Former Metro-North Property (Mott Haven)

BRONX, NEW YORK

Site Management Plan
FINAL

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SITE MANAGEMENT PLAN

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

Tables

TABLE OF CONTENTS (CONTINUED)

Figures

TABLE OF CONTENTS (CONTINUED)

Appendices

LIST OF ACRONYMS

Acronym	Definition
µg/Kg	micrograms per kilogram
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
AOC	Area of Concern
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
BMS	Building Management System
BTEX	benzene, toluene, ethylbenzene, and xylenes
C/D	construction and demolition
CAMP	Community Air Monitoring Plan
COC	Certificate of Completion
COCs	contaminants of concern
DCR	Declaration of Covenants and Restrictions
DER	Division of Environmental Remediation
DO	dissolved oxygen
DOE, DSF	Department of Education, Division of School Facilities
DPI	differential pressure indicator
DSHM	Division of Solid and Hazardous Materials
DUSR	Data Usability Summary Report
EC	Engineering Control
ESA	Environmental Site Assessment
FER	Final Engineering Report
ft	feet
HASP	Health and Safety Plan
IC	Institutional Control
MGP	Manufactured Gas Plant
ml/min	milliliters per minute
MTA	Metropolitan Transportation Authority
NYCDEP	New York City Department of Environmental Protection
NYCSCA	New York City School Construction Authority
NYS	New York State

LIST OF ACRONYMS

Acronym	Definition
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyls
PFE	pressure field extension
PID	photoionization detector
ppb	parts per billion
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
RSCO	Recommended Soil Cleanup Objective
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SoMP	Soil Management Plan
SPDES	State Pollution Discharge Elimination System
SSDS	sub slab depressurization system
STARS	Spill Technology and Remediation Series
SVOC	semi-volatile organic compound
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
UST	underground storage tank
VOC	volatile organic compound

SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This Site Management Plan (SMP) is required for fulfillment of the Remedial Action Work Plan (RAWP) prepared for the Former Metro-North Property (Mott Haven Property) located at 730 Concourse Village West, Bronx, New York. A copy of this SMP will be maintained in the custodian's office for each of the schools located within the Mott Haven Campus as well as in PS 156 and IS 151, for the life of the subject schools. In addition, copies of the document will be maintained by the New York State Department of Environmental Conservation (NYSDEC) and New York City School Construction Authority (NYCSCA).

As more fully described below, a portion of the Mott Haven Property was remediated in accordance with the Brownfield Cleanup Agreement (BCA) Index #W2-1074-05-08, Site #C203030, which was executed on February 17, 2006. The remainder of the Mott Haven Property is also addressed within this SMP in response to public comment.

1.1.1 General

NYCSCA applied to the Brownfield Cleanup Program (BCP) for a seven-acre property located in Bronx County, New York City, New York which it planned to develop into four schools. The BCA covers the one-acre area accepted into the BCP (hereafter referred to as the "BCP Area") which measures 300 feet (in a general north-south direction) by approximately 125 feet (in a general east-west direction) in the northwest corner of the seven-acre property. This SMP addresses the BCP Area and the remainder of the property (hereafter referred to as the "Non-BCP Area A"), as well as the area beneath the platform that supports PS 156 and IS 151 (hereafter referred to as the

"Non-BCP Area B"). The area encompassing the BCP Area, Non-BCP Area A, and Non-BCP Area B is a total of 13 acres and will hereafter be referred to as the "Site". A map of the Site location is shown in Figure 1 and an aerial photograph with the Site boundary as well as the BCP Area, Non-BCP Area A and Non-BCP Area B boundaries is shown in Figure 2. The boundaries of the BCP Area, the Non-BCP Area A, and the Non-BCP Area B are fully described in Appendix A – Metes and Bounds.

This SMP was prepared by Shaw Environmental, Inc. (Shaw), on behalf of NYCSCA, in accordance with the requirements in NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, dated December 2002, and the guidelines provided by NYSDEC. This SMP addresses the means for implementation of Institutional Controls (ICs) and Engineering Controls (ECs), which are required by the Environmental Easement for the BCP Area and by the Declaration of Covenants and Restriction (DCR) for the Non-BCP Area A, and Non-BCP Area B.

After completion of the remedial work described in the Remedial Action Work Plan, fill material was left in the subsurface at Non-BCP Area A and Non-BCP Area B, which is hereafter referred to as 'historic urban fill.' This SMP also addresses management of the historic urban fill at the Non-BCP Area A and Non-BCP Area B in perpetuity or until extinguishment of the Environmental Easement and DCR in accordance with 6 NYCRR Part 375.

Remedial Action at the Site began in July 2006, and was completed in October 2007. All reports associated with the BCP Area, Non-BCP Area A and Non-BCP Area B can be viewed at the document repositories or by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

1.1.2 Purpose

ECs have been incorporated into the Site remedy to provide proper management of historic urban fill at Non-BCP Area A and Non-BCP Area B in the future and to protect public health and the environment. A Site-specific Environmental Easement (BCP Area) and DCR (Non-BCP Area A and Non-BCP Area B) will be recorded with the Bronx County Clerk's Office that provides an enforceable means to ensure strict adherence to all Engineering Controls and all Institutional Controls placed on this Site by NYSDEC, by the grantor of the Environmental Easement and DCR, and any and all successors and assigns of the grantor. ICs provide restrictions on Site usage and mandate

operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP includes acceptable methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement and DCR. Compliance with this Plan is required by the grantor of the Environmental Easement and DCR and grantor's successors and assigns. This plan is subject to change by NYSDEC.

Site management is the last phase of the remedial process and is triggered by the approval of the Final Engineering Report and issuance of the Certificate of Completion (COC) by NYSDEC. The SMP continues in perpetuity or until extinguished in accordance with 6NYCRR Part 375. It is the responsibility of the Environmental Easement and DCR grantor, and its successors and assigns to ensure that all Site Management responsibilities under this plan are performed.

The SMP provides a detailed description of all procedures required to manage the Site following the completion of the Remedial Action in accordance with the BCA with NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain the Sub-Slab Depressurization System (SSDS); and (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC.

To address these needs, this SMP includes four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for the SSDS; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC.

Site Management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annual.

Important notes regarding this SMP are as follows:

- This SMP defines Site-specific implementation procedures as required by the Environmental Easement and DCR. The penalty for failure to implement the SMP is revocation of the COC;
- The BCA (Index #W2-1074-05-08; Site #C203030) for the Site requires conformance with this SMP, and therefore, serves as a contractual binding authority under which this SMP is to be implemented. The Brownfield

Cleanup law itself also requires the preparation of a SMP (formerly known as an Operation, Maintenance and Monitoring Plan) in ECL 27-1415 and 27-1419. Therefore, the BCA is a binding contract and the BCP law is statutory authority under which this SMP is required and is to be implemented.

- As of January 2008, the draft version of the SMP and all Site documents related to Remedial Investigation and Remedial Action are maintained at the NYSDEC Region 2 offices in Long Island City and in the repositories established for this project listed below. Other Site documents such as the Remedial Investigation Report and the RAWP can also be found in the following repositories:

Melrose Branch Public Library

901 Morris Avenue

Bronx, NY 10451

718-588-0110

Repository Hours:

Monday 12 pm – 7 pm

Tuesday and Thursday 10 am – 6 pm

Wednesday and Friday 1 pm – 6 pm

Saturday 10 am – 5 pm

Mott Haven Branch Public Library

321 East 140th Street

Bronx, NY 10454

718-665-4878

Repository Hours:

Monday, Wednesday and Thursday 10 am – 6 pm

Tuesday 12 pm – 7 pm

Friday 1 pm – 6 pm

Saturday 10 am – 5 pm

The Final Site Management Plan will be submitted, in hard-copy format, to the Region 2 NYSDEC offices, located at 41-40 21st Street, Long Island City, New York, and in electronic format to NYSDEC and NYSDOH. A hardcopy of the Final Site Management Plan, Remedial Investigation Report and Remedial Action Work Plan, as well as current and historical copies of the Annual Site Management Reports will be maintained at a designated location on the new Mott Haven Campus.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The Site is located in the County of Bronx (New York City), New York and the BCP Area and Non-BCP area A are identified as Block 2443 and Lot 78 on the Borough of Bronx Tax Map. The Non-BCP Area B is identified as Block 2443 and Lots 79 and 190 on the Borough of Bronx Tax Map. As stated above the BCA area is approximately one acre in size on the northwest portion of the Mott Haven Property. The Site is located in a topographical depression and consists of an approximately 13-acre area bounded by East 156th Street to the north, Metropolitan Transportation Authority (MTA) rail yard to the south, MTA rail lines to the east, and a 30 foot high retaining wall with Concourse Village West just beyond the top of the retaining wall to the west (see Figure 2). The boundaries of the BCP Area, the Non-BCP Area A, and the Non-BCP Area B are more fully described in Appendix A – Metes and Bounds.

1.2.2 Site History

URS Corporation (URS) prepared a Phase I Environmental Site Assessment (ESA) of the BCP Area and Non-BCP Area A for NYCSCA, dated July 20, 2001, and conducted a Phase II Investigation to further characterize the soil and groundwater quality of the BCP Area and Non-BCP Area A. URS prepared a Phase II Environmental Investigation Report of the BCP Area and Non-BCP Area A, dated August 24, 2001 for

NYCSCA. Shaw Environmental, Inc. (Shaw) completed additional site investigation activities between March and September 2005. These investigative activities were completed as two separate phases. The Remedial Investigation activities, completed pursuant to the NYSDEC approved RIWP (July 2005), were performed in the BCP Area, Non-BCP Area A, the southwest corner of Non-BCP Area B, and to the west of the Site between March and August 2005. A Supplemental Investigation (SI) was performed in Non-BCP Area B and to the north and west of the Site to identify off-site contamination which may be impacting the Mott Haven Site.

A review of historical records (Sanborn Fire Insurance Maps, Appendix B) shows that much of the Site operated as a rail yard from prior to 1891 to approximately 1975. The Sanborn maps show that the Site contained many tracks with a machine shop, carpenter shop, paint area, offices and storage areas. The tracks extended at least 700 feet beyond the northern boundary of the Site.

Properties in the vicinity of the Site and adjacent to the Site 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 and a manufactured gas plant (MGP) in the upgradient area northwest of the BCP Area. The exact location of the MGP relative to the Site cannot be determined from the Sanborn maps. The URS Phase I ESA indicated that an auto repair shop and gasoline filling station were historically located at the southwestern corner of East 156th Street and Sheridan Avenue/Concourse Village West, adjacent to and immediately west of the Site. By 1977 the filling station was no longer depicted on the map, but the auto repair shop remained. The URS Phase I ESA report indicated that the MGP operated from prior to 1891 to 1946.

1.2.3 Geological Conditions

Site Geology

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 (ft) below ground surface (bgs). Bedrock was encountered at the Site beneath the overburden deposits at depths ranging from approximately 4 feet in the center of the Site to as deep as 70 ft bgs in the BCP Area. Figure 3 shows the soil boring locations across the site; locations of geologic cross

sections are shown on Figure 4. Stratigraphic cross sections are shown on Figures 5 through 12.

Site Hydrogeology

Site hydrogeologic data indicated that the depth to groundwater varies from 4.5 to approximately 9.3 feet bgs. Groundwater resides in the fill material at the Site. The overburden groundwater flow direction, as shown on Figure 13, based on groundwater level measurements from monitoring wells (Table 1), is from northwest to southeast across the Site. Based on permeability data and horizontal hydraulic gradients, groundwater flows at a rate of approximately 10 feet per year. The Site is located in a topographic depression, 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 are conducive to high rates of recharge to the aquifer.

1.3 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The SMP and all Site documents, including the Remedial Investigation and Remedial Action Work Plan, are maintained by the NYSDEC (or successor agency). At the time of publication, these reports could be found at the Region 2 NYSDEC offices in Long Island City, New York or at the repositories.

1.3.1 Summary of Remedial Investigation Findings

Specific details and findings of the investigation activities can be found in the Remedial Investigation (RI) Report that was approved by the NYSDEC on July 5, 2006:

> Draft Remedial Investigation Report of Former Metro North Property at 672 Concourse Village West, Bronx, New York, Shaw Environmental, Inc., November 15, 2005.

