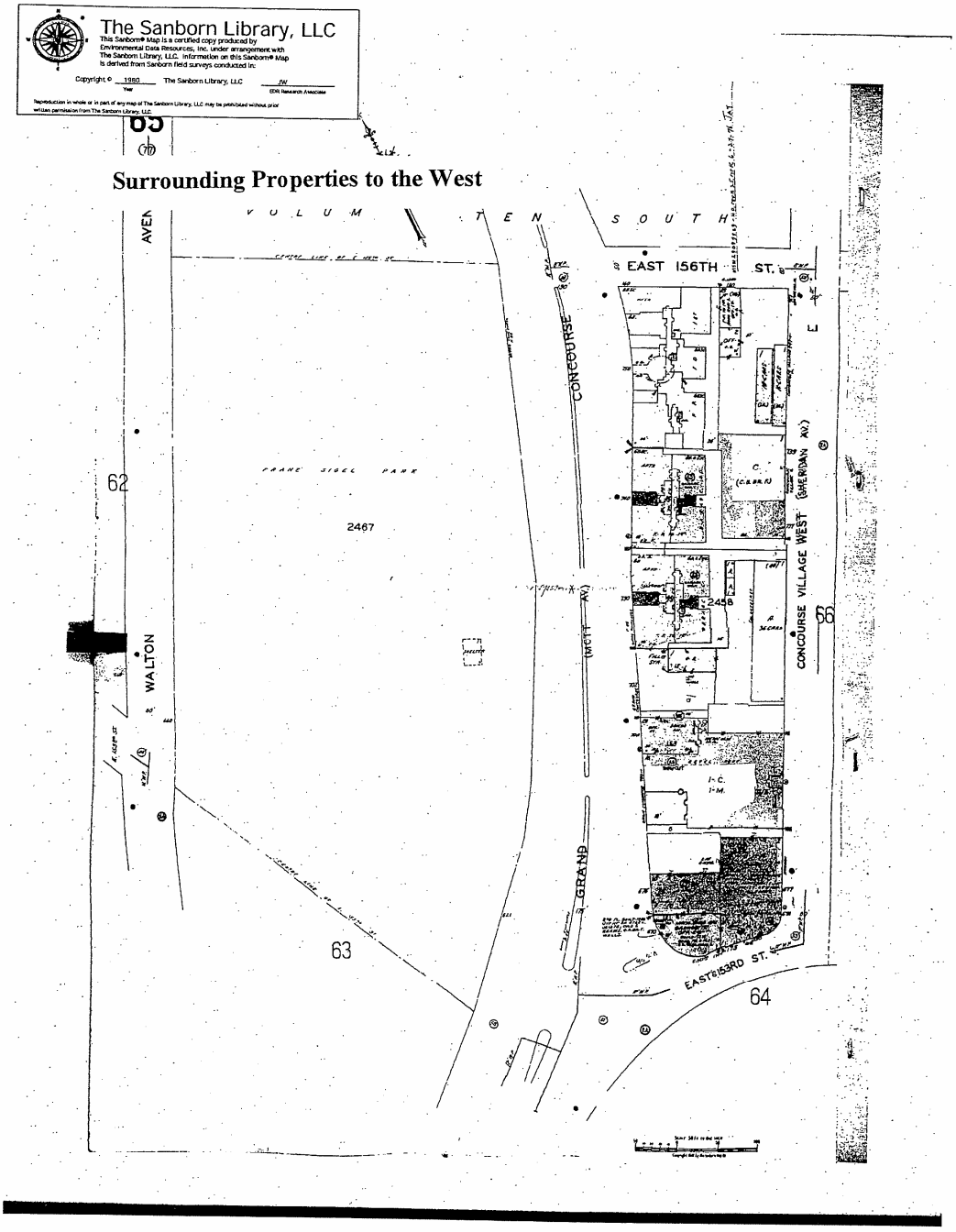
66
(78)
Site Location
65
CONCOURSE VILLAGE WEST (SHERIDAN AV.)
STREET
64
2443
PRIMARY SCHOOL
PLAYGROUND
PENN CENTRAL R.R.
MOTT HAVEN YARD
HENRY LOU GEHRIG INTERMEDIATE SCHOOL
NEW YORK CENTRAL R. R.
CONCOURSE VILLAGE EAST
(YARM AV.)
74
EAST 153RD
CHURCH
2442
E. 154TH ST
2442
E 155TH ST
MORRIS
AVE.
79
SOUTH
VOLUME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Surrounding Properties to the West
VULUM
TEN
SOUTH
EAST 156TH ST.
CONCOURSE
FRANK SIGEL PARK
2467
62
63
64
66
WALTON
GRAND
EAST 153RD ST.
CONCOURSE VILLAGE WEST (GAEWONAN AV.)
2458
I-C.
I-M.

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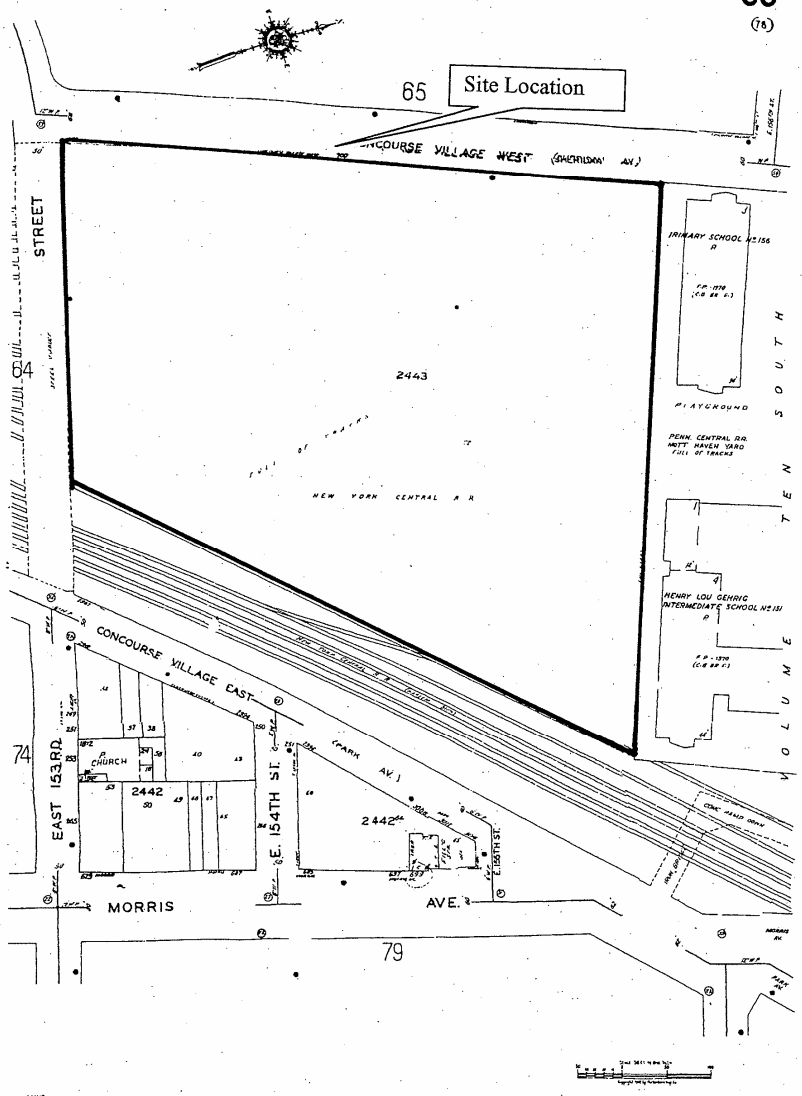

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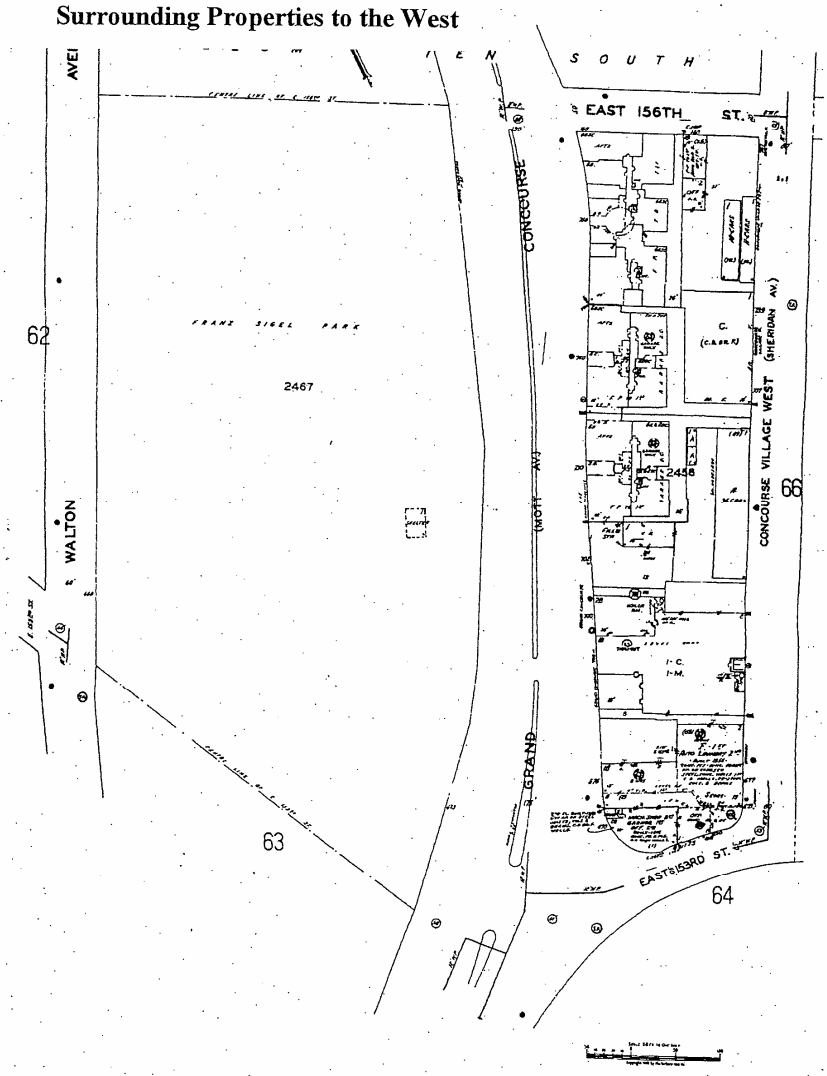