The following activities were conducted to characterize the subsurface conditions at the Site: geophysical investigations; installation of twenty-three (23) soil gas points / implants and collection of soil vapor samples; installation of forty-seven (47) soil borings; excavation of nine (9) test pits; installation of twenty (20) groundwater monitoring wells; installation of eight (8) bedrock soil borings; site reconnaissance on

surrounding properties; laboratory analysis of soil gas, soil and groundwater samples; and permeability tests to assess the hydraulic characteristics of the shallow aquifer beneath the Site.

Conceptual Model of On-Site and Off-Site Contamination

The conceptual model of groundwater flow provides the framework to assess fate and transport of contamination at the Site. Previous off-site contaminant releases from a historic MGP identified in the area northwest of the BCP Area and a historic gasoline service station located west of the Site have impacted groundwater quality by migrating vertically downward through the fill/soil materials to the water table. At the water table this contamination migrates with the groundwater flow in a southeasterly direction on to the Site. This has resulted in contamination of soils at the water table interface with VOCs and SVOCs in the BCP Area. Due to the low groundwater flow rate, the VOCs naturally attenuate. The SVOCs in the BCP Area remained adsorbed onto site soils and did not migrate in the groundwater. As a result, there was no significant migration of contamination in the downgradient direction of flow and no impacts to off-site receptors.

Excavation of the BCP Area has removed contaminated soils and the hydraulic barriers will mitigate recontamination of the BCP Area and Non-BCP Area A. Therefore groundwater quality conditions at the Site are expected to improve with time.

The principal contaminants of concern (COCs) for the Site are VOCs and SVOCs in the soil and VOCs in the groundwater. The most elevated VOC and SVOC compounds detected include benzene, toluene, ethylbenzene, xylene (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. Figure 14 depicts the distribution of naphthalene detected in the soil, showing concentrations generally an order of magnitude higher than the Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objective (RSCO) of 13,000 parts per billion (ppb). The most significant contamination identified was generally confined to the BCP Area as well as upgradient (Non-BCP Area B) and off-site, at a depth corresponding to the top of the zone of saturation (water table).

Areas of Concern

Areas of concerns (AOCs) at the Site were limited to: VOC and SVOC-contaminated soils in the BCP Area. Contaminated soils in the BCP Area were generally found between 4 to 10 ft bgs.

Groundwater contaminated with VOCs was characterized at the Site in monitoring wells in the BCP Area, as well as in several off-site, upgradient monitoring wells. Figure 15 depicts the concentration of BTEX detected in the groundwater and confirms the likely source of the VOCs on the Site as the off-site upgradient historic service station. No VOCs were detected in the downgradient monitoring wells suggesting that the low groundwater seepage velocity and long travel time for contamination to move across the Site, allow for natural attenuation of the VOCs.

Below is a summary of Remedial Investigation findings:

1.3.1.1 Soil

VOCs were detected in soil samples collected across the Site as well as off-site to the west and northwest of the Site (Figures 16A and 16B are spider maps which summarize the exceedances of the RSCOs and Table 2 which show RSCO exceedances). Compounds that exceeded their applicable RSCOs include (with corresponding highest detected concentration): BTEX (benzene, 23,000 micrograms per kilogram [µg/Kg]; toluene, 9,600 µg/Kg; ethylbenzene, 43,000 µg/Kg; xylene, 75,400 µg/Kg), naphthalene (220,000 µg/Kg), isopropylbezene (4,900 µg/Kg), acetone (1,600 µg/Kg), and methylene chloride (2,000 µg/Kg). The highest concentrations of the VOCs were detected in the zone of saturation corresponding to the top of the water table.

One or more SVOCs were detected in excess of the applicable RSCO at one or more depths in 32 soil borings (Figures 17A-D and Table 2). Compounds that exceeded the RSCOs include (with corresponding highest detected concentration): benzo(a)anthracene (31,000 µg/Kg), chrysene (31,000 µg/Kg), benzo(a)pyrene (27,000 µg/Kg), dibenzofuran (7,100 µg/Kg), phenanthrene (150,000 µg/Kg), fluoranthene (79,000 µg/Kg), pyrene (69,000 µg/Kg), benzo(b)fluoranthene (34,000 µg/Kg), benzo(k)fluoranthene (11,000 µg/Kg), indeno (1,2,3-cd)pyrene (7,900 µg/Kg),

dibenzo(a,h)anthracene (2,100 µg/Kg), butylbenzylphthalate (53,000 µg/Kg), naphthalene (150,000 µg/Kg), and 2-methylnaphthalene (66,000 µg/Kg).

Metals above RSCOs were encountered in all of the soil borings; most metal concentrations exceeded Eastern Background Standards (Figures 18A-C and Table 3). This Site is located in an urban setting and the concentrations observed are considered to be indicative of background and/or historic site conditions and not related to Site contamination.

No herbicides, pesticides or polychlorinated biphenyls (PCBs) were above the RSCOs. Cyanide was detected in two samples. There is no RSCO for cyanide.

1.3.1.2 On-Site and Off-Site Groundwater

Several VOCs were detected in excess of the applicable groundwater quality standards (GWQS), particularly in monitoring wells MW-7, MW-12, and MW-13 in the BCP Area; MW-14 and MW-15 in the Non-BCP Area B (Figure 19 and Table 4); and off-site in MW-8, MW-9 and MW-18. VOCs exceeding the applicable GWQS include (with corresponding highest detected concentration): naphthalene (2,500 micrograms per liter [µg/L]), acetone (84 µg/L), cis-1,2-dichloroethene (13 µg/L), benzene (6,100 µg/L), toluene (14,000 µg/L), ethylbenzene (2,400 µg/L), xylenes (14,500 µg/L), isopropylbenzene (190 µg/L), n-propylbenzene (240 µg/L), 1,3,5-trimethylbenzene (560 µg/L), 1,2,4-trimethylbenzene (2,200 µg/L), sec-butylbenzene (21 µg/L), p-isopropylbezene (41 µg/L), n-butylbenzene (22 µg/L), tetrachloroethene (9.1 µg/L) and vinyl chloride (9.4 µg/L). Of the VOC compounds detected in these monitoring wells, only MTBE (detected in three samples) did not exceed the applicable GWQS.

Following a similar trend as the VOC contamination, the highest SVOCs impact to groundwater was observed in the BCP Area in monitoring wells MW-7, MW-8, and MW-12; in the Non-BCP Area B in monitoring wells MW-14 and MW-15; and off-site in MW-18 (Figure 20 and Table 4). Exceedances include (with corresponding highest detected concentration): naphthalene (1,300 µg/L), butylbenzylphthalate (64 µg/L), bis(2-ethylhexyl)phthalate (41 µg/L), phenol (22 µg/L) and acenaphthene (29 µg/L). Only bis(2-ethylhexyl)phthalate and butylbenzylphthalate were detected in areas outside of the BCP Area.

A number of metal constituents were detected above the GWQS in the samples collected (Figure 21 and Table 5). These included (with corresponding highest detected concentration): antimony (43.0 µg/L), arsenic (672 µg/L), barium (3,020 µg/L), beryllium (11.3 µg/L), cadmium (5.74 µg/L), chromium (530 µg/L), iron (394,000 µg/L), lead (529 µg/L), magnesium (258,000 µg/L), manganese (9,120 µg/L), and nickel (526 µg/L). Monitoring well MW-2, located toward the southern part of Non-BCP Area A had the highest metal detections. 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 were leached out of the sediment into the water resulting in a higher detected concentration. These metal detections are associated with the nature of the historic urban fill at the Site and not a release from a contaminant source.

There was one detection for cyanide in MW-14 (15 µg/L) which was below the GWQS (Table 5). There were no detections for PCBs or pesticides in the groundwater during this investigation. Only one herbicide was detected in the groundwater samples. 2,4-dichlorophenoxyacetic acid (2,4-D) was detected in samples from monitoring wells MW-15, MW-13, MW-2 and MW-14 (Table 5); all detections were below the GWQS.

1.3.1.3 On-Site and Off-Site Soil Vapor

VOCs were detected in all of the soil gas samples collected (Figure 22). Table 6 provides a summary of the detected VOCs. The highest total VOC concentrations were observed in the BCP Area in samples SG-1 and SG-9. N-hexane (84,000 micrograms per cubic meter [µg/m^3], n-heptane (22,000 µg/m^3) and cyclohexane (9,300 µg/m^3) had the highest concentrations of all the detected VOCs. BTEX compounds were detected in most of the 23 samples collected. Most analytes in samples PSGI-9 and PSGI-10 (off-site to the west) were detected at concentrations less than 100 µg/m^3 with the exception of chloroform in PSGI-9 (510 µg/m^3) and ethanol in PSGI-10 (120 µg/m^3).

1.4 DESCRIPTION OF REMEDIAL ACTIONS

Remedial actions completed in October 2007 included the installation of the Jet Grout and Waterloo® Hydraulic Barriers, excavation of over 29,000 tons of contaminated

soil from the BCP Area (approximately 300 feet by 125 feet by 12 feet deep), and backfilling the BCP Area with environmentally clean fill. The Site has been remediated in accordance with the scope of work presented in the NYSDEC-approved (approved on July 5, 2006) Remedial Action Work Plan (RAWP) dated November 15, 2005 and as amended by the Remedial Action Work Plan Addenda dated June 14, 2006, the Sub-Slab Depressurization System Letter to the New York State Department of Health (NYSDOH) dated June 16, 2006, and RAWP Addendum No. 2 dated August 3, 2007.

Below is a summary of the Remedial Actions completed and being implemented at the Site in accordance with the RAWP and supplemental voluntary activities:

1. Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during all intrusive site work;

2. The installation of a jet grout hydraulic barrier along a portion of the western side of the BCP Area and Non-BCP Area A and a steel sheeting (Waterloo Barrier®) hydraulic barrier along a portion of the northern side of the BCP Area and Non-BCP Area A;

3. Excavation of soil/fill within the defined area as shown on Figure 23 (broken out into three sections);

4. Dewatering of the excavated area to provide a solid bottom to place clean backfill material and to reduce the volume of contaminated groundwater remaining on the Site;

5. Appropriate off-Site disposal of all material removed from the BCP Area in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;

6. Collection and analysis of confirmatory soil samples to evaluate the performance of the remedy with respect to attaining the RAWP goals;

7. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits of no detectable VOCs and no exceedances of RSCOs; and, (2) compliance with all Federal, State and local rules and regulations in handling and transport of material;

8. In-situ solidification of a 50 ft x 60 ft area in Non-BCP Area B to encapsulate a small pocket of soil contamination immediately north of the BCP Area;

9. Excavation of soil for off-Site disposal from five Spot Excavations in Non-BCP Area A as discussed in Section 6.0;

10. A Site Management Plan for long term management of historic urban fill as required by the Environmental Easement and DCR, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

11. Recording of an Environmental Easement and DCR to prevent future exposure to any underlying soils remaining at the Site (a copy of the Environmental Easement and DCR is provided in Appendix C);

12. A vapor barrier and an SSDS to mitigate the migration of any potential residual VOC vapors into the school building;

13. Construction and maintenance of a cover system consisting of school buildings (concrete foundation), asphalt pavement, concrete sidewalks, artificial turf on athletic fields, or two feet of clean fill on all exposed ground surfaces including landscaped areas to prevent human exposure to underlying soils remaining under Non-BCP Area A;

14. Construction and maintenance of a concrete cover on all exposed ground surfaces beneath PS 156 and IS 151 to prevent human exposure to underlying soils remaining under Non-BCP Area B; and

15. All responsibilities associated with the Remedial Action, including permitting requirements, addressed in accordance with all applicable Federal, State and local rules and regulations.

Ongoing remedial activities at the Site are being conducted in accordance with the NYSDEC-approved RAWP for the Former Metro-North Property (Mott Haven) (November, 2005) as amended by the Remedial Action Work Plan Addenda dated June 14, 2006; the SSDS Letter to NYSDOH dated June 16, 2006; and RAWP Addendum No.

2 dated August 3, 2007. The approved RAWP is included in Appendix D. There have been no deviations from the RAWP.