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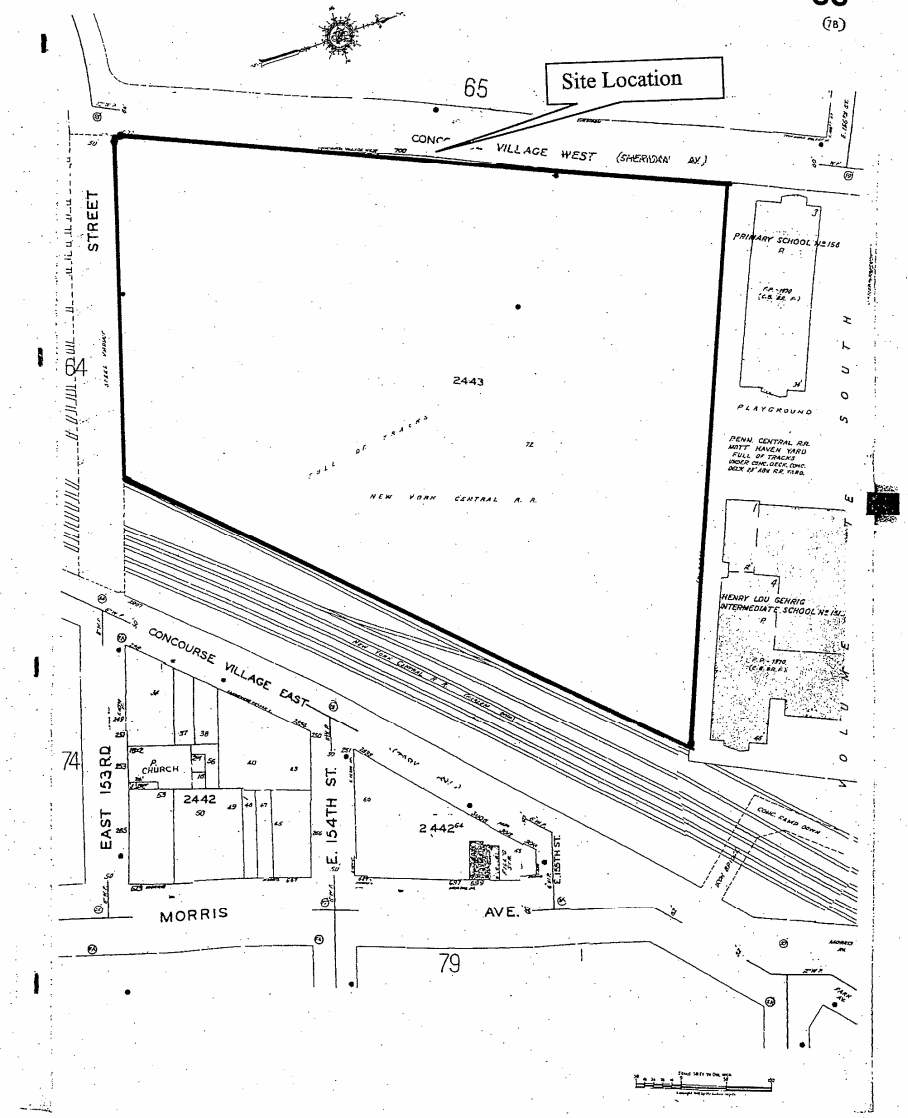

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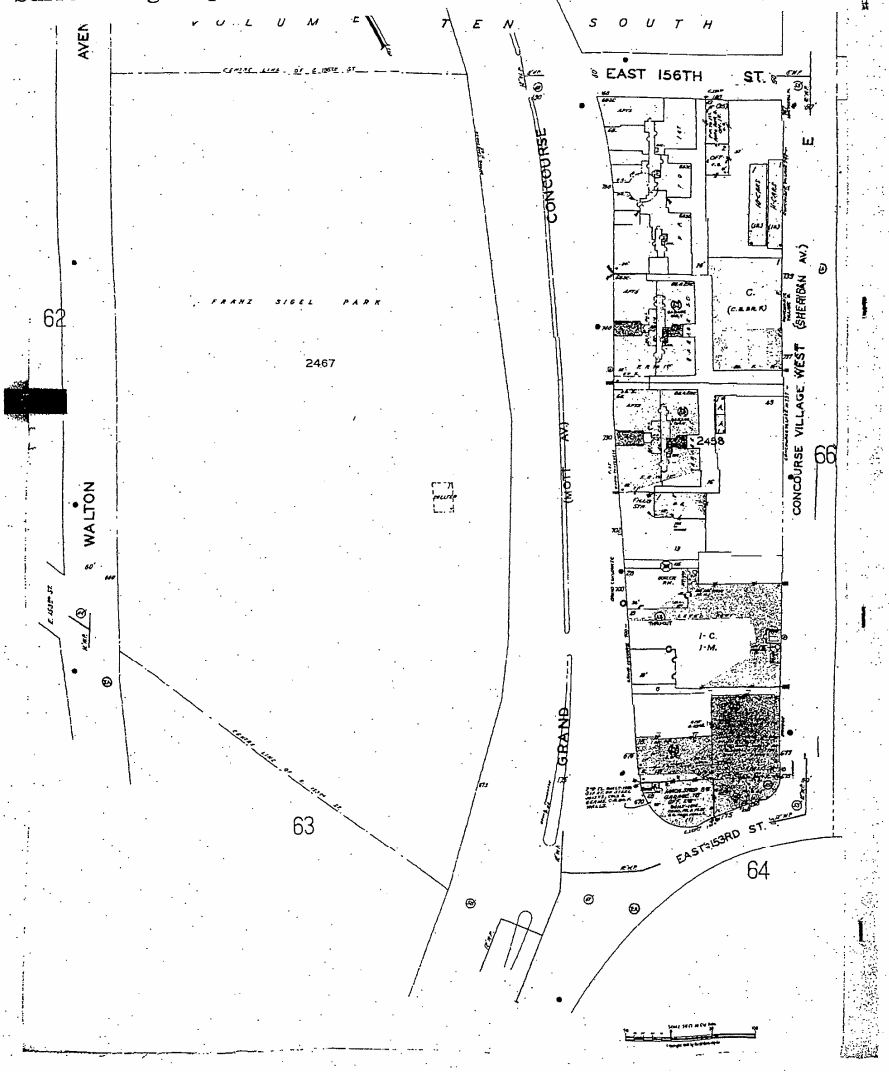

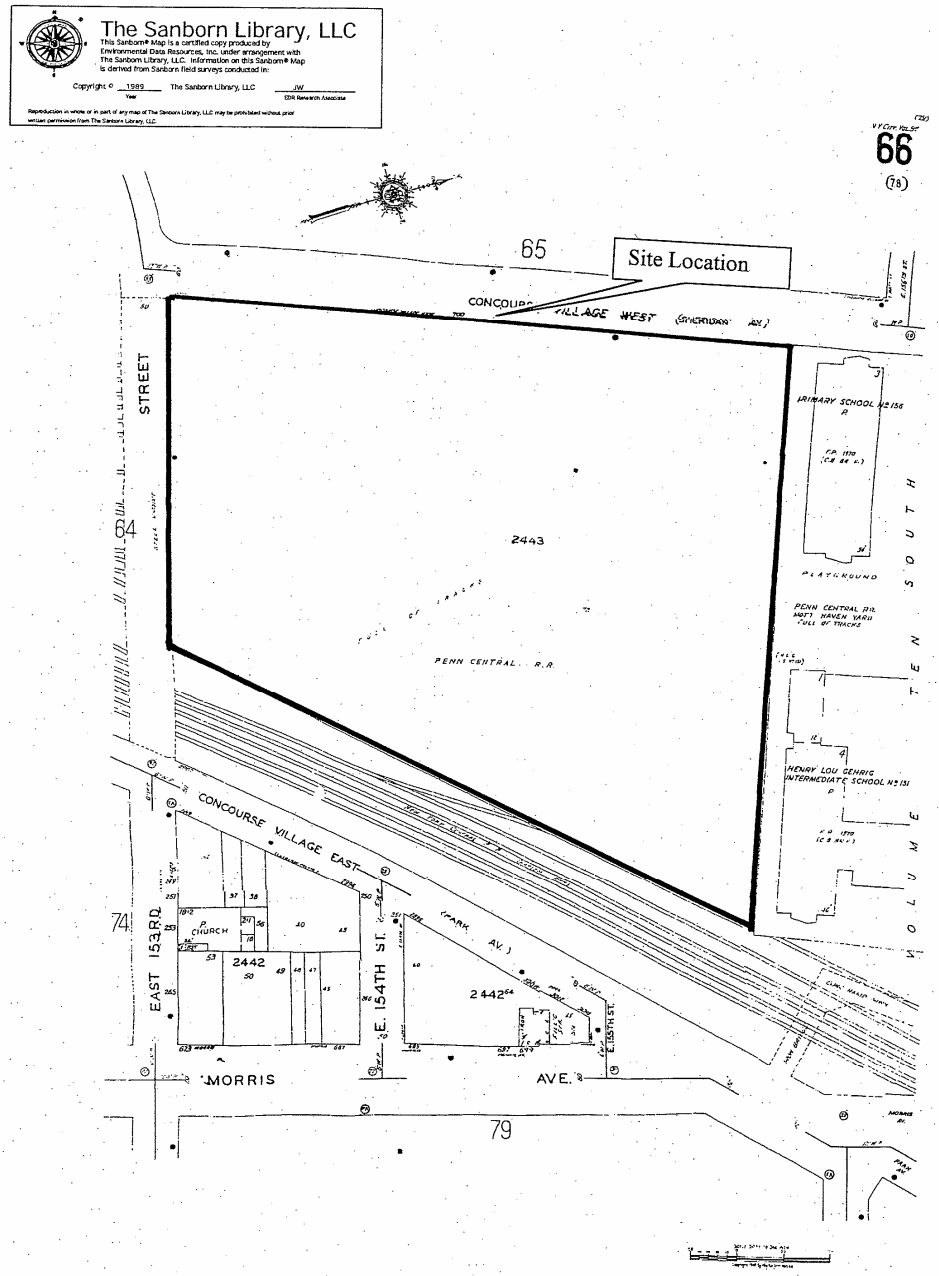
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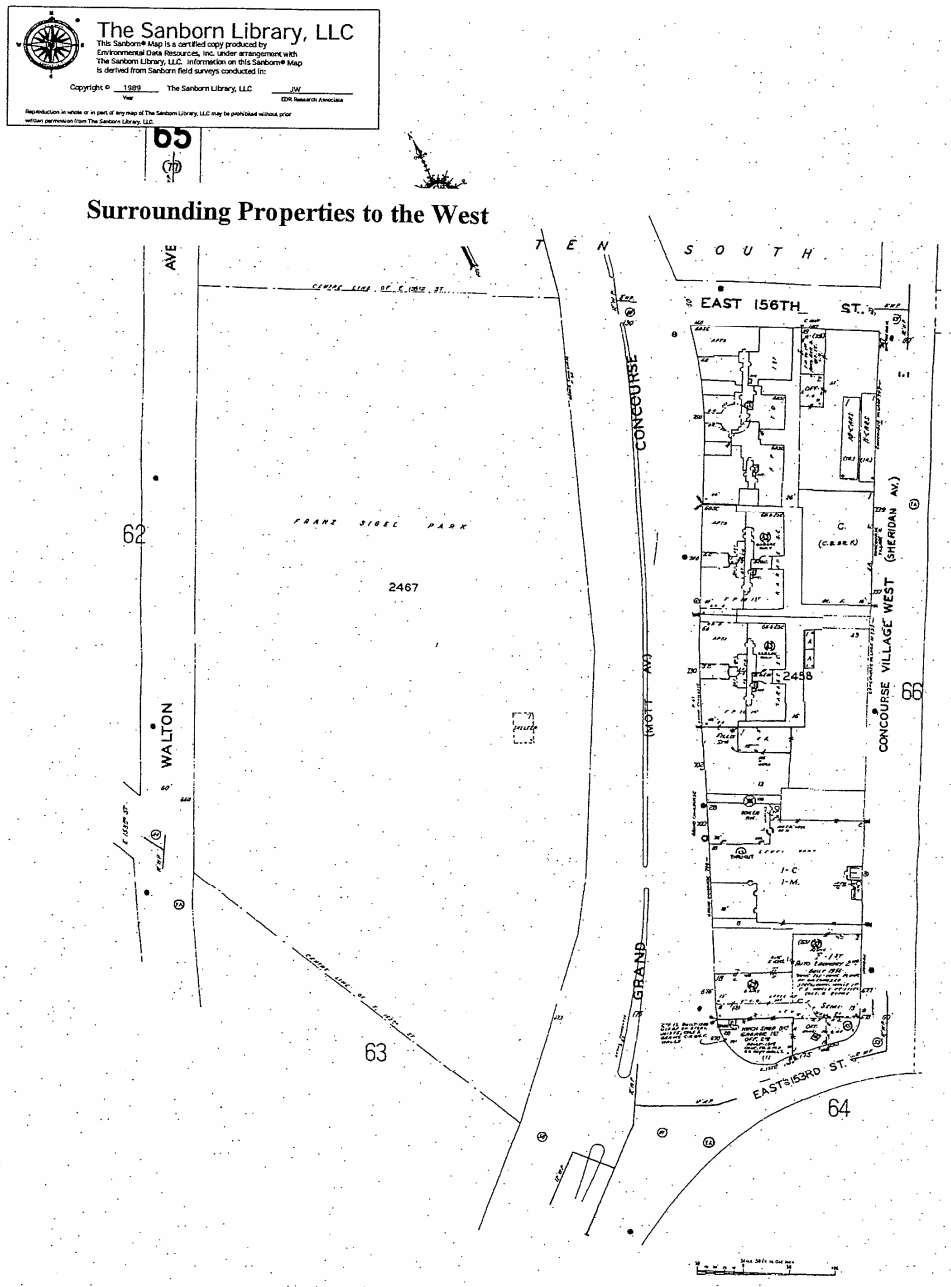
66
(78)
65
Site Location
CONCOURSE VILLAGE WEST (STERLING AV.)
STREET
64
2443
PENN CENTRAL R.R.
PRIMARY SCHOOL No 156
PLAYGROUND
PENN CENTRAL R.R. MOTT HAVEN YARD FULL OF TRACKS
HENRY LOU GEHRIG INTERMEDIATE SCHOOL No 131
SOUTH
CONCOURSE VILLAGE EAST
(PARK AV.)
74
EAST 153RD.
E. 154TH ST.
E. 155TH ST.
CHURCH
2442
2442 64
MORRIS
AVE.
79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65
Surrounding Properties to the West
EAST 156TH ST.
SOUTH
CONCOURSE
FRANZ SIGEL PARK
2467
2458
CONCOURSE VILLAGE WEST (SHERIDAN AV.)
WALTON AVE
GRAND (MOTT AV.)
EAST 153RD ST.
62
63
64
66

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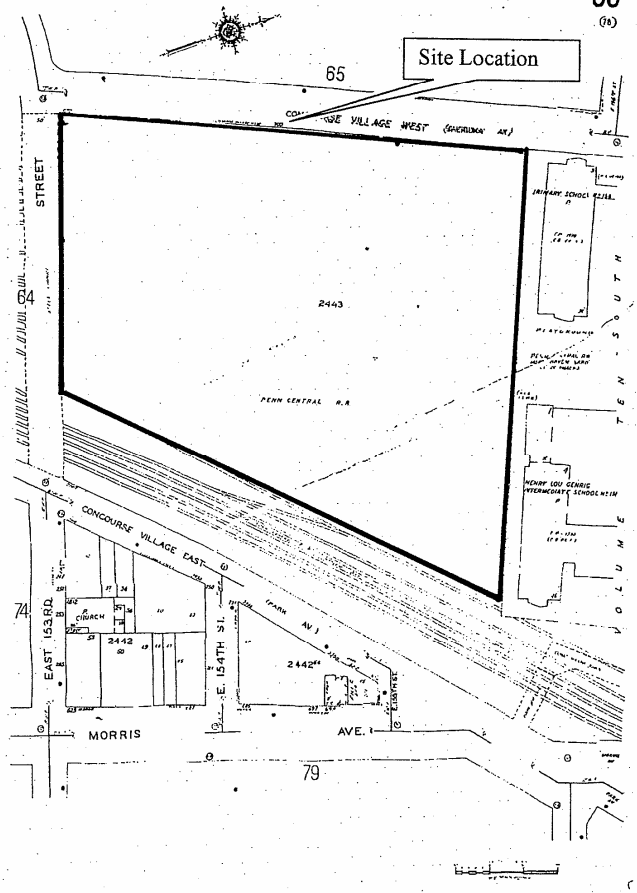

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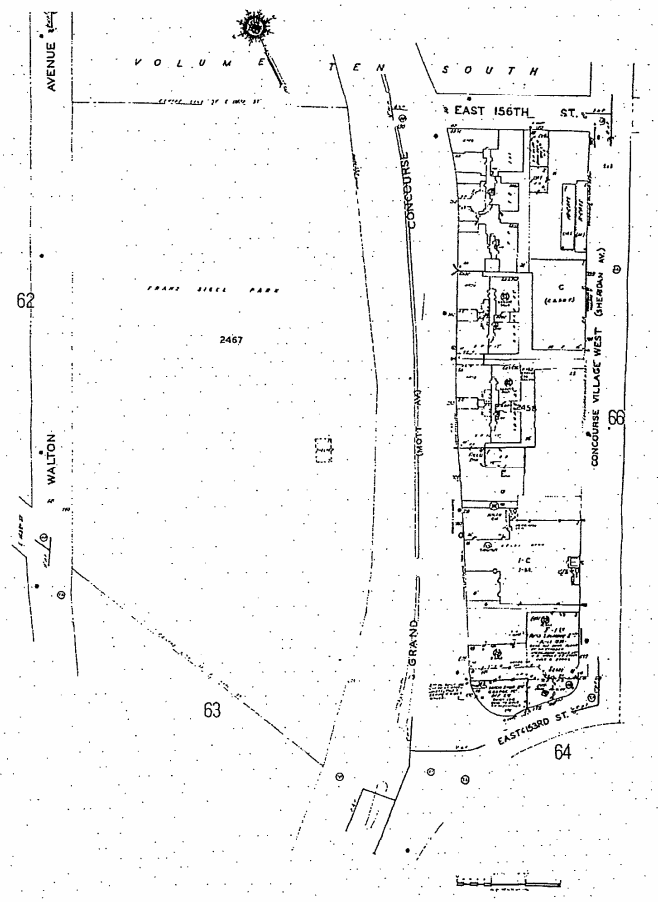

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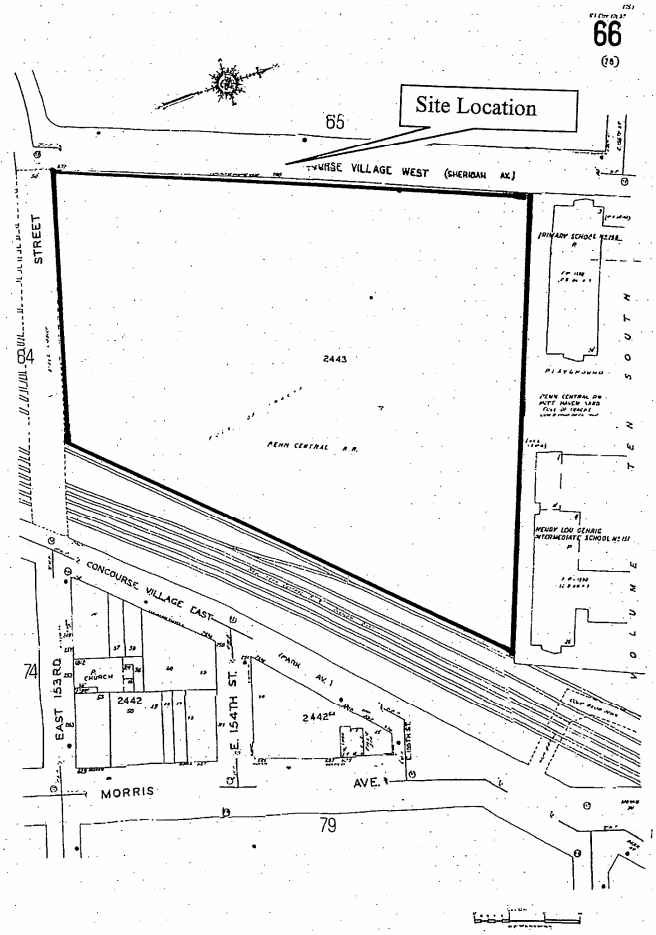