1.4.1 Removal of Contaminated Materials from the BCP Area

A map of the location of areas where excavation was performed is shown in Figure 23 (including a breakout of the three sections of the excavation). The northern-most section (Section 1) was rectangular with a length (east-west direction) of 150 feet, a width (north-south direction) of 100 feet, and a depth of approximately 15 feet (to elevation 9.3 BPBD). The middle and southern sections (Sections 3 and 2, respectively) were rectangular with lengths (east-west direction) of 125 feet, widths (north-south direction) of 100 feet, and depths of approximately 15 feet (to elevation 10.0 BPBD) and 10 feet (to elevation 14.5 BPBD), respectively.

The southern-most section, Section 2, was the first area to be excavated. Excavation started on April 30, 2007 and continued through May 14, 2007. Upon completion of the excavation in Section 2, a total of 15 confirmatory samples were collected from the locations shown on the figure in Appendix O, and analyzed for Target Compound List (TCL) VOCs by USEPA Method 8260 and TCL SVOCs by USEPA Method 8270. A summary table of the results is presented in Appendix O. One (1) confirmatory soil sample in Section 2, EP-46, contained 0.069 milligrams/kilogram (mg/Kg) of benzene, which is a very marginal exceedance of the 0.060 mg/Kg TAGM RSCO. In a letter to the NYSDEC dated May 21, 2007, SCA's consultant, Shaw Environmental (Shaw), indicated that the concentration did not pose a risk to Site occupants. The NYSDEC provided an email on May 22, 2007, confirming that the area had been sufficiently excavated and that the area could be backfilled.

The northern-most section, Section 1, was the second area to be excavated. Excavation began on May 23, 2007, and continued through July 30, 2007. Upon completion of the excavation in Section 1, a total of 18 confirmatory samples were collected from the locations shown on the figure in Appendix O, and analyzed for VOCs and SVOCs. The results are presented in the summary table in Appendix O. One confirmatory sample showed VOC levels above regulatory guidance values for clean up. The NYCSCA notified NYSDEC and directed the contractor to excavate and remove an

additional foot of soil in this area. Re-sampling following this additional soil removal confirmed all VOCs below regulatory guidelines. All confirmatory sample results were submitted to the NYSDEC on August 10, 2007, indicating that all of the samples from the bottom of the final excavation were below TAGM RSCOs, and that the Contractor had been directed to backfill the excavation.

Section 3 was the last area to be excavated. Excavation began on September 12, 2007, and continued through September 27, 2007. Upon completion of the excavation in Section 3, a total of 15 confirmatory samples were collected from the locations shown on the figure in Appendix O, and analyzed for VOCs and SVOCs. The results are presented in the summary table in Appendix O. One confirmatory sample showed VOC concentrations above regulatory guidance values for clean up in one area. A second sample showed SVOC concentrations above regulatory guidance values for clean up in a second area. The NYCSCA notified NYSDEC and directed the contractor to excavate and remove an additional foot of soil in both these areas. Re-sampling following this additional soil removal confirmed all VOCs and SVOCs below regulatory guidelines. All confirmatory sample results were submitted to the NYSDEC on October 4, 2007, indicating that all of the samples from the bottom of the final excavation were below TAGM RSCOs, and that the Contractor had been directed to backfill the excavation.

The majority of contaminated soils that were removed from the BCP Area were characterized as non-hazardous industrial waste (NHIW). All excavations were performed inside temporary tent structures with a fully operational vapor management system. The NHIW was transported to Clean Earth of Philadelphia (CEP) for treatment and disposal. Transportation of the NHIW to CEP began on April 30, 2007 and continued through September 27, 2007. A total of 944 truckloads transporting a total of 29,035.8 tons of NHIW were removed from the Site during this time.

Grout spoil material was generated during the installation of the jet grout hydraulic barrier on the western side of the BCP Area and Non-BCP Area A. Transportation of the grout spoil to CEP began on December 29, 2006 and continued periodically through September 18, 2007. A total of 353 truckloads transporting a total

of 9,868.5 tons of this material was removed from the BCP Area and Non-BCP Area A during this time.

Soils in four small areas, three within Section 1 and one within Section 3, were characterized as hazardous waste for disposal purposes. Between June 6 and 13, 2007, thirteen (13) truck loads of soil were excavated from within Section 1 and transported off-site as hazardous waste. The hazardous waste was disposed at the Clean Earth of North Jersey facility in South Kearny, New Jersey. Also, one roll-off container of soil was excavated at this time, stored within the temporary tent structure, and was transported on August 13, 2007 as hazardous waste to EQ Detroit, in Detroit Michigan. On September 17, 2007, the small area designated as "hazardous waste" from Section 3 was transported off-site to EQ Detroit. A total of 438.4 tons of soil characterized as hazardous waste was removed from the Site.

1.4.2 Historic Urban Fill

Based on soil and groundwater sampling in Non-BCP Area A, it was determined that the material was characteristic of historic urban fill and had not been impacted by the MGP waste and gasoline which were the contaminants of concern in the BCP Area. NYSDEC defines historic urban fill as "non-indigenous or non-native material, historically deposited or disposed in the general area of, or on, a site to create useable land by filling water bodies, wetlands or topographic depressions, which is in no way connected with the subsequent operations at the location of the emplacement, and which was contaminated prior to emplacement." Historic urban fill remaining on the Site after the remedial actions may contain concentrations of compounds in excess of corresponding TAGM RSCOs.

Historic urban fill will be covered with a combination of asphalt roads, concrete sidewalks/walkways, an athletic field (artificial turf), school buildings on concrete slab, and landscaped areas. There is no historic urban fill remaining within the BCP Area.

1.4.3 Engineering and Institutional Controls

Engineering Controls for the BCP Area and Non-BCP Area A consist of: (1) cover systems to prevent exposure to underlying soils; (2) hydraulic barriers along the

northern and western sides of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future; and (3) a vapor barrier and SSDS beneath all school buildings as an added safeguard to prevent any potential residual soil vapor from entering the school buildings in the future. Engineering Controls for the Non-BCP Area B consist of a cover system to prevent exposure to underlying soils. A series of Institutional Controls are required to implement, maintain and monitor these Engineering Controls. These Institutional Controls dictate that:

- All Engineering Controls are operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property (the BCP Area, Non-BCP Area A and Non-BCP Area B) are inspected and certified at a frequency and in a manner defined in this SMP;
- Groundwater monitoring is performed as defined in this SMP;
- Data and information pertinent to Site Management for the Controlled Property are reported at the frequency and in a manner defined in this SMP; and
- On-Site environmental monitoring devices, including groundwater monitoring wells, are protected and replaced as necessary to ensure continued functioning in the manner specified in this SMP.

The Controlled Property will have the following Institutional Controls in the form of Site restrictions. Adherence to these Institutional Controls is required under the Environmental Easement and DCR. Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for the intended use;
- All future activities on the Controlled Property that will disturb historic urban fill material are prohibited unless they are conducted in accordance with the soil management provisions in this SMP; and

- The Controlled Property may be used for a New York City Public School only provided the long-term Engineering and Institutional Controls included in the SMP remain in use.

These EC/ICs will:

- Prevent ingestion of groundwater with contamination levels that exceed drinking water standards;
- Prevent contact with or inhalation of volatiles from contaminated groundwater;
- Improve groundwater quality at the Site;
- Prevent the discharge of contaminants to surface water;
- Prevent contaminated groundwater from migrating on-Site;
- Prevent ingestion/direct contact with underlying soils;
- Prevent migration of contaminants that would result in off-Site groundwater or surface water contamination.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Remedial activities are being completed at the Site in accordance with the NYSDEC-approved RAWP for the Former Metro-North Property (Mott Haven) (November 2005) as amended by the Remedial Action Work Plan Addenda dated June 14, 2006; the SSDS Letter to NYSDOH dated June 16, 2006; and RAWP Addendum No. 2 dated August 3, 2007. The remedial goals included:

1. Ensure that on-site contaminant concentrations in soil and groundwater and soil gas do not pose unacceptable risks to school occupants;
2. Achieve cleanup of VOCs and SVOCs to RSCOs as per TAGM 4046 to the extent practical; and
3. Maintain existing groundwater quality at the downgradient property line.

A summary of the remedial strategies and EC/ICs completed and to be implemented at the Site are as follows:

- Excavation of soils/fill within the area defined in the RAWP;
- Dewatering of the excavation to provide a solid bottom to place clean backfill material which concurrently removed most of the contaminated groundwater remaining on the Site;
- Maintenance of a cover system consisting of school buildings (concrete foundation), asphalt pavement, concrete sidewalks, concrete cover, artificial turf on athletic fields, or two feet of clean fill on all exposed ground surfaces including landscaped areas to prevent human exposure to underlying soils remaining under Non-BCP Area A and Non-BCP Area B;
- Registration of an Environmental Easement and DCR, including Institutional Controls, to prevent future exposure to any underlying soils remaining at the Site (copies of the Environmental Easement and DCR are provided in Appendix C);

- The installation of a jet grout hydraulic barrier along a portion of the western (upgradient) side of the BCP Area and Non-BCP Area A and a steel sheeting (Waterloo Barrier®) hydraulic barrier along a portion of the northern side of the BCP Area and Non-BCP Area A; and
- Construction of a vapor barrier and SSDS beneath the BCP Area and Non-BCP Area A to mitigate the migration of any potential residual VOC vapors into the new school buildings.

Since historic urban fill and groundwater/soil vapor exist beneath the Site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

The purpose of this Plan is to provide:

- A description of all EC/ICs on the Site;
- The basic operation and intended role of each implemented EC/IC;
- A description of the key components of the ICs created, as stated in the Environmental Easement and DCR;
- A description of the features that will be evaluated during each annual inspection and compliance certification period;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Soil Management Plan for the safe handling of historic urban fill that may be disturbed during maintenance or redevelopment work on Non-BCP Area A and Non-BCP Area B; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the Site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROL COMPONENTS

2.2.1 Engineering Control Systems

2.2.1.1 Cover Systems

All historic urban fill areas (Non BCP Area A and Non BCP Area B) will have a cover system. While no historical urban fill exists in the BCP Area, a cover system will also be constructed within this area. The cover system over the BCP Area and Non BCP Area A is comprised of concrete building slabs, asphalt-covered roads, concrete-covered sidewalks, an artificial turf athletic field, or two feet of clean fill on all exposed ground surfaces including landscaped areas. In addition, a concrete cap will be placed on Non-BCP Area B (this cover was not included as an engineering control in either the RAWP or Addenda since it is located beyond the Mott Haven Property and is unnecessary for meeting the RAWP objectives). This cover is included in this document to ensure that it is maintained and inspected as part of the overall management of the Site under the control of the DOE Division of School Facilities (DSF). The clean fill will meet the TAGM RSCOs and will contain no detectable volatile organic compounds as defined below in Section 2.3.2.6.

Figure 24 shows the design for each remedial cover type to be used on the BCP Area and Non-BCP Area A. As indicated on Figure 24, approximately 2-feet of drainage stone will be placed directly below the turf surface, underlain by a network of 12-inch drainage pipes, underlain by a woven geotextile fabric. Figure 25 shows the location of each cover type at the BCP Area and Non-BCP Area A. The design of the cover for Non-BCP Area B includes an average of eight (8) inches of crushed stone base with a minimum of four (4) inches of cement concrete cap.

A Soil Management Plan is included in Appendix E, and outlines the inspection and maintenance of the cover systems as well as procedures required in the event the cover system and underlying historic urban fill are disturbed. The Soil Management Plan is also discussed in greater detail in Section 2.3 of this EC/IC Plan. Issues related to maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

2.2.1.2 Vapor Barrier

A vapor barrier will be installed beneath all of the new school buildings (BCP Area and Non-BCP Area A) as an added precaution to prevent any potential residual soil gas vapors from entering the school building in the future. The vapor barrier will be installed above the gravel layer containing the SSDS. There is no routine maintenance associated with the vapor barrier. Monitoring of the vapor barrier is described in Section 3.2.2 of this document. Specifications and drawings regarding the installation of the vapor barrier are included in Appendix F of this SMP.