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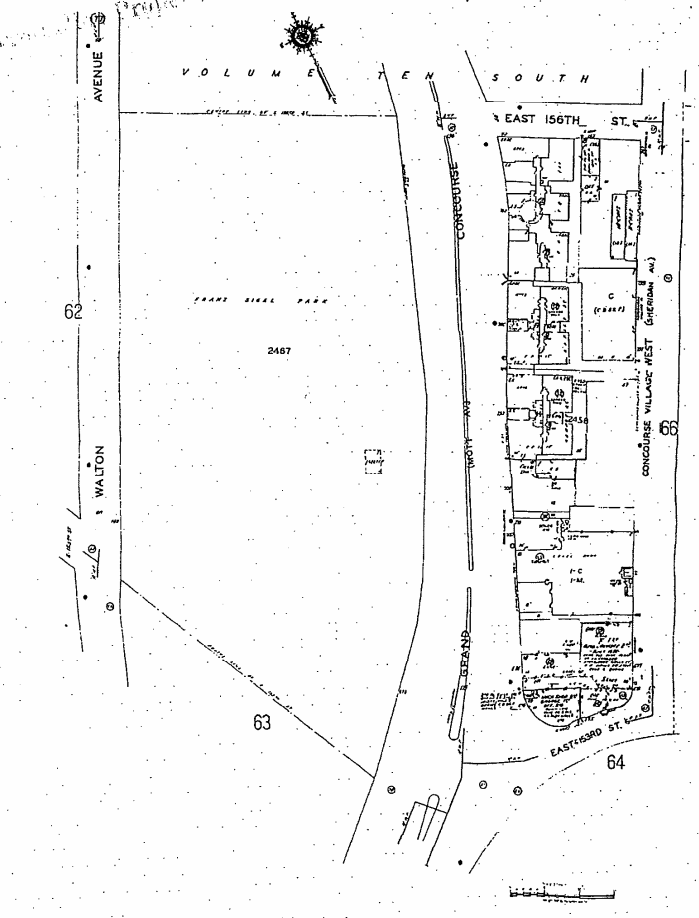

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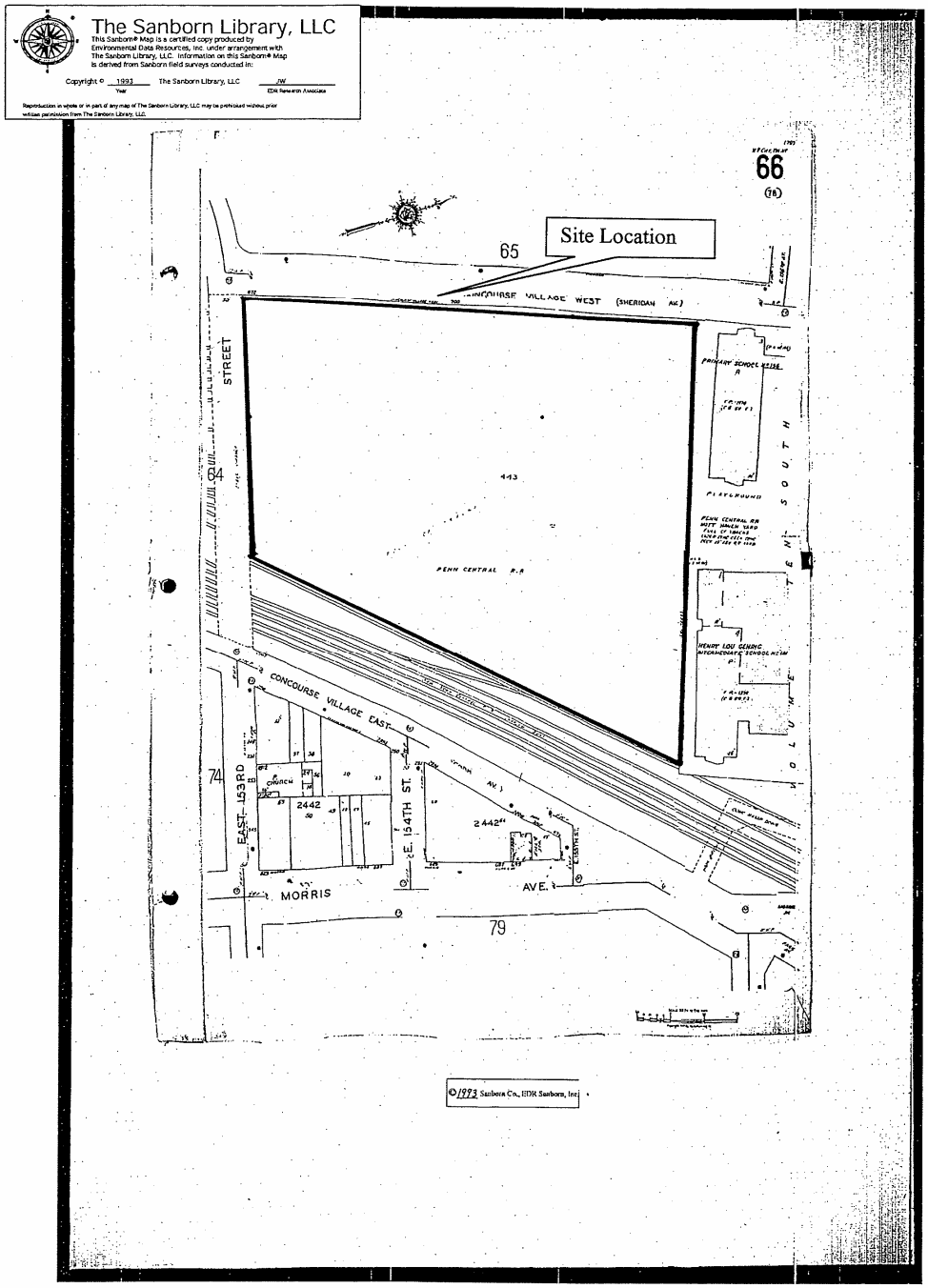
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66
Site Location
65
79
74
64
443
2442
2442
CONCOURSE VILLAGE EAST
EAST 153RD STREET
E. 154TH ST.
MORRIS AVE.
SOUTH TERMINAL
PENN CENTRAL R.R.
PLAYGROUND
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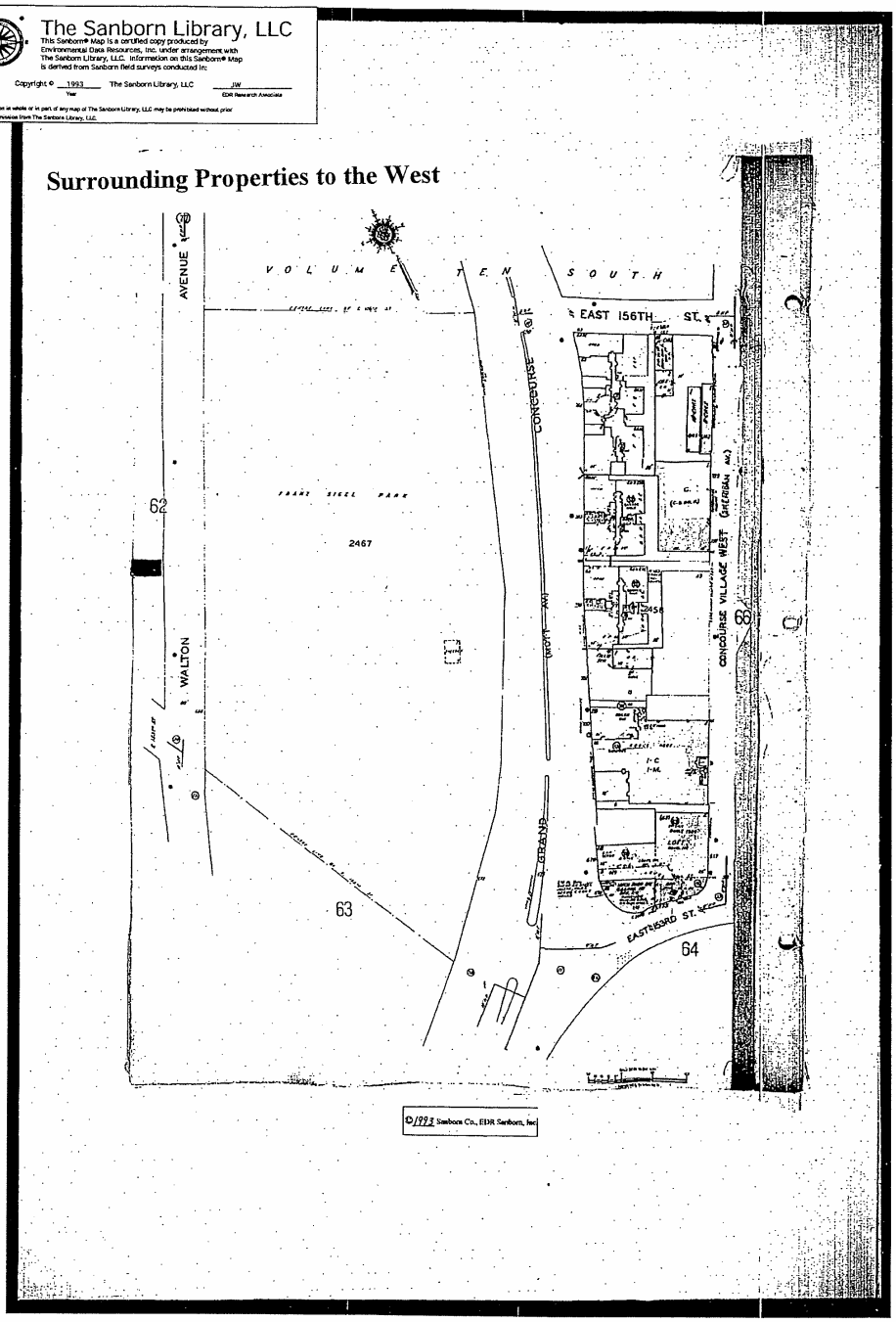

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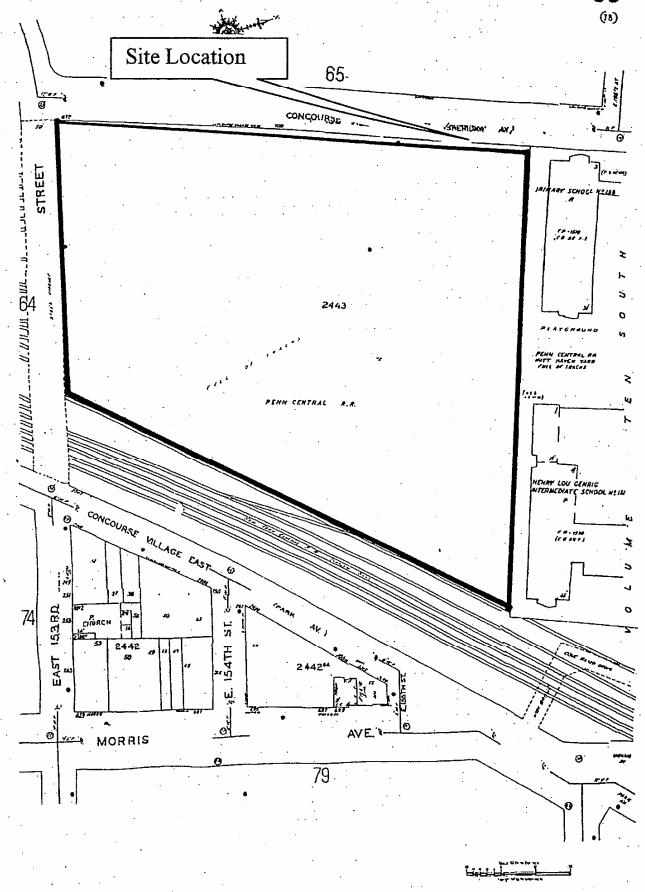

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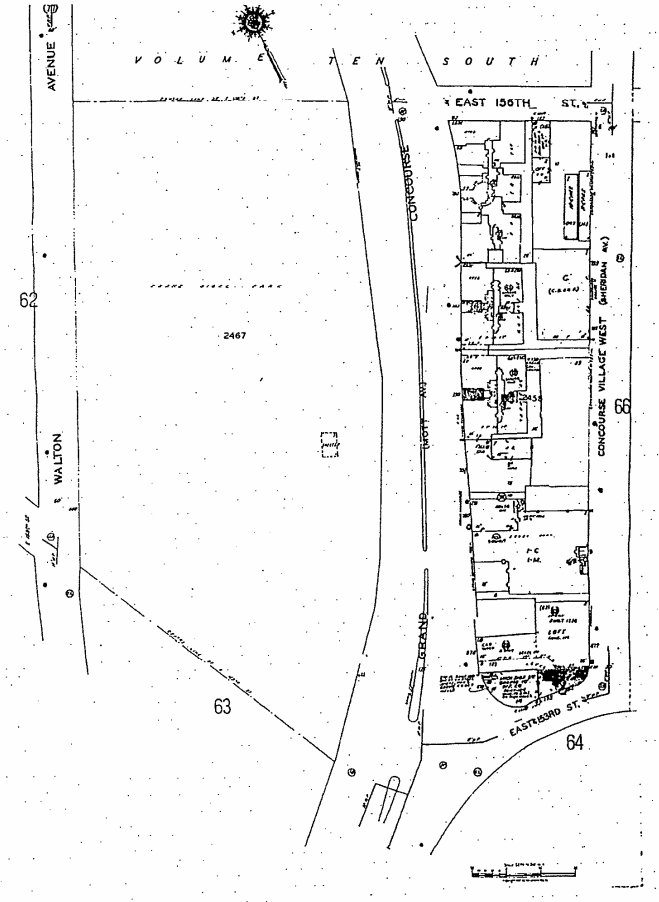

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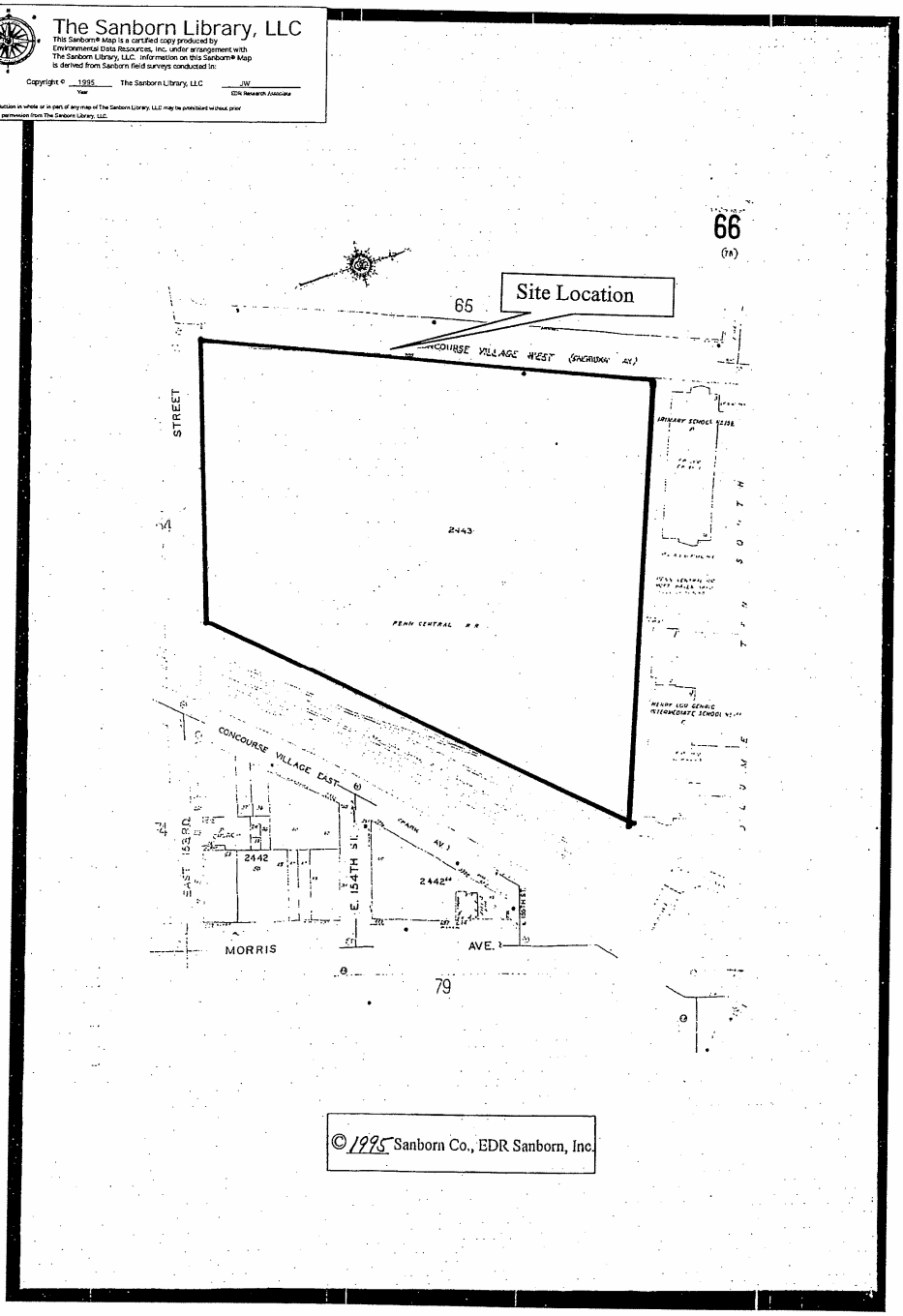

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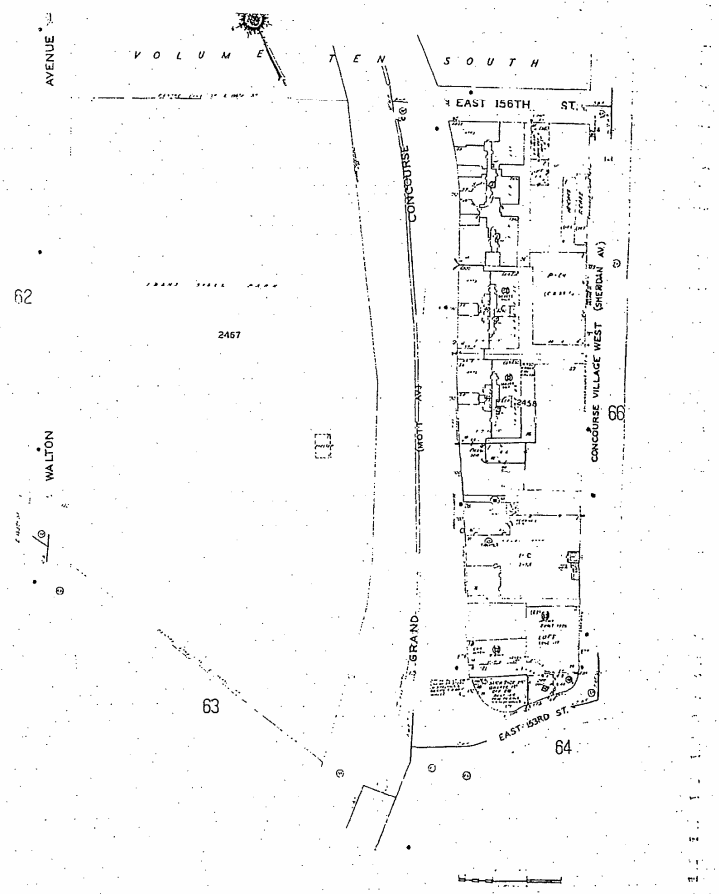