2.2.1.3 Jet Grout Hydraulic Barrier

A jet grout hydraulic barrier was installed along 400 feet of the retaining wall on the west side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to at least 30 feet in depth. There is no monitoring or maintenance associated with the hydraulic barrier. Specifications and drawings regarding the installation of the jet grout hydraulic barrier are included in Appendix G of this SMP.

2.2.1.4 Waterloo® Hydraulic Barrier

A Waterloo® hydraulic barrier was installed 370 feet along the north side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to approximately 30 feet in depth or to bedrock. There is no monitoring or maintenance associated with the hydraulic barrier. Specifications and drawings regarding the installation of the Waterloo® hydraulic barrier are included in Appendix H of this SMP.

2.2.1.5 Sub Slab Depressurization System

A SSDS will be installed beneath all of the new school buildings (BCP Area and Non-BCP Area A) as an added precaution to prevent any potential residual soil gas vapors from entering the school buildings in the future. The SSDS will be installed beneath the vapor barrier and operated in an active mode for the life of the school facility unless there is clear demonstration that the subsurface VOC contamination emanating from upgradient source(s) has been removed or treated. Specifications and drawings regarding the installation of the SSDS are included as Appendix I of this SMP.

Procedures for operating and maintaining the SSDS are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP).

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

2.2.2.1 Cover Systems

The cover system will be a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals as presented in the Soil Management Plan for the life of the schools.

2.2.2.2 Sub Slab Depressurization System

An active SSDS will also be installed beneath the schools as an added precaution to prevent any potential residual soil gas vapors from entering the school buildings in the future. The SSDS will be installed beneath the vapor barrier and operated in an active mode for the life of the school facility. On the clear demonstration that the subsurface VOC contamination emanating from the upgradient sources has been removed or treated, SCA may submit a petition for its discontinuation of the SSDS.

The active SSDS will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the active SSDS may be submitted by the property owner based on confirmatory data that justifies such request. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH.

2.2.2.3 Vapor Barrier

The vapor barrier will be a permanent control which will be installed beneath the school as an added precaution to prevent any potential residual soil gas vapors from entering the school buildings in the future. The vapor barrier will be placed above the gravel layer containing the SSDS. There is no routine maintenance associated with the vapor barrier. Monitoring of the vapor barrier is described in Section 3.2.2 of this document.

2.2.2.4 Jet Grout Hydraulic Barrier

A jet grout hydraulic barrier was installed along 400 feet of the retaining wall on the west side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to at least 30 feet in depth. There is no monitoring or maintenance associated with the hydraulic barrier.

2.2.2.5 Waterloo® Hydraulic Barrier

A Waterloo® hydraulic barrier was installed 370 feet along the north side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to approximately 30 feet in depth or to bedrock. There is no monitoring or maintenance associated with the hydraulic barrier.

2.2.2.6 Groundwater Monitoring

Groundwater monitoring activities will be performed to assess groundwater quality in order to monitor the performance of the remedial actions listed in Section 1.4 and to evaluate any changes in the upgradient groundwater quality at the Site. Monitoring activities are outlined in the Monitoring Plan of the SMP.

2.3 INSTITUTIONAL CONTROLS COMPONENTS

2.3.1 Institutional Controls

A series of Institutional Controls are required under the RAWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to underlying soils by controlling disturbances of the underlying soils; and, (3) restrict the use of the Site to a public school campus. Adherence to these Institutional Controls on the Site (Controlled Property) is required under the Environmental Easement and DCR and will be implemented under this Site Management Plan. These Institutional Controls require:

- Compliance with the Environmental Easement and DCR by the Grantor and the Grantor's successors and assigns with all elements of this SMP;

- All Engineering Controls must be operated and maintained as specified in this SMP;
- The cover system consisting of concrete building slabs, asphalt pavement, concrete covered sidewalks, an artificial turf athletic field, or two feet of clean fill on all exposed ground surfaces including landscaped areas in the BCP Area and Non-BCP Area A must be inspected, certified and maintained as required in this SMP;
- The cover system consisting of a concrete cap on all exposed ground surfaces beneath PS 156 and IS 151 to prevent human exposure to underlying soils remaining under Non-BCP Area B;
- A soil vapor mitigation system consisting of a vapor barrier and a SSDS under all building structures (BCP Area and Non-BCP Area A) must be inspected, certified, operated and maintained as required in this SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Groundwater monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in this SMP;
- On-Site environmental monitoring devices (groundwater monitor wells) must be protected and replaced as necessary to ensure the devices function in the manner specified in this SMP; and
- Engineering Controls may not be discontinued without an amendment or the extinguishment of this Environmental Easement or DCR and approval by NYSDEC and NYSDOH.

The Controlled Property will have the following Institutional Controls in the form of Site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement and DCR. Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- The use of the groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for its intended purpose;

- All future activities on the Controlled Property that will disturb historic urban fill material (Non-BCP Area A and Non BCP Area B) are prohibited unless they are conducted in accordance with the soil management provisions in this SMP;
- The Controlled Property may only be used for a school campus provided that the long-term Engineering and Institutional Controls included in this SMP are employed;
- The Controlled Property may not be used for purposes other than a school without an amendment or the extinguishment of this Environmental Easement and DCR approved in writing by the NYSDEC;
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

2.3.2 Soil/Materials Management Plan

This portion of the SMP is applicable to future intrusive work that will disturb the historic fill material remaining on the Non-BCP Area A and Non-BCP Area B following completion of the remedial measures. The 13-acre Site will be fully remediated for restricted use as a school campus. Any future intrusive work (i.e., after the completion of this Remedial Action) that will disturb the historic urban fill in the Non-BCP Area A and Non-BCP Area B and modifications or repairs to the existing cover system will be performed in compliance with the Soil Management Plan (SoMP), which is included in this SMP. Any future intrusive construction work must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. The Soil Management Plan is presented

in Appendix E of the SMP. The HASP and the CAMP will be prepared by the approved general contractor and approved by the NYCDOE or other designated entity prior to any intrusive work. The HASP and CAMP are the responsibility of the property owner and will be in compliance with DER-10 Technical Guide and 29 CFR 1910 and 1926, and all other applicable Federal, State and local regulations. Any intrusive construction work must be certified as compliant with the SMP and included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5). The SoMP also includes details on the inspection of the cover systems.

2.3.2.1 Soil Screening Methods

Visual, olfactory and photoionization detector (PID) soil screening and assessment will be performed by a qualified environmental professional during all future development excavations into historic urban fill. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Screening will be performed by qualified environmental professionals. Resumes will be provided in the Annual Site Management Report for all personnel conducting invasive work field screening (i.e. those representing the Remedial Engineer) for historic urban fill during development work.

2.3.2.2 Stockpile Methods

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

A dedicated water truck equipped with a water cannon will be available on-Site for dust control.

2.3.2.3 Materials Excavation and Load Out

The Remediation Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the Controlled Property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the Remedial Engineer. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements).

A truck wash will be operated on-Site. The Remediation Engineer will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the intrusive work is complete.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The contractor and the Remedial Engineer will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during invasive work and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

The Applicant and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities performed under the Remedial Action Work Plan.

In the highly unlikely event that historic urban fill exhibits unanticipated field evidence of contamination, the subject fill will be removed and confirmatory sampling will be completed.

Mechanical processing of historical fill or excavated material on-site is prohibited.

2.3.2.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

The truck transport route from the Site is as follows:

1. Turn right onto Morris Avenue from the Site;
2. Head south on Morris Avenue to 138th Street;
3. Turn right onto 138th Street;
4. Head west on 138th Street and enter either Interstate 87 northbound or southbound, depending upon the quickest route to the disposal facility.

All trucks loaded with Site materials will exit the vicinity of the Site using only this approved truck route.

The out-bound truck route to the Site is shown in Figure 26. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

2.3.2.5 Materials Disposal Off-Site

The final disposal locations will be identified and reported to NYSDEC in the Annual Site Management Report.

For large projects, the total quantity of material expected to be disposed off-Site will be reported to NYSDEC prior to performance of work. This will include quantity, breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc.

All soil/fill/solid waste excavated and removed from the Site will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer, Contractor, or Site Owner to the receiving facility describing the material to be disposed and requesting formal written acceptance

of the material. This letter will state that material to be disposed was generated at an environmental remediation site in New York State and subject to the 6NYCRR Part 360 Regulations. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material.

Non-hazardous historic urban fill taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2.

Historic urban fill from Non-BCP Area A or Non-BCP Area B (all historic fill has been removed from the BCP Area) is prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

On-site non-hazardous soils other than historic fill to be removed from the Site will be considered by the Division of Solid & Hazardous Materials (DSHM) in NYSDEC to be C/D materials and not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DSHM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DSHM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on- Site or off- Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The Annual Site Management Report will include an accounting of the destination of all material removed from the Site during work performed under this plan, including, but not limited to, excavated soil, historic fill, other solid waste, and fluids. Documentation associated with disposal of all material must also include records and

approvals for receipt of the material. This information will also be presented in a tabular form in the Annual Site Management Report.

Bill of Lading system or equivalent will be used for off-Site movement of all material removed from the Site. This information will be reported in the Annual Site Management Report.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and quality assurance/quality control (QA/QC) will be reported in the Annual Site Management Report. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

2.3.2.6 Materials Reuse On-Site

Material that has been tested and found to contain levels of organic compounds and inorganic analytes that do not exceed TAGM RSCOs and no detectable VOCs meeting the gradation requirements described below may be reused on the Site, and is referred to as "Environmentally Clean Fill and Backfill." Environmentally Clean Fill shall contain no particles exceeding four inches in the largest diameter. No more than 30 percent of the material shall be retained on a ¾ inch sieve. The material passing the ¾ inch sieve shall contain, by weight, no more than 40 percent passing the No. 100 sieve and 12 percent passing the No. 200 sieve.

The following restrictions of reuse of on-site materials will apply:

- Concrete crushing or processing on-site is prohibited.
- Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-site.

- On-site material removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms or as backfill for subsurface utility lines.

- Concrete and asphalt pavement that are removed from the Site cannot be re-used.

2.3.2.7 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by the New York City Department of Environmental Protection (NYCDEP).

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site.

Discharge of water generated during construction to surface waters (i.e. a local pond, stream or river) is prohibited without a SPDES permit.

2.3.2.8 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this SMP prior to receipt at the Site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the definition of Environmentally Clean Fill as specified in Section 2.3.2.6.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers.

2.3.2.9 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-Site excavation or development-related construction, sampling will be

performed on product, sediment and surrounding soils, etc. Chemical analytical work will be for full scan parameters target analyte list (TAL) metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs. These analyses will not be limited to Spill Technology and Remediation Series (STARS) parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

2.3.2.10 Community Air Monitoring Plan

The Contractor shall prepare and implement a CAMP consistent with the NYSDOH requirements for a Generic Community Air Monitoring Plan and provide the CAMP to the Owner a minimum of two weeks prior to commencement of earth disturbance activities. The CAMP must be approved by the Owner, the NYSDEC and the NYSDOH prior to the start of work. The fixed and mobile monitoring stations will be established as specified in the NYSDOH Generic CAMP. Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

2.3.2.11 Odor, Dust and Nuisance Control Plan

2.3.2.11.1 Odor Control Plan

Odor control methods will be implemented during Site disturbance activities to control emissions of nuisance odors from excavations or stockpiles. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Controlled Property owner's Remediation Engineer, who is responsible for certifying the Annual Site Management Report.

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

2.3.2.11.2 Dust Control Plan

Dust suppression methods that addresses dust management during invasive on-Site work, will include, at a minimum, the items listed below:

- Dust suppression will be achieved though the use of an on-Site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water truck sprinkling.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of the vapor barrier, SSDS and cover system will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive Site-wide inspection will be conducted annually. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;

- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP, the Environmental Easement, and the DCR;
- Sampling and analysis of appropriate media during monitoring events;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Site Management Reporting Plan (Section 5).