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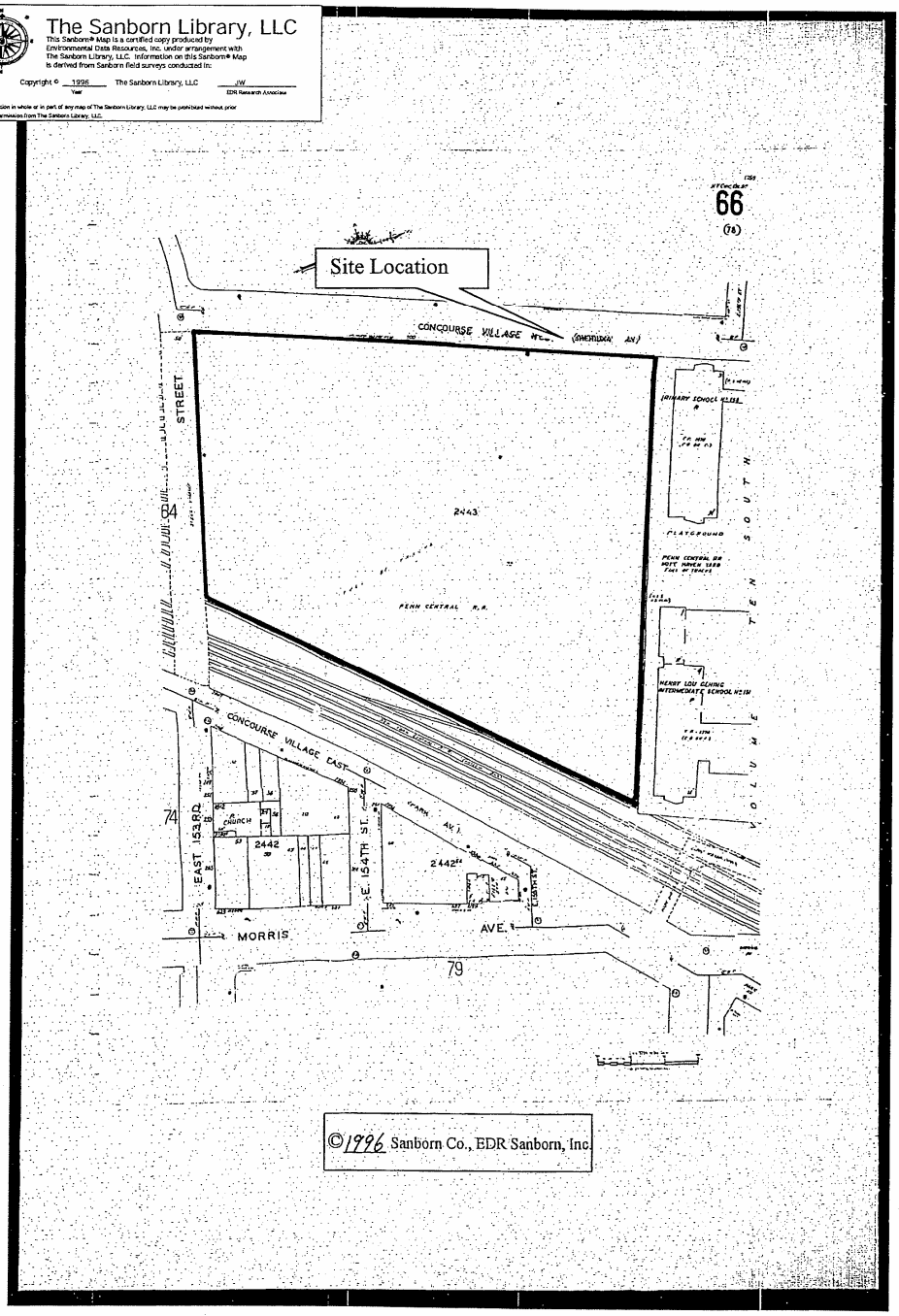

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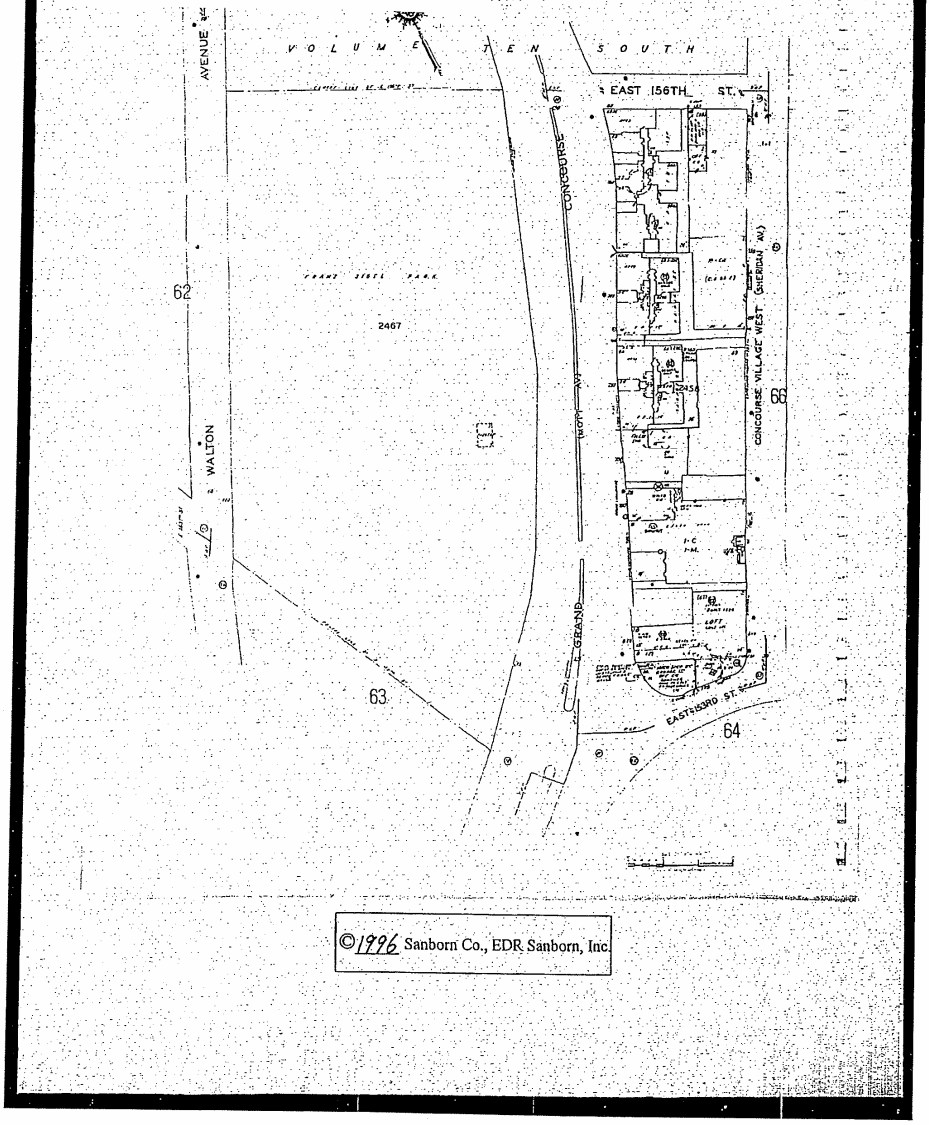

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APPENDIX H
PUBLIC HEALTH EXPOSURE ASSESSMENT

1.0 Public Health Exposure Assessment

1.1 Exposure Setting

The former Metro North property (Mott Haven, hereafter referred to as the "Site") is located at 672 Concourse Village West on Block 2443, Lot 78 in the Bronx, New York. The Site consists of a 9 acre vacant lot located in a topographic depression. The properties to the west and east of the Site are approximately 30 feet higher in elevation than the Site. The surrounding area is primarily characterized by residential, commercial, and railroad use. No buildings are currently at the Site. Metro North is currently using a portion of the Site for storage. Historically, the Site was used for railroad operations. The adjacent properties include Primary School No. 156 and Intermediate School No. 151 to the north (schools); New York and Harlem Railroad to the east (transportation); New York and Harlem Railroad and Cardinal Hayes High School to the south (transportation and school); and apartment buildings, Herk Elevators, Live Poultry, and Nationwide Warehouse to the west (residential, commercial, and retail).

Based on groundwater levels measured at the Site, shallow groundwater is approximately 4 to 12 feet below ground surface (bgs) and shallow groundwater flows southeast across the Site. The closest surface water body is the Harlem River located approximately 2,500 feet to the west and approximately one mile to the south of the Site. The United States Geological Survey (USGS) topographic map and Environmental Data Resources (EDR) Radius Report did not show any tidal or freshwater wetlands at or near the Site. According to the EDR Radius Report, the closest wetlands are located along the Harlem River. According to the EDR Radius Report, the Site is not located in a flood plain.

1.2 Contaminants On-Site

A Phase II Environmental Site Investigation (ESI) was conducted at the Site and the results reported in the Phase II Environmental Site Investigation Report (URS, 2005). Phase II investigation activities included the following:

- Surface soil sampling
- Test pit sampling
- Subsurface borings
- Groundwater sampling

Eleven surface soil samples were collected at a depth of 0 to 6 inches from locations across the Site and analyzed for semi-volatile organic compounds (SVOCs), pesticides, PCBs, herbicides,

and TAL metals. Ten test pits were excavated in four debris mounds and one or two soil samples were collected from each test pit for a total of 10 samples. Test pit soil samples were analyzed for volatile organic compounds (VOCs), SVOCs, pesticides, PCBs, herbicides, and TAL metals. Ten soil borings were drilled. Three of these were completed as temporary piezometer installations. Soil samples from the borings were collected and analyzed for VOCs, SVOCs, and TAL metals at the seven completed borings; groundwater samples were collected at the three temporary piezometer installations and at boring SB-3. Groundwater samples were analyzed for VOCs only.

A Remedial Investigation (RI) was completed between March and September, 2005 and the results reported in this Remedial Investigation Report (Shaw, 2005). The following field activities were completed as part of the RI:

- Implementation of a Community Air Monitoring Program during investigative activities;
- Completion of a geophysical surveys to establish underground utilities in areas where intrusive activities were planned;
- Installed 66 soil gas implants and collected 23 soil gas samples (analyzed for VOCs and methane) to further assess any impacts to the property;
- Advanced 49 soil borings to a depth of approximately 15 ft bgs, and five soil borings to a depth between 25 and 43 ft bgs, in the vicinity of the Site and analyzed select samples for VOCs, SVOCs, metals, pesticides, herbicides and PCBs;
- Excavation of nine test pits across the Site including the debris mounds and collection of one sample (analyzed for VOCs, SVOCs, metals, pesticides, herbicides and PCBs) from each test pit to further characterize the subsurface;
- Installed, developed, surveyed and sampled 20 groundwater monitoring wells on-site and off-site (analyzed samples for VOCs, SVOCs, metals, pesticides, herbicides and PCBs);
- Advanced eight soil borings to bedrock to confirm the presence or absence of dense non-aqueous phase liquid (DNAPL);
- Performed site reconnaissance on surrounding properties; and,
- Conducted slug tests on selected monitoring wells to assess hydraulic characteristics of the shallow aquifer.

The results of the sampling and analysis programs conducted as part of the Phase II ESI and the RI are summarized below.

Surface Soils.

Eleven surface soil samples were collected from locations across the Site during the Phase II ESI. The analytical results from the surface soil samples indicated the presence of SVOCs throughout the Site, most of which were detected at concentrations less than the Recommended Soil Cleanup Objectives (RSCOs) published in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) (HWR-94-4-46, Determination of Soil Cleanup Objectives and Cleanup Levels, January 1994). Several SVOCs were detected at concentrations that exceeded the RSCOs. The compounds whose concentrations exceeded the RSCOs and the range in which they were detected were the following:

- benzo(a)anthracene: 570 – 15,000 µg/kg;
- benzo(a)pyrene: 680 – 15,000 µg/kg;
- chrysene: 700 – 17,000 µg/kg;
- benzo(k)fluoranthene: 1,200 – 13,000 µg/kg;
- dibenzo(a,h)anthracene: 44 – 400 µg/kg; and
- benzo(b)fluoranthene: 1,100 – 13,000 µg/kg.