Unscheduled inspections and/or sampling may take place when a suspected failure of the cover systems or SSDS has been reported or in an emergency, such as a natural disaster, to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

2.4.2.1 NYSDEC-acceptable Electronic Database

The following information is presented in Appendix J in an electronic database format:

- A Site summary;
- The name of the current Site owner and/or the remedial party implementing the SMP for the Site;
- The location of the Site;
- The current status of Site remedial activity;
- A copy of the Environmental Easement and DCR; and
- A contact name and phone number of a person knowledgeable about the Environmental Easement and DCR requirements, in order for NYSDEC to obtain additional information, as necessary.

This information will be: 1) modified as conditions change; (2) revised in Appendix J of this document; and, (3) submitted to NYSDEC in the Annual Site

Monitoring Report. Should the Environmental Easement or DCR be modified or terminated, the copy of the revised Environmental Easement or DCR will also be updated in this manner.

2.4.2.2 Non-routine Notifications

Non-routine notifications are to be submitted by the property owner(s) to the NYSDEC, the Bronx Borough President's Office, the New York City Council Representative for the district, and Community Board 4 on an as-needed basis for the following reasons:

- 120-day advance notice of any proposed changes in Site use that are consistent with the terms of the BCA;
- 15-day advance notice of any proposed ground-intrusive activities that are non-routine and non-emergency;
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action taken to mitigate the damage or defect;
- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, including a summary of action taken and the impact to the environment and the public; and
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

3.0 MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the implemented ECs in reducing or mitigating contamination at the Site. ECs at the BCP Area and Non-BCP Area A include a cover system, SSDS, vapor barrier, and jet grout and steel sheet hydraulic barriers. ECs at Non-BCP Area B include a cover system. This Monitoring Plan is subject to revision by NYSDEC.

3.1.2 Purpose

This Monitoring Plan describes the methods to be used for:

- Groundwater sampling and analysis;
- Evaluating Site information periodically to confirm that the remedy continues to be effective as per the design;
- Preparing the necessary reports for the various monitoring activities;
- Assessing compliance with NYSDEC groundwater standards; and
- Assessing achievement of the remedial performance criteria.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control requirements;
- Inspection and maintenance requirements for groundwater monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and certification.

Quarterly groundwater monitoring will be conducted for one year following installation of the barrier walls, and semi-annually until the upgradient spills are addressed. The first round of quarterly samples was collected on December 6, 2007. Second and third quarter sampling was completed on March 24, 2008, and June 5, 2008, respectively. At the completion of school construction, data from off Site and on Site monitoring wells will be evaluated with the NYSDEC to assess the upgradient groundwater quality concerns and to make a determination regarding the future of the groundwater monitoring program. If the upgradient source(s) of groundwater contamination is not yet addressed, semi-annual groundwater monitoring will continue. The groundwater monitoring program is summarized in the table below and outlined in detail in Section 3.2 below.

Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Cover Systems	Monthly	Custodial Engineer	DOE
	Annual	Independent Professional Engineer	DOE
Groundwater Monitoring Well Sampling	Quarterly for 1st year, semi-annual thereafter until the upgradient source(s) is addressed	Groundwater	US EPA Method 8260 for VOCs**

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

** The 1st round of quarterly groundwater samples were also analyzed by US EPA Method 8270 for SVOCs.

3.2 ENGINEERING CONTROL SYSTEM MONITORING

The following sections discuss the monitoring activities for each of the ECs.

3.2.1 Cover System Monitoring

Exposure to subsurface soils will be prevented by a cover system that will be constructed on the Site. The cover system for the BCP Area and Non-BCP Area A will

be comprised of concrete building slabs, asphalt covered roads, concrete covered sidewalks, a artificial turf athletic field, or two feet of clean fill on all exposed ground surfaces including landscaped areas. In addition, NYCSCA agreed to install a cap on Non-BCP Area B. Figure 24 shows the design (i.e., cross section) of each type of cover to be built at the BCP Area and Non-BCP Area A and Figure 25 shows the location of each cover type to be built at the BCP Area and Non-BCP Area A. The design of the cover for Non-BCP Area B includes an average of eight (8) inches of crushed stone base with a minimum of four (4) inches of cement concrete cap. School personnel will be provided training in both the operation and maintenance of the artificial turf system, and the custodian will conduct monthly inspections of the turf. DOE will replace the turf when standard repairs are no longer practical.

Monitoring of the cover systems will be performed by monthly walk-throughs and an annual inspection of the cover materials as detailed in the Soil Management Plan.

3.2.1.1 Cover System Monitoring Schedule

Monthly inspections will be performed by the school custodian who will identify any observed changes to the cover system. In the event of a change in previous conditions, the custodian will log the information and immediately request an inspection from DOE, DSF. Annual inspections of the BCP Area, Non-BCP Area A, and Non-BCP Area B cover systems will be performed by an independent professional engineer retained by the DOE, DSF and in the presence of custodial staff. Monthly and Annual Inspection Checklists are provided in Appendix M.

Inspection frequency is subject to change by NYSDEC and NYSDOH. Unscheduled inspections and/or sampling may take place when a suspected failure of any part of the cover systems has been reported or an emergency occurs that is deemed likely to affect the operation of the cover system. Monitoring deliverables for the cover system are specified in Section 5.4.

3.2.2 Vapor Barrier Monitoring

A vapor barrier will be installed beneath all of the school buildings in the BCP Area and Non-BCP Area A as an added precaution to prevent any potential residual soil gas vapors from entering the school buildings in the future. The vapor barrier will be

installed above the gravel layer containing the SSDS. At the time of installation, a smoke test will be performed on the vapor barrier as a Quality Assurance (QA)/Quality Control (QC) measure to demonstrate its integrity to the satisfaction of an independent professional engineer. This QA/QC step is a requirement of the manufacturer in order to issue a warranty for the vapor barrier system. In addition, a smoke test will be performed as part of the annual Site inspection to verify that there is no communication between the sub-slab and indoor environments. The annual smoke test will utilize environmentally safe smoke tubes to inspect the basement floors of the school buildings for leaks through concrete cracks and floor joints consistent with the October 2006 NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. There is no routine maintenance associated with the vapor barrier. Specifications and drawings regarding the installation of the vapor barrier are included in Appendix F of this SMP. The Annual Inspection Checklist is provided in Appendix M. Referenced documents, if applicable, also relate to the design of the vapor barrier.

3.2.3 Jet Grout Hydraulic Barrier Monitoring

A jet grout hydraulic barrier was installed along 400 feet of the retaining wall on the west side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to at least 30 feet in depth. There is no monitoring or maintenance associated with the hydraulic barrier. Specifications and drawings regarding the installation of the jet grout hydraulic barrier are included in Appendix G of this SMP. Referenced documents, if applicable, also relate to the design of the vapor barrier.

3.2.4 Waterloo® Hydraulic Barrier Monitoring

A Waterloo® hydraulic barrier was installed 370 feet along the north side of the BCP Area and Non-BCP Area A to prevent any upgradient contaminated groundwater from flowing beneath the school buildings in the future. The hydraulic barrier has been installed to approximately 30 feet in depth or to bedrock. There is no monitoring or maintenance associated with the hydraulic barrier. Specifications and drawings regarding the installation of the Waterloo® hydraulic barrier are included in Appendix H of this SMP. Referenced documents, if applicable, also relate to the design of the vapor barrier.

3.2.5 SSDS Monitoring

A SSDS will be installed beneath the school buildings in the BCP Area and Non-BCP Area A as an added precaution to prevent any potential residual soil gas vapors from entering the school buildings in the future. The SSDS will operate in the active mode for the life of the school facility unless there is clear demonstration that the subsurface VOC contamination emanating from upgradient source(s) has been removed or treated. Specifications regarding the installation of the SSDS are included as Appendix I of this SMP and the plans for the Vapor Barrier are included in Appendix F of the SMP.

After the SSDS is installed and prior to school occupancy, a start-up test will be performed to evaluate the effectiveness of the SSDS. The first step will be to start each of the SSDS fans on the roofs of the buildings to document that the fans are functioning properly and to document the air flow velocity at each SSDS effluent stack. Once the fans are fully operational at the roof level, a digital micromanometer will be used to collect vacuum readings from the pressure field extension (PFE) monitoring stations in the basements of each building. The PFE monitoring stations in each building were designed to be installed in basement locations furthest from SSDS effluent stacks, and therefore furthest from the fans, to ensure that the SSDS is effective across the entire footprint of each building. PFE measurements will need to achieve a minimum of 0.01 inches of water vacuum in order to meet the performance requirements of the October 2006 NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. If these criteria are not met, adjustments will be made to the SSDS fans to increase air flow and vacuum influence including replacement of the fans with larger fans, if necessary.

The operation of the SSDS will be monitored through a state-of-the art Building Maintenance System (BMS) which provides 24/7 digital input on the operation of the SSDS, including motor current, air flow, and the motor fan on/off switch. In the event of a BMS alarm, its notification system will sequentially notify the Custodial Engineer and other DOE personnel. The level of notification will be dependent on the response time of each personnel identified in the notification sequence.

3.2.5.1 SSDS Monitoring Schedule

All of the major SSDS components will be continuously monitored by the BMS.

In addition, unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or if an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the SSDS are specified later in Section 5.0.

Monthly inspections of the SSDS will be performed by the Custodial Engineer and annual inspections will be performed by an independent professional engineer retained by the DOE, DSF. Monthly and Annual Inspection Checklists are provided in Appendix M.

3.2.5.2 General Equipment Monitoring

A visual inspection of the above ground components of the SSDS will be conducted by an independent professional engineer retained by the DOE, DSF during the annual inspection. The "General Equipment Monitoring" will cover the operational components of the SSDS (i.e., fans, inline filter/bird screens, etc.) which will be monitored during the annual inspection. As stated above, all of the major SSDS components will be continuously monitored by the BMS.

A complete list of BMS components to be checked will be provided once the final design details are completed. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the SSDS system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan will be initiated immediately and the SSDS will be restored to its design specifications.

3.2.5.3 SSDS System Monitoring Devices and Alarms (BMS)

As mentioned above, the SSDS will be connected to a BMS which has a warning device to indicate that the system is not operating properly. In the event that there is an interruption in service, an alarm will appear on a control panel that indicates the time and date of the alarm. The date and time at which the alarm is cleared will be noted. The BMS notification process involves several levels of electronic notification depending on the response time of each personnel identified in the notification sequence and will operate 24/7. The system will be inspected and applicable maintenance and repairs will

be conducted, as specified in the Operation and Maintenance Plan, and the SSDS will be restored to its design specifications. Additional key parts (i.e., fan belts, motor) will be on-hand to facilitate replacements, as necessary. Operational problems will be noted in the Annual Site Management Report.

3.3 GROUNDWATER MONITORING PROGRAM

Quarterly groundwater monitoring will be conducted for one year starting December 2007, and semi-annually until the upgradient source(s) of contamination are addressed. The first round of quarterly samples was collected on December 6, 2007. Second and third quarter sampling was completed on March 24, 2008, and June 5, 2008, respectively. At the completion of school construction, data from off Site and on Site monitoring wells will be evaluated with the NYSDEC to assess the upgradient groundwater quality concerns and to make a determination regarding the future of the groundwater monitoring program. If the upgradient source(s) of groundwater contamination is not yet addressed, semi-annual groundwater monitoring will continue.

3.3.1 Monitoring System Design

The network of monitoring wells is designed to monitor groundwater conditions at the Site. The network of wells has been located based on the criteria in the following table:

Groundwater Monitoring Well Network

Monitoring Well Number	Depth of Well (ft)	Screened Interval of Well (ft)	Frequency*	Matrix	Analysis	Location Rationale
MW-3A	15	5-15	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Previously sampled, centrally located downgradient well
MW-5A	12	2-12	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Previously sampled, northeast located downgradient well
MW-11A	18	8-18	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Previously sampled, southeast located downgradient well
MW-23	15	5-15	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Immediately downgradient of Waterloo® Hydraulic Barrier
MW-24	13	3-13	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Immediately downgradient of Jet Grout Hydraulic Barrier
MW-25	12	2-12	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Inside of Waterloo® Hydraulic Barrier (NYSDEC Request)
MW-26R[1]	15	5-15	Quarterly for 1st Year, Semiannual thereafter	Groundwater	US EPA Method 8260 for VOCs**	Inside of Waterloo® Hydraulic Barrier (NYSDEC Request)

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH.

** The 1st round of quarterly groundwater samples were also analyzed by US EPA Method 8270 for SVOCs.

[1] MW-26 was destroyed after the 1st Quarterly Sampling Event by school construction activities. MW-26R was installed in the same location and to the same depth.

The locations of these wells are shown on Figure 27 of this SMP. Baseline water levels and groundwater flow patterns are shown on Figure 13. All of the on-Site groundwater monitoring wells installed during the RI have been, or will be decommissioned in place, as part of the school construction. All off-Site groundwater

monitoring wells will be monitored and maintained until such time it is determined the wells are no longer needed.

3.3.2 Groundwater Well Construction

The groundwater monitoring network consists of seven (7) monitoring wells. Monitoring wells MW-3A and MW-23 were installed utilizing a hollow stem auger drill rig, and MW-5A, MW-11A, MW-24, MW-25 and MW-26R were installed with a Geoprobe® rig. The two wells installed with the hollow stem auger rig were constructed of 2-inch diameter polyvinyl chloride (PVC) with 10-foot long, 0.010-inch machine slotted well screen. The five wells installed by the Geoprobe rig were constructed with 1.5-inch diameter PVC with 10-foot long, 0.010-inch machine slotted well screen. Each well screen is surrounded by a sand pack with a bentonite seal. The remainder of the annulus is sealed with concrete with two feet of stick up. Each well has a 6-inch (2-inch PVC wells) or 4-inch (1.5-inch PVC wells) diameter steel protective casing set over the well riser, with four (4) 3-inch steel bollards surrounding the protective well casing.

Copies of the well construction logs for these 7 wells are included in Appendix K of this SMP.

3.3.3 Monitoring Schedule

The seven (7) groundwater wells in the monitoring network will be sampled on a quarterly basis for the first year and then semi-annually until the upgradient spills are addressed. At the completion of school construction, data from off Site and on Site monitoring wells will be evaluated with the NYSDEC to assess the upgradient groundwater quality concerns and to make a determination regarding the future of the groundwater monitoring program. If the upgradient source(s) of groundwater contamination is not yet addressed, semi-annual groundwater monitoring will continue.

Deliverables for the groundwater-monitoring program are specified below.

3.3.4 Sampling Event Protocol

All well sampling activities will be recorded in a field book and a groundwater-sampling log presented in Appendix L. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network. The following sampling procedures will be followed for each groundwater sampling event:

1. Measure Water Level.
2. Install Tubing: Slowly lower the peristaltic pump tubing into the well to the depth specified for that well. The bottom of the tubing must be kept at least 2 feet above the bottom of the well to prevent disturbance and resuspension of any sediment present in the bottom of the well. Record the depth to which the tubing is lowered.
3. Measure the water level again with the tubing in the well. Leave the water level measuring device in the well.
4. Purge Well: Start pumping the well at 200 to 500 milliliters per minute (ml/min). The water level will be monitored approximately every 5 minutes. Ideally, a steady flow rate will be maintained which should result in a stabilized water level (drawdown of 0.3 feet or less). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. Care should be taken to avoid entrainment of air in the tubing (i.e., allow the water level to drop down to the pump intake). Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment.
5. Monitor Indicator Parameters: During purging of the well, monitor and record the field indicator parameters (temperature, specific conductance, pH, redox potential, and dissolved oxygen [DO]) approximately every 5 minutes. The well is considered stabilized and ready for sample collection when the indicator parameters have stabilized for three consecutive readings as follows:
    - $\pm$0.1 for pH
    - $\pm$3% for specific conductance (conductivity)
    - $\pm$10 mv for redox potential

- ±10% for DO

    1. Dissolved oxygen usually requires the longest time to achieve stabilization. The pump must not be removed from the well between purging and sampling.

6. Remove Tubing: Slowly remove the tubing from the well and properly discard. Slowly lower a dedicated, disposable 1-inch polyethylene bailer into the well. The bottom of the bailer must be kept at least two feet from the bottom of the well. Slowly remove the bailer from the well and pour the contents of the bailer into the sample containers. The VOC sample containers must be filled prior to any other sample containers.
7. Measure and record well depth.
8. Close and lock the well.

Following sample collection, the samples will be submitted to a NYSDOH-certified laboratory for volatile organic analysis by US EPA Method 8260. The first round of sampling also included semi-volatile organic analysis by US EPA Method 8270. The monitoring reporting requirements are discussed in Section 3.7 of this SMP.

3.4 WELL REPLACEMENT/REPAIRS AND DECOMMISSIONING

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance. Well decommissioning, for the purpose of replacement, will be reported to NYSDEC prior to performance and in the annual report. Well decommissioning without replacement must receive prior approval by NYSDEC. Well decommissioning will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures (October 1996)." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC and NYSDOH.

3.5 SITE-WIDE INSPECTION

A Site-wide inspection will be performed monthly by the School custodian and annually by an independent professional engineer retained by the DOE, DSF. Site-wide

inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix M). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- Description of general Site conditions at the time of the inspection;
- Site management activities being conducted including, where appropriate, confirmatory sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirmation that Site records are up to date.

3.6 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses have been, and will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the Site (Appendix N). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:

- All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
- The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.

- Analytical Procedures;
- Data Reduction and Validation:
  - Data validation will be performed in accordance with the USEPA validation guidelines for organic and inorganic data review. Validation will include the following:
    - Verification of 100% of all QC sample results (both qualitative and quantitative);
    - Verification of the identification of 10% of all sample results (both positive hits and non-detects);
    - Recalculation of 10% of all investigative sample results; and
    - A Data Usability Summary Report (DUSR) which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.7 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular Site monitoring events and Site inspections will be kept on file with the DOE, DSF and at each school custodians' office on the Mott Haven Campus. All forms, and other relevant reporting

formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Annual Site Management Report, as specified in the Reporting Plan of the SMP.

All groundwater monitoring results will be reported to NYSDEC on an annual basis in the Site Management Report. A report or letter will be prepared for submission subsequent to each groundwater sampling event. The report (or letter) will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (i.e., groundwater);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (also to be submitted electronically in the NYSDEC-identified format);
- A copy of the laboratory certification;
- Any observations, conclusions, or recommendations; and
- A determination as to whether plume conditions have changed since the last reporting event.

Data will be reported in hard copy and digital format as determined by NYSDEC. A summary of the groundwater monitoring program deliverables are presented below.

Monitoring/Inspection Deliverables

Task	Frequency of Sampling*	Reporting Requirements
Groundwater Monitoring	Quarterly for the First Year, Semi-annually afterwards until the upgradient source(s) of contamination are addressed	Quarterly Groundwater Monitoring Reports and Annual Groundwater Monitoring Report

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC/ NYSDOH.

3.8 CERTIFICATIONS

Site inspections and sampling activities will take place as outlined above. Frequency of inspection is subject to change by NYSDEC. Inspection certification for all ICs and ECs will be submitted to NYSDEC on a calendar year basis and must be submitted by March 1 of the following year. An independent professional engineer registered to practice in New York State retained by DOE, DSF will perform the Annual Site Inspection and will provide the certification. Further information on the certification requirements are outlined in the Reporting Plan of the SMP. Information regarding the training requirements and qualifications for the personnel conducting the monitoring and inspections is presented in Table 7.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

The Operation and Maintenance Plan describes the measures necessary to operate and maintain any mechanical components of the remedy selected for the BCP Area and Non-BCP Area A (i.e., SSDS). This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the BCP Area and Non-BCP Area A to operate and maintain the SSDS;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in conditions in the BCP Area and Non-BCP Area A or the manner in which the SSDS is operated and maintained.

Information on non-mechanical Engineering Controls (i.e. cover system, vapor barrier, and jet grout and Waterloo® barriers) can be found in Section 2 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept in each school custodian's office within the Mott Haven Campus. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP. The Operation and Management Plan is subject to NYSDEC revision.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

The following sections describe the operation and maintenance plan for the SSDS system.

4.2.1 Scope

The SSDS fan units, which will be located on the school building roofs, have a number of parts that will require routine maintenance. Key parts of the SSDS fans include motor and fan bearings, fan belt, fan back draft damper, and air flow switch and sensor. Maintenance will be performed on the SSDS fans at least annually. Maintenance will consist of replacing worn parts when necessary (i.e., the fan belt). The

electric motors for the fans have a life expectancy of 25 years. The motors will be replaced after 22 to 24 years of service.

In the event that an SSDS fan fails, the fan will be repaired or replaced and documented for inclusion in the Annual Site Management Report. Key spare parts (i.e., fan belts, motor) will be kept at the school to reduce the time necessary to replace the parts. Once a spare fan part has been put into operation, a new fan part will be ordered and kept at the school as a spare.

The BMS will continuously monitor the SSDS operational status as indicated in Section 3.2.5.3. The custodial staff will monitor the status of the system in this manner. A log book will be set up to confirm on-going custodial oversight of the SSDS. The custodial staff will be instructed to contact the DOE, DSF in the event of a change in the operation of the SSDS.

Annual inspection of the SSDS, as well as other engineering controls, will be performed by an independent professional engineer retained by the DOE, DSF to ensure that all engineering controls are functioning properly.

Monthly walk-throughs of the Site will be performed by the custodian, who will identify any observed changes to the lowest interior floor surfaces as well as changes to the exterior ground surfaces (i.e., asphalt pavement, artificial athletic turf, walkways, etc.). This procedure will be followed for the entire period the Site is used as a school. In the event of a change in previous conditions, the custodian will log the information and immediately request an inspection from the DOE. A follow-up inspection and report will be generated and the NYSDEC will be informed of all findings and recommendations.

4.2.2 System Start-Up and Testing

The specifications for the SSDS system describe the components of the system and how they will be installed. The specifications also require the Contractor to pressure test the system during various phases of the installation and prior to start up, and to make any necessary repairs or replacements.

After the SSDS is installed and prior to school occupancy, a start-up test will be performed to evaluate the effectiveness of the SSDS. The first step will be to start each

of the SSDS fans on the roofs of the buildings to document that the fans are functioning properly and to document the air flow velocity at each SSDS effluent stack. Once the fans are fully operational at the roof level, a digital micromanometer will be used to collect vacuum readings from the PFE monitoring stations in the basements of each building. The PFE monitoring stations in each building were designed to be installed in basement locations furthest from SSDS effluent stacks, and therefore furthest from the fans, to ensure that the SSDS is effective across the entire footprint of each building. PFE measurements will need to achieve a minimum of 0.01 inches of water vacuum in order to meet the performance requirements of the October 2006 NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. If these criteria are not met, adjustments will be made to the SSDS fans to increase air flow and vacuum influence including replacement of the fans with larger fans, if necessary.

The system testing described above will be conducted if, in the course of the SSDS lifetime, significant changes are made to the system, and the system restarted.

4.2.3 SSDS Operation: Routine Operation Procedures

The contractor will be responsible for submitting all manufacturers' product data, manuals, and drawings related to the SSDS components including the fans, switches, dampers, and pressure gauges to the Owner. Copies of these materials will be maintained on-site and available for reference in the event of troubleshooting, adjustments or repairs are necessary.

4.2.4 SSDS Operation: Routine Equipment Maintenance

Following startup and balance of the SSDS, all gauges and flow element settings will be recorded for future comparison purposes if the system is malfunctioning. The manufacturer's recommendations regarding operation of the blower will be followed.

4.2.5 SSDS Operation: Non-Routine Equipment Maintenance

In the event of a BMS alarm, its notification system will sequentially notify the Custodial Engineer and other DOE personnel. Following notification the source of the

problem will be determined and repairs or replacements will be made as required in accordance with the component manuals.

4.3 GROUNDWATER MONITORING WELL MAINTENANCE

If biofouling or silt accumulation has occurred in the monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

4.4 MAINTENANCE REPORTING REQUIREMENTS

Maintenance reports and any other information generated during regular operations at the Site will be kept on-file in each school custodian's office on the Site. All reports, forms, and other relevant information will be available to the NYSDEC upon request and submitted as part of the Annual Site Management Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

Routine maintenance activities will be recorded by the custodial staff in a log book. The log book will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

For all routine EC maintenance completed by a contractor, the contractor will submit a summary report of the completed maintenance, along with a list of parts and materials used, to the DOE with a copy to the school custodian within 30 days.

4.4.2 Non-Routine (Severe Condition) Maintenance Reports

Any non-routine maintenance event will be recorded in the custodial staff's log book and will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet);
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form); and
- A log of the Emergency Contact correspondence.

For all non-routine EC maintenance completed by a contractor, the contractor will submit a summary report of the completed maintenance, along with a list of parts and materials used, to the DOE with a copy to the school custodian within 30 days.

4.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

4.5.1 Emergency Telephone Numbers

In the event of any environmentally-related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) will contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel will be contacted. Prompt contact will also be made to the qualified

environmental professional. These emergency contact lists must be maintained in an easily accessible location at the Site.

Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Additional Emergency Contact Numbers

School Custodian, To Be Determined	To be provided
NYCDOE DSF, Director Bernie Orlan	Work Telephone Number: 718/361-3808 Cell Telephone Number: 347/386-4418
NYCSCA, IEH Director Alex Lempert	Work Telephone Number: 718/472-8501 Cell Telephone Number: 917/642-2716

* Note: Contact numbers subject to change and will be updated as necessary

4.5.2 Map and Directions to Nearest Health Facility

Site Location: 730 Concourse Village West, Bronx, New York

Nearest Hospital Name: Lincoln Hospital

Hospital Location: 234 East 149th Street, Bronx, New York

Hospital Telephone: (718) 993-3860

Directions to the Hospital:

1. Go northeast on Concourse Village West (<0.1 mile)

2. Turn right onto East 156th Street (0.1 mile)

3. Turn right onto Concourse Village East (<0.1 mile)

4. Stay straight and go onto Morris Avenue (0.5 mile)

5. Turn right onto East 149th Street (<0.1 mile)

Total Distance: 0.7 miles

Total Estimated Time: 2 minutes

Map Showing Route from the Site to the Hospital:

4.5.3 Response Procedures

4.5.3.1 Emergency Contacts/Notification System

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan. The list is also posted prominently at the Site and made readily available to all personnel at all times.

4.5.3.2 SSDS/Vapor Barrier

Unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or if an emergency occurs that is deemed likely to affect the operation of the system.

Indoor air monitoring is not required by the State remedial program, since monitoring of the engineering controls is believed to be sufficient for protection of human health. However, DOE has agreed to conduct indoor air sampling on a contingency basis. The DOE will ultimately make decisions regarding the sampling procedures, with input from NYSDOH, which will also be reviewing the sampling results.

4.6 OPERATION AND MAINTENANCE TRAINING

The training, qualification and reporting requirements for personnel conducting the monitoring and maintenance of the Engineering Controls are presented in Table 7.

5.0 SITE MANAGEMENT REPORTING PLAN

5.1 INTRODUCTION

An Annual Site Management Report will be submitted to NYSDEC by March 1st of the calendar year following approval of the SMP by the NYSDEC. The Annual Site Management Report will be prepared in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation requirements. This Site Management Reporting Plan and its requirements are subject to revision by NYSDEC.

This report will include the following:

- Identification of all required EC/ICs required by the RAWP and this SMP for the BCP Area, Non-BCP Area A and Non-BCP Area B;
- An evaluation of the Engineering and Institutional Control Plan and the Monitoring Plan for adequacy in meeting remedial goals;
- Assessment of the continued effectiveness of all Institutional and Engineering Controls for the Site;
- Certification of the EC/ICs;
- Results of the required periodic Site Inspections;
- All deliverables generated during the reporting period, as specified in Section 2 EC/IC Plan, Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan; and
- Signed and Sealed by a New York State Professional Engineer.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

Information on EC/ICs can be found in the Engineering and Institutional Control Plan portion of the SMP. Inspection of the EC/ICs will occur at a frequency described in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan. After the last inspection of the reporting period, a Professional Engineer licensed to practice in New York State will sign and certify the document. The document will certify that:

- On-Site ECs/ICs are unchanged from the previous certification;

- They remain in-place and effective;
- The systems are performing as designed;
- Nothing has occurred that would impair the ability of the controls to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls;
- Access is available to the Site by NYSDEC and NYSDOH to evaluate continued maintenance of such controls; and
- Site usage is compliant with the environmental easement.

The signed certification will be included in the Annual Site Management Report (see Section 5.3).

5.3 SITE INSPECTIONS

5.3.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a Site-wide inspection will be conducted:

- Monthly by custodial staff;
- Annually by an independent professional engineer retained by DOE, DSF;
- When a breakdown of the SSDS has occurred (inspection of the BCP Area and Non-BCP Area A); and
- Whenever a severe condition has taken place, such as any erosion or flooding event that may affect the ECs.

5.3.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms for their respective system (refer to Appendix L for groundwater sampling). Additionally, a general Site-wide inspection form (which includes the cover systems) will

be completed during the Site-wide inspection (see Appendix M). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records (including all sampling data of groundwater at the Site and system maintenance reports) generated for the Site during the calendar year will be included in the Annual Site Management Report.

5.3.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and
- The Site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and FER.

5.4 SITE MANAGEMENT REPORT

The Site Management Report will be submitted annually and will be submitted by March 1st of the calendar year following the approval of the SMP. Other activities such as groundwater monitoring reports will be submitted quarterly for the first year, and semi-annually thereafter, with those results also incorporated into the Annual Site Management Report. The report will include:

- EC/IC certification;
- All applicable inspection forms and other records generated for the Site during the reporting period;
- Cumulative data summary tables and/or graphical representations of contaminants of concern for groundwater, which include a listing of all compounds analyzed along with the applicable standards, with all exceedances highlighted;

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables required for all points sampled during the calendar year (also to be submitted electronically in the NYSDEC-specified format);
- A performance summary for the SSDS during the calendar year, including information such as:
    - The number of days the system was operational during the reporting period;
    - A description of breakdowns and/or repairs along with an explanation for any significant downtime;
    - A summary of the performance and/or effectiveness monitoring;
    - Comments, conclusions, and recommendations based on data evaluation; and
    - Description of the resolution of performance problems.
- A Site evaluation, which will address the following:
    - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored; and
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan.
- A figure showing sampling and well locations, and significant analytical values at sampling locations; and
- Comments, conclusions, and recommendations, based on an evaluation of the information included in the report, regarding EC/ICs at the Site.

The Annual Site Management Report will be submitted, in hard-copy format, to the Region 2 NYSDEC offices, located at 41-40 21st Street, Long Island City, New York, and in electronic format to NYSDEC and NYSDOH. A hardcopy of the Final Site Management Plan, Remedial Investigation and Remedial Action Work Plan, as well as current and historical copies of the Annual Site Management Reports will be maintained at a designated location on the new Mott Haven Campus.

6.0 SUPPLEMENTAL OFF-SITE REMEDIAL ACTIVITIES

Remedial actions beyond those required by the RAWP have been undertaken adjacent to the BCP Area as part of NYCSCA's voluntary efforts, as well as NYCSCA's proactive outreach to the community.

The Remedial Investigation findings identified a small pocket of soil contamination in the Non-BCP Area B, immediately north of the BCP Area (see Figure 28), which is hereafter referred to as the Supplemental Remedial Area (SRA). The zone of contamination was confined to a small pocket of soil in the center of the SRA, at a depth between 3 and 8 feet below ground surface, corresponding to the top of the zone of saturation (water table).

Remedial Action Objectives were established to ensure that the SRA remedy was fully effective in addressing this soil contamination.

Excavation of the contaminated soil, similar to the BCP Area, was not a feasible remedial alternative due to potential adverse impacts to the structural stability of the columns that support nearby school buildings. NYCSCA's consulting engineers determined that the contaminants should be stabilized and encapsulated using an in-situ solidification technology. The injection of jet grout columns was determined to be the best alternative to stabilize and contain the contaminants within the solid matrix. During August 2007, the small pocket of contaminated soil and a 5 to 10 foot buffer of uncontaminated soil were encapsulated in a grout monolith using the jet grout injection technology. A total of 100, 8-ft diameter, overlapping jet grout columns, as shown on Figure 29, were installed to 15 feet below the existing grade. Approximately 4 weeks after the columns had been installed, a total of four (4) confirmation cores were collected from the locations shown on Figure 29. The confirmation cores confirmed that the columns formed a single grout monolith, and that the Remedial Action Objectives had been achieved.

In addition, to address a recommendation in the Center for Public Environmental Oversight (CPEO) report entitled "Independent Review of the Cleanup of the Mott Haven Schools Complex, Bronx, New York", the NYCSCA will place a concrete cover beneath PS 156 and IS 151 in Non-BCP Area B. The cap is discussed in Sections 2.2.1.1, 3.2.1, and 4.2.1 above.

Supplemental voluntary on-Site remedial actions in Non-BCP Area A, beyond those required by the RAWP (Spot Excavations and Soil Gas Sampling), are presented in Appendix P.

TABLES

Table 1
New York City School Construction Authority
Former Metro-NorthProperty (Mott Haven)
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 2
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	SB22	SB22	SB23	SB24	SB25	SB25	SB25	SB25A
		Sample Depth (ft.):	NA	NA	NA	NA	14-16	4-6	3-5	6-8	10-11	6-8	6-8	2-4	6-8	14-16	4-6
		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	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	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**	560 U	**11 JB**	4.6 U	**30 J**	**130**	**50**	**22 J**	**81**
Carbon Disulfide	2700		0.42 U	0.40 U	83 U	69 U	**2.6 J**	0.41 UJ	0.46 U	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		2.1 U	2.0 U	130 U	110 U	2.2 U	2.0 UJ	**3.3 JB**	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		3.2 U	3.1 U	600 U	500 U	3.5 U	3.1 UJ	3.5 U	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	^		0.37 U	0.35 U	160 U	140 U	0.40 U	0.36 UJ	0.41 U	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	^		0.45 U	0.43 U	79 U	66 U	0.48 U	0.44 UJ	0.49 U	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		0.46 UJ	0.44 U	51 U	42 U	**29 J**	0.44 UJ	0.50 U	**23000**	0.51 U	0.55 U	0.46 UJ	0.45 U	0.48 U	0.46 U	0.48 U
Trichloroethene	700		0.35 U	0.34 U	140 U	120 U	0.38 U	0.34 UJ	0.38 U	110 U	0.39 U	**25**	0.36 UJ	0.35 U	0.37 U	0.36 U	0.37 U
Toluene	1500		0.46 U	0.44 U	**300 J**	**760 J**	**2.3 J**	0.45 UJ	0.51 U	**9600**	0.51 U	0.55 U	0.47 UJ	**2.0 J**	0.48 U	0.47 U	0.48 U
Tetrachloroethene	1400		0.83 U	0.80 U	70 U	58 U	0.89 U	0.81 UJ	0.91 U	56 U	0.92 U	**18**	0.85 UJ	0.83 U	0.87 U	0.85 U	0.87 U
Ethylbenzene	5500		0.40 U	0.39 U	**6900**	**19000**	**2.3 J**	0.39 UJ	0.44 U	**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		0.99 U	0.94 U	**25000**	**50000**	**14**	0.96 UJ	1.1 U	**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		0.44 U	0.42 U	**4600**	**6400**	**4.5 J**	0.43 UJ	0.48 U	**3300**	0.49 U	0.53 U	0.45 UJ	0.44 U	0.46 U	0.45 U	0.46 U
Isopropylbenzene	^		0.48 U	0.45 U	**1600**	**4900**	**41**	0.46 UJ	0.52 U	**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		0.38 U	0.36 U	96 U	80 U	0.41 U	0.37 UJ	0.42 U	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	^		0.61 U	0.58 U	**3600**	**11000**	**51**	0.6 UJ	0.67 U	**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	^		0.56 U	0.54 U	**9600**	**14000**	**21**	0.55 UJ	0.62 U	**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	^		0.43 U	0.41 U	**30000**	**93000 D**	**150**	0.42 UJ	**2.5 J**	**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	^		0.48 U	0.46 U	**730 J**	75 U	**5.4 J**	0.46 UJ	0.52 U	**3000**	0.53 U	0.57 U	0.49 UJ	0.48 U	0.50 U	0.49 U	0.50 U
p-Isopropyltoluene	^		0.49 U	0.46 U	**1600**	**3200**	**2.1 J**	0.47 UJ	**1.3 J**	**3400**	0.54 U	0.58 U	0.49 UJ	**190**	**16**	**20**	**4.0 J**
n-Butylbenzene	^		0.39 U	0.37 U	**1500**	**4500**	**5.8 J**	0.38 UJ	0.42 U	**8200**	0.43 U	0.46 U	0.39 UJ	0.38 U	0.40 U	0.39 U	0.40 U
Naphthalene	13000		0.67 U	0.64 U	**7100**	**27000**	**4.7 J**	0.65 UJ	**9.4**	**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	^		590 U	570 U	55 U	45 U	64 UJ	57 U	650 U	70 U	65 U	71 U	60 U	120 U	62 U	60 U	120 U
3+4-Methylphenols	900		590 U	570 U	**270 J**	42 U	64 UJ	57 U	650 U	70 U	65 U	71 U	60 U	120 U	61 U	60 U	120 U
Naphthalene	13,000		630 U	610 U	**1500**	**96000 D**	69 U	62 U	700 U	**840**	70 U	76 U	65 U	**150 J**	**69 J**	65 U	130 U
2-Methylnaphthalene	36,400		620 U	600 U	**770 J**	**57000 D**	68 U	61 U	690 U	**510**	69 U	75 U	63 U	**150 J**	**66 J**	64 U	130 U
Acenaphthylene	41,000		**1200 J**	580 U	**160 J**	**1200**	66 U	59 U	670 U	**80 J**	67 U	73 U	62 U	**510 J**	63 U	62 U	**180 J**
Acenaphthene	50,000		**910 J**	640 U	**250 J**	**11000 D**	72 U	64 U	730 U	**130 J**	73 U	80 U	68 U	**650 J**	**100 J**	**68 J**	**170 J**
Dibenzofuran	6,200		**620 J**	590 U	**120 J**	**7100**	67 U	60 U	680 U	73 U	68 U	74 U	63 U	**770**	**120 J**	**75 J**	130 U
Fluorene	50,000		**1100 J**	600 U	**280 J**	**12000 D**	68 U	61 U	690 U	**78 J**	70 U	76 U	64 U	**630 J**	**140 J**	**95 J**	**190 J**
Phenanthrene	50,000		**12000**	570 U	**2400**	**40000 D**	64 U	58 U	**4700**	**240 J**	66 U	71 U	60 U	**8100 D**	**1000**	**680**	**2500**
Anthracene	50,000		**3100 J**	540 U	**440 J**	**11000 D**	61 U	55 U	**860 J**	**100 J**	62 U	68 U	57 U	**1200**	**160 J**	**120 J**	**590 J**
Fluoranthene	50,000		**17000**	**1700 J**	**2500**	**24000 D**	60 U	**75 J**	**6400**	**510**	61 U	67 U	56 U	**9800 D**	**1100**	**630**	**3900**
Pyrene	50,000		**17000**	**1700 J**	**2400**	**28000 D**	72 U	**65 J**	**7800**	**1200**	73 U	79 U	67 U	**7700 D**	**820**	**420**	**4400**
Butylbenzylphthalate	50,000		600 U	580 U	37 U	31 U	65 U	59 U	660 U	71 U	67 U	72 U	61 U	**1500**	63 U	62 U	**25000 D**
Benzo(a)anthracene	224 or MDL		**9500**	**920 J**	**970 J**	**7400 D**	57 U	51 U	**3000 J**	**360 J**	58 U	63 U	53 U	**3300**	**310 J**	**150 J**	**1700**
Chrysene	400		**9400**	**750 J**	**1100 J**	**6700 D**	73 U	65 U	**2900 J**	**450**	74 U	80 U	68 U	**3400**	**300 J**	**140 J**	**2000**
bis(2-Ethylhexyl)phthalate	50,000		710 U	690 U	**490 J**	**150 J**	78 U	70 U	790 U	85 U	79 U	86 U	73 U	**3300**	**110 J**	**79 J**	**360 J**
Benzo(b) fluoranthene	1,100		**16000 J**	**1200 J**	**1100**	**6600**	44 U	**62 J**	**3800 J**	**460**	45 U	49 U	42 U	**4100**	**260 J**	**110 J**	**2400**
Benzo(k)fluoranthene	1,100		**5100 J**	790 U	**380 J**	**2200**	89 U	80 U	**1600 J**	**140 J**	91 U	99 U	84 U	**1400**	**99 J**	84 U	**700 J**
Benzo(a)pyrene	61 or MDL		**8400 J**	**840 J**	**900 J**	**5100**	65 U	58 U	**3000 J**	**460**	66 U	72 U	61 U	**2400**	**160 J**	**74 J**	**1500**
Indeno (1,2,3-cd)pyrene	3,200		**1300 J**	**680 J**	**360 J**	**1500**	51 U	46 U	**1500 J**	**160 J**	52 U	57 U	48 U	**530 J**	**81 J**	49 U	**260 J**
Dibenz(a,h)anthracene	14 or MDL		470 UJ	450 U	33 U	**190 J**	51 U	45 U	510 U	55 U	52 U	56 U	48 U	**96 J**	49 U	48 U	98 U
Benzo(g,h,i)perylene	50,000		**3200 J**	**760 J**	**470 J**	**1900**	67 U	60 U	**1900 J**	**310 J**	68 U	74 U	63 U	**850**	**95 J**	63 U	**510 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**	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		0.79 U	0.76 U	NR	NR	0.86 U	0.77 U	**32**	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		0.94 U	0.90 U	NR	NR	1.0 U	0.92 U	**5.9**	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		0.98 U	0.94 U	NR	NR	1.1 U	0.96 U	**5.7 P**	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		1.9 U	1.8 U	NR	NR	2.0 U	1.8 U	2.1 U	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		**640 J**	**170 P**	NR	NR	5.1 U	4.6 U	5.2 U	5.6 U	5.3 U	5.7 U	4.8 U	**190 P**	4.9 U	4.8 U	5.0 U

Table 2
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	SB-33	SB-34	SB35	SB-36	SB37	SB41	SB42	SB43 ⇧
		Sample Depth (ft.):	6-8	10-12	14-16	14-16	4-6	4-6	0-2	6-8	12-14	0-4	6-8	0-2	2-4	4-6	4-6	4-6	2-4
		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	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	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	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		**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	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		**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**	**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		**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	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	^		0.41 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	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	^		0.50 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	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		0.51 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	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		0.39 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	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		0.51 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	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		0.92 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	0.88 U	0.87 U	0.79 U	0.80 U	0.88 U	0.92 U	**29**	0.87 U
Ethylbenzene	5500		0.45 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	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		1.1 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	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		0.49 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	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	^		0.53 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	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		0.42 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	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	^		0.68 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	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	^		0.63 U	0.57 U	0.81 U	0.66 UJ	0.55 U	0.57 U	0.56 U	**16**	0.59 U	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	^		**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	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	^		0.53 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	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	^		**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	**24**	0.51 U	0.46 U	0.47 U	0.51 U	**14**	0.50 U	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	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		**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	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	^		66 U	60 U	**1900 J**	70 UJ	58 U	60 U	580 U	62 U	62 U	250 U	61 U	560 U	57 U	63 U	66 U	610 U	620 U
3+4-Methylphenols	900		65 U	60 U	85 U	70 U	58 U	60 U	580 U	62 U	62 U	250 U	61 U	560 U	57 U	62 U	66 U	610 U	620 U
Naphthalene	13,000		71 U	65 U	92 U	76 U	62 U	65 U	630 U	67 U	67 U	270 U	66 U	610 U	62 U	68 U	**87 J**	660 U	670 U
2-Methylnaphthalene	36,400		69 U	63 U	90 U	74 U	61 U	64 U	610 U	66 U	65 U	260 U	65 U	590 U	60 U	66 U	69 U	640 U	650 U
Acenaphthylene	41,000		67 U	62 U	88 U	72 U	59 U	62 U	**1700 J**	64 U	64 U	**280 J**	63 U	**2600 J**	58 U	64 U	67 U	**770 J**	630 U
Acenaphthene	50,000		74 U	68 U	96 U	79 U	65 U	68 U	650 U	70 U	70 U	280 U	69 U	630 U	64 U	70 U	74 U	**850 J**	700 U
Dibenzofuran	6,200		69 U	63 U	89 U	73 U	60 U	63 U	610 U	65 U	65 U	260 U	64 U	590 U	60 U	65 U	69 U	**1400 J**	650 U
Fluorene	50,000		70 U	64 U	91 U	75 U	62 U	64 U	620 U	67 U	66 U	270 U	66 U	**610 J**	61 U	67 U	70 U	**2000 J**	660 U
Phenanthrene	50,000		**100 J**	60 U	86 U	71 U	58 U	**560**	**5500**	**94 J**	62 U	**1800**	**240 J**	**6200**	**93 J**	63 U	**670**	**19000**	620 U
Anthracene	50,000		63 U	57 U	82 U	67 U	55 U	**87 J**	**1800 J**	59 U	59 U	**410 J**	59 U	**2700 J**	54 U	60 U	**87 J**	**4400**	590 U
Fluoranthene	50,000		**99 J**	56 U	80 U	66 U	54 U	**840**	**14000**	**83 J**	58 U	**4000**	**800**	**20000**	**240 J**	59 U	**790**	**17000**	**1600 J**
Pyrene	50,000		**80 J**	67 U	96 U	78 U	65 U	**710**	**13000**	70 U	69 U	**3500**	**690**	**18000**	**200 J**	70 U	**660**	**13000**	**1500 J**
Butylbenzylphthalate	50,000		67 U	61 U	87 U	72 U	59 U	62 U	590 U	64 U	63 U	260 U	63 U	570 U	58 U	64 U	67 U	620 U	630 U
Benzo(a)anthracene	224 or MDL		58 U	53 U	76 U	62 U	51 U	**320 J**	**8300**	55 U	55 U	**1900**	**380 J**	**9300**	**110 J**	55 U	**250 J**	**4900**	**860 J**
Chrysene	400		74 U	68 U	97 U	80 U	66 U	**370 J**	**8700**	71 U	70 U	**2200**	**410**	**10000**	**150 J**	71 U	**280 J**	**5700**	**980 J**
bis(2-Ethylhexyl)phthalate	50,000		80 U	73 U	100 U	85 U	70 U	**93 J**	700 U	76 U	**91 J**	**360 J**	**88 J**	680 U	69 U	76 U	80 U	740 U	750 U
Benzo(b) fluoranthene	1,100		46 U	42 U	60 U	49 U	40 U	**390**	**14000**	43 U	43 U	**2700**	**500**	**14000**	**170 J**	44 U	**290 J**	**5200**	**1200 J**
Benzo(k)fluoranthene	1,100		91 U	84 U	120 U	97 U	80 U	**130 J**	**4500**	87 U	86 U	**870 J**	**160 J**	**4100**	79 U	87 U	**100 J**	**1500 J**	860 U
Benzo(a)pyrene	61 or MDL		66 U	61 U	86 U	71 U	58 U	**270 J**	**9500**	63 U	63 U	**1700**	**360 J**	**9600**	**100 J**	63 U	**230 J**	**3500 J**	**780 J**
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	**560 J**	**170 J**	**5700**	**58 J**	50 U	**150 J**	**1700 J**	500 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	200 U	49 U	**510 J**	45 U	50 U	52 U	480 U	490 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	**740 J**	**230 J**	**5400**	**69 J**	65 U	**220 J**	**1900 J**	650 U
Pesticides/PCBs/Herbicides (ppb)																			
4,4-DDE	2,100		0.99 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	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		0.88 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	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		1.1 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	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		1.1 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	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		2.1 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	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		5.3 U	4.9 U	6.8 U	5.6 U	4.6 U	**65**	**770 D**	5.0 U	5.0 U	**190**	5.0 U	**1900 DP**	4.6 U	5.0 U	5.3 U	4.9 U	**600 PD**

Table 2
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	SB46	SB46	SB46	SB