Herbicides, pesticides, and PCBs were not detected in any surface soil sample from the Site at concentrations that exceeded the RSCOs. Arsenic, barium, cadmium, calcium, copper, lead, magnesium, mercury, nickel, and zinc were detected in at least one surface soil sample from the Site at concentrations that exceeded Eastern USA background levels.

Southern Debris Mound.

No evidence of contamination was observed during excavation and field inspection of the materials comprising the Southern Debris Mound during test pit excavation; therefore, soil samples were collected from the materials underlying the debris mound during the Phase II ESI. Three test pits were excavated in the material beneath the Southern Debris Mound and no VOCs were detected at concentrations that exceeded the RSCOs. Several SVOCs were detected at concentrations that exceeded the RSCOs. The compounds whose concentrations exceeded the RSCOs and the range in which they were detected were the following:

- benzo(a)pyrene: 950 – 4,800 µg/kg;
- chrysene: 1,100 – 5,100 µg/kg;
- benzo(k)fluoranthene: 1,700 – 3,100 µg/kg;
- dibenzo(a,h)anthracene: 46 – 260 µg/kg; and

- benzo(b)fluoranthene: 4,100 µg/kg.

Herbicides, pesticides, and PCBs were not detected in any soil sample from the Southern Debris Mound at concentrations that exceeded the RSCOs. Cadmium, copper, mercury, zinc, lead, magnesium, barium, and calcium were detected in at least one soil sample from the Southern Debris Mound at concentrations that exceeded Eastern USA background levels.

Northern Debris Mound.

No evidence of contamination was observed during excavation and field inspection of the materials comprising the Northern Debris Mound during test pit excavation; therefore, soil samples were collected from the materials underlying the debris mound during the Phase II ESI. Three test pits were excavated in the material beneath the Northern Debris Mound and no VOCs were detected at concentrations that exceeded the RSCOs (NYSDEC, 1994). The three soil samples from the Northern Debris Mound indicated the presence of a number of SVOCs, but only benzo(a)pyrene was detected at a concentration (120 µg/kg) that exceeded the RSCO. Herbicides, pesticides, and PCBs were not detected in any soil sample from the Northern Debris Mound at concentrations that exceeded the RSCOs. Magnesium, mercury, and zinc were detected in at least one soil sample from the Northern Debris Mound at concentrations that exceeded Eastern USA background levels.

Central Section of Site.

Three test pits were excavated in the central portion of the Site during the Phase II ESI. No VOCs were detected at concentrations that exceeded the RSCOs (NYSDEC, 1994). Several SVOCs were detected in soil samples from the test pits in the central section of the site. The SVOCs that were detected at concentrations that exceeded the RSCOs and their maximum detected concentrations are the following:

- benzo(a)anthracene: 2,500 µg/kg;
- chrysene: 3,300 µg/kg;
- benzo(b)fluoranthene: 2,900 µg/kg;
- benzo(k)fluoranthene: 4,000 µg/kg;
- benzo(a)pyrene: 2,500 µg/kg; and
- dibenzo(a,h)anthracene: 110 µg/kg.

Herbicides, pesticides, and PCBs were not detected in any soil sample from the Central Section of the Site at concentrations that exceeded the RSCOs. Arsenic, cadmium, copper, lead, magnesium, mercury, and zinc were detected in at least one soil sample from the Central Section of the Site at concentrations that exceeded Eastern USA background levels.

Southern Boundary of the Site.

One test pit was excavated along the southern boundary of the site during the Phase II ESI. No VOCs were detected at concentrations that exceeded the RSCOs (NYSDEC, 1994). The SVOCs that were detected at concentrations that exceeded the RSCOs and their detected concentrations are the following:

- benzo(a)anthracene: 800 µg/kg;
- chrysene: 890 µg/kg;
- benzo(a)pyrene: 760 µg/kg; and
- dibenzo(a,h)anthracene: 55 µg/kg.

Herbicides, pesticides, and PCBs were not detected in the soil sample from the Southern Boundary of the Site at concentrations that exceeded the RSCOs. Arsenic, cadmium, copper, lead, magnesium, mercury, nickel, and zinc were detected in the soil sample from the Southern Boundary of the Site at concentrations that exceeded Eastern USA background levels.

Subsurface Soil Borings.

Ten soil borings were drilled at the Site during the Phase II ESI. With the exception of boring PZ-2 (northwest corner of Site), none of the soil borings along the perimeter of the Site indicated the presence of VOCs at concentrations that exceeded the RSCOs. At boring location PZ-2 the following VOCs were detected:

- benzene: 6,000 µg/kg;
- toluene: 110,000 µg/kg;
- ethylbenzene: 170,000 µg/kg; and
- total xylenes: 1,500,000 µg/kg.

Low levels of SVOCs were reported in all of the soil boring samples, with the highest concentrations reported in the sample from boring PZ-2. Soil boring PZ-2 exhibited the following SVOC concentrations:

- naphthalene: 72,000 µg/kg;
- 2-methylnaphthalene: 57,000 µg/kg;
- benzo(a)anthracene: 4,300 µg/kg;
- chrysene: 4,600 µg/kg;
- benzo(b)fluoranthene: 2,700 µg/kg;
- benzo(k)fluoranthene: 2,400 µg/kg; and
- benzo(a)pyrene: 4,300 µg/kg.

A number of metals were detected in soil boring samples from the Site perimeter at concentrations that exceeded Eastern USA background levels.

Soil borings collected in the northwest corner of the site during the Phase II ESI did not indicate the presence of VOCs at concentrations that exceeded RSCOs. One soil boring sample from the northwest corner of the Site (SB-6) exhibited SVOCs at concentrations that exceeded RSCOs. This soil sample exhibited the following concentrations of SVOCs:

- benzo(a)anthracene: 2,800 µg/kg;
- chrysene: 3,300 µg/kg;
- benzo(b)fluoranthene: 4,000 µg/kg;
- benzo(k)fluoranthene: 3,500 µg/kg;
- benzo(a)pyrene: 3,500 µg/kg; and
- dibenzo(a,h)anthracene: 170 µg/kg.

Arsenic, cadmium, calcium, chromium, copper, lead, mercury, nickel, and zinc were detected in at least one soil boring sample from the northwest corner of the Site at concentrations that exceeded Eastern USA background levels.

A total of 63 soil samples were collected at the Site during RI activities, seven of which were from the soil surface. The only soil samples (both surface and sub-surface) that exhibited VOC contamination were from the northwest corner of the site. All other soil samples from the Site did not exhibit VOC contamination. The maximum detected concentrations of VOCs in soil samples collected during the RI that were in exceedence of RSCOs were the following:

Contaminant	Maximum Detected Concentration (µg/kg)	
acetone	880	(SB-45), 2 – 4 ft.
benzene	23,000	(SB-22), 6 – 8 ft.
toluene	9,600	(SB-22), 6 – 8 ft.
ethylbenzene	43,000	(SB-22), 6 – 8 ft.
m,p-xylene	130,000	(SB-45), 5 – 7 ft.
o-xylene	30,000	(SB-45), 5 – 7 ft.
naphthalene	220,000	(SB-45), 5 – 7 ft.

These data further illustrate that VOCs were only detected in soil at concentrations that exceed the RSCOs in samples from the northwest portion of the Site.

Soil samples collected as part of the RI showed that SVOCs were detected throughout site soils in the northwest corner of the Site in both the surface and sub-surface; however, the highest concentrations of SVOCs were detected in the subsurface in the zone of saturation corresponding to the water table. The maximum detected concentrations of SVOCs in soil samples collected during the RI that were in exceedence of RSCOs were the following:

Contaminant	Maximum Detected Concentration (µg/kg)	
2-methylnaphthalene	57,000	(NWSB)
dibenzofuran	7,100	(NWSB)
benzo(a)anthracene	9,300	(SB-35), 0 - 2 ft.
chrysene	10,000	(SB-35), 0 – 2 ft.
benzo(b)fluoranthene	14,000	(SB-30), 6 – 8 ft. and (SB-35), 0 – 2 ft.
benzo(k)fluoranthene	4,500	(SB-30), 6 – 8 ft.
benzo(a)pyrene	9,600	(SB-35), 0 – 2 ft.
indeno(1,2,3-cd)pyrene	5,700	(SB-35), 0 – 2 ft.
dibenz(a,h)anthracene	510	(SB-35), 0 – 2 ft.

Pesticides, herbicides and PCBs were not detected in any soil samples at concentrations that exceeded RSCOs.

Arsenic, beryllium, chromium, copper, iron, mercury, nickel, and zinc were commonly detected in soils at concentrations that exceeded RSCOs and/or Eastern USA background concentrations.

Groundwater.

Phase II ESI Groundwater Samples

Five groundwater samples were collected during the Phase II ESI to evaluate groundwater quality at the Site. The highest concentrations of VOCs were reported in the northwest corner of the Site at the location of PZ-2. The groundwater sample collected at this location exhibited the following concentrations of VOCs:

- benzene: 17,000 µg/L;
- toluene: 180 µg/L;
- ethylbenzene: 370 µg/L;
- total xylenes: 1,580 µg/L; and
- 1,1,2-trichloroethane: 12 µg/L.

The groundwater sample collected from the eastern boundary of the Site (PZ-1) during the Phase II ESI provides an assessment of the groundwater quality at the downgradient property line migrating from the Site. Only two VOCs were detected at this location at concentrations that exceeded the groundwater quality standards; vinyl chloride (7.7 µg/L) and cis-1,2-dichloroethene (25 µg/L). However, more recent and representative data from the monitoring wells at the downgradient property line (collected during the RI and as described below) show no VOCs exceeding standards.

Remedial Investigation Groundwater Samples

A total of 18 groundwater samples were collected as part of the RI conducted of the Site area (11 groundwater monitoring wells on site and 7 monitoring wells off site). As was the case with the groundwater investigation that was conducted during the Phase II ESI, the highest concentrations of contaminants were detected in samples collected from the northwest corner of the Site. The highest concentrations of VOCs detected on the Mott Haven site during the RI were the following:

Contaminant	Maximum Detected Concentration (µg/L)	
vinyl chloride	9.4	(MW-10)
naphthalene	2,500	(MW-12)
benzene	6,100	(MW-7)
toluene	450	(MW-12)
ethylbenzene	2,400	(MW-12)
m,p-xylene	3,900	(MW-12)
o-xylene	910	(MW-12)
isopropylbenzene	190	(MW-12)
n-propylbenzene	240	(MW-12)
1,3,5-trimethylbenzene	410	(MW-12)
1,2,4-trimethylbenzene	2,200	(MW-12)
p-isopropylbenzene	31	(MW-12)
n-butylbenzene	18	(MW-7 and MW-12)

Not only are the highest on-site detected concentrations of VOCs from monitoring wells in the northwest corner of the site, several of the highest concentrations of contaminants (particularly benzene, toluene, ethylbenzene and xylenes) are found in off-site locations (e.g. MW-8 and MW-9), indicating an off-site source(s) for on-site VOC contamination. Data from monitoring wells along the eastern boundary of the site (MW-2, MW-3, and MW-5) show that no VOCs were detected; this confirms that groundwater contamination is not migrating off-site.

Soil Gas.

Eighteen soil gas samples were collected as part of the RI conducted at the Site. In general, the highest concentrations of VOCs in soil gas samples were collected from the northwest corner of the site. The maximum detected concentrations of VOCs in soil gas samples collected during the RI were the following:

Contaminant	Maximum Detected Concentration ($\mu g/m^3$)	
benzene	1,000	(SG-1)
toluene	700	(SG-9)
ethylbenzene	35	(SG-28)
m,p-xylenes	34	(SG-38)
o-xylene	11	(SG-38)

dichlorodifluoromethane	28	(SG-28)
acetone	320	(SG-20)
1,1-dichloroethene	6.6	(SG-20)
1,3,5-trimethylbenzene	3.8	(SG-20)
1,2,4-trimethylbenzene	13	(SG-20)
trichlorofluoromethane	35	(SG-46)
cyclohexane	9,300	(SG-9)
carbon disulfide	24	(SG-38)
2-butanone	20	(SG-37)
trichloroethene	240	(SG-20)
n-heptane	22,000	(SG-9)
n-hexane	84,000	(SG-9)
1,3-dichlorobenzene	80	(SG-38)
1,4-dichlorobenzene	3.9	(SG-29)
tetrachloroethene	67	(SG-37)

Detected concentrations of VOCs in soil gas samples were compared to screening levels presented in *Draft Guidance for Evaluating the Vapor Intrusion To Indoor Air Pathway From Groundwater and Soils* (OSWER, 2002). The screening levels used in this assessment were designed to be protective of human health and were based on a carcinogenic risk of 1×10^{-5} or a non-carcinogenic hazard quotient of 1.0 (whichever results in a more restrictive screening level), and a vapor attenuation factor of 2×10^{-3}, which is the most conservative default attenuation factor. All of the detected concentrations of VOCs in soil gas were less than soil gas screening levels except for trichloroethene. Trichloroethene was detected in one soil gas sample (SG-20) at a maximum detected concentration (240 $\mu g/m^3$) that exceeded the soil gas screening level (110 $\mu g/m^3$). All other detected concentrations of trichloroethene were less than the soil gas screening level. The proposed remedy involving soil removal from the northwest corner of the Site and off-site disposal will eliminate this potential exposure pathway.

Summary of Contamination

In general, SVOCs were detected in surface and subsurface soil throughout the Site, and in the northwest corner of the Site at concentrations that exceeded RSCOs. VOCs were only detected at concentrations that exceeded RSCOs in subsurface soils from the northwestern corner of the Site. A number of metals were detected in surface and subsurface soils at concentrations that exceeded Eastern USA background levels.

Several VOCs were detected in groundwater samples from the northwest corner of the Site at concentrations that exceeded RSCOs. The RI groundwater results from the eastern boundary (MW-2, MW-3, and MW-5) show that there is no VOC contamination migrating off of the Site.

Soil gas samples from on-site locations exhibited VOC concentrations that were less than screening levels (designed to be protective of human health) except for trichloroethene at one sampling location (SG-20) in the northwest portion of the Site.

1.3 Contaminant Fate and Transport

On-site contamination consists of SVOCs in the northwest corner of the Site at concentrations that exceeded RSCOs. Several VOCs are also present in subsurface soils in the northwestern corner of the Site. A number of metals are present in surficial and subsurface soils throughout the Site at concentrations that are greater than Eastern USA background levels. The concentrations of the detected metals, however, are considered to be indicative of local background conditions and are concluded to be not related to Site contamination.

SVOCs in soil are unlikely to migrate from the site due to their strong affinity for the soil particles and low water solubility. SVOCs in general are not very soluble in water and are not likely to migrate in groundwater. Although several VOCs were detected in subsurface soil in the northwest corner of the Site, they are not migrating from the localized area where they were found, as indicated by the soil and groundwater samples collected down-gradient of the northwest corner of the Site. VOC migration off-site does not appear to be occurring; this is related to the low groundwater seepage velocities and long travel time for contamination to move across the Site, which promotes natural attenuation of the VOCs. Surface water and sediment transport of contaminants does not occur at the Site because of the absence of surface water bodies at the Site.

The only other potential transport mechanism is the partition of VOCs from soils and groundwater into the vapor phase. VOCs in the sub surface may contribute low levels of VOCs to the atmosphere via vertical vapor migration. However, as discussed, the proposed remedy for the Site will mitigate this transport pathway.

1.4 Potentially Exposed Populations

There are two potentially exposed populations at the Site with regard to human health exposures to site-related contaminants: 1) construction workers and 2) school employees and students.

Based on the results of the Phase II ESI (URS, 2005) and the RI (Shaw, 2005), surface and subsurface soils in the northwest corner of the Site exhibit elevated concentrations of SVOCs, VOCs, and metals; groundwater in the northwest corner of the Site exhibits elevated concentrations of VOCs; and, soil gas (one sample) in the northwest corner of the Site exhibits an elevated concentration of one VOC (trichloroethene). Construction workers and school employees and students could potentially be exposed to these site-related contaminants via the following exposure routes:

Potentially Exposed Population	Contaminated Media	Potential Exposure Route
On-Site Construction Workers	Surface Soil	Incidental Ingestion
		Inhalation of Particulates & Vapors
		Dermal Contact
	Subsurface Soil	Incidental Ingestion
		Inhalation of Particulates & Vapors
		Dermal Contact
	Groundwater	Incidental Ingestion
		Inhalation of Vapors
		Dermal Contact
On-Site School Employees & Students	Surface Soil	Incidental Ingestion
		Inhalation of Particulates & Vapors
		Dermal Contact
	Subsurface Soil	Inhalation of Vapors
	Groundwater	Inhalation of Vapors
Off-Site Residents	Surface Soil	None
	Subsurface Soil	None
	Groundwater	Inhalation of Vapors
Off-Site Commercial/Industrial Workers	Surface Soil	None
	Subsurface Soil	None
	Groundwater	Inhalation of Vapors

1.5 Potential Exposure Pathways

The populations identified previously could be exposed to site-related contaminants via a number of exposure pathways. On-site construction workers could be exposed to contaminants in

surface and subsurface soil via incidental ingestion, dermal contact, and inhalation of particles and vapors during routine construction activities at the Site. These exposures could be significant depending upon the location of the construction activities (i.e. northwest corner of the site has the highest contaminant concentrations), the nature of the activities (i.e. excavation or other soil disturbing activities increases exposure potential), and the duration of the activities. On-site construction workers could also be exposed to site-related contaminants in groundwater via incidental ingestion, dermal contact, and inhalation of vapors during routine construction activities at the Site (i.e. excavation to groundwater level). Exposures to groundwater could be significant depending upon the depth of the construction activity (i.e. excavation below the groundwater level will increase the potential for dermal and incidental ingestion exposures), location of the activity (northwest corner of the site has the highest contaminant concentrations), and duration of the activity. Most, if not all, of these potential exposure pathways for construction workers can be mitigated or eliminated with appropriate site-specific health and safety practices.

On-site school employees and students could be exposed to site-related contaminants in surface soil (e.g. during outdoor activities) via incidental ingestion, dermal contact, and inhalation of particles and vapors. Exposures to surface soil by school employees and students would be mitigated by placement of "clean" material on top of the surface soil where buildings or impervious surfaces do not cover the existing surface soil. On-site school employees and students could also be exposed to site-related contaminants in subsurface soil and groundwater via vapor intrusion into the future school buildings and subsequent inhalation of vapors. The northwest corner of the site appears to be the only location on-site where vapor intrusion into the proposed school building is a potential exposure pathway. However, the proposed remedy for the Site (excavation of contaminated media, and installation of a vapor barrier and passive sub slab depressurization system beneath the new school) will mitigate this exposure.

Based on the results of the Phase II ESI (URS, 2005) and the RI (Shaw, 2005), off-site exposures of site-related contaminants are expected to be minimal. Off-site residents could potentially be exposed to groundwater vapors via vapor intrusion into their homes if contaminants migrate off-site. However, groundwater flow at the Site is to the southeast and the properties adjoining the Site to the southeast are railroad tracks used by the New York and Harlem Railroad and are not residential. Furthermore, the results of soil gas sampling conducted off-site along the western boundary of the site show that all detected constituents in soil gas were less than soil gas screening levels designed to be protective of human health. Therefore off-site residential exposure to upgradient, off-site related groundwater vapors is expected to be insignificant if it

occurs at all. Commercial/industrial workers could potentially be exposed to groundwater vapors via vapor intrusion into their work places if contaminants migrate off-site. As stated previously for off-site residents, groundwater flow at the Site is to the southeast and the properties adjoining the Site to the southeast are railroad tracks used by the New York and Harlem Railroad and are not commercial or industrial properties. Although soil gas samples were not collected along the eastern boundary of the site, all of the eastern-most soil gas samples collected on-site exhibited VOC concentrations that were less than soil gas screening levels designed to be protective of human health. Therefore off-site commercial/industrial exposure to groundwater vapors is expected to be insignificant if it occurs at all.

2.0 Fish and Wildlife Resources Impact Analysis

In order to determine whether a fish and wildlife resources impact analysis was needed for the Site, the decision matrix presented in Appendix 3C of the Draft DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, 2002) was followed. The first six steps in the decision matrix are as follows:

1. Is the site or area of concern a discharge or spill event? **No.**
2. Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas? **No.**
3. Is the site and all adjacent property a developed area with buildings, paved surfaces, and little or no vegetation? **Site is undeveloped with some vegetation; adjacent property is developed with little or no vegetation.**
4. Does the site contain habitat of an endangered, threatened, or special concern species? **No.**
5. Has the contamination gone off-site? **No.**
6. Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination? **No.**

If the answer to Questions 5 or 6 are "No", then no Fish and Wildlife Resources Impact Analysis is needed. Since the answers to Question 5 and 6 is definitely "No", then no Fish and Wildlife Resources Impact Analysis is needed for the Site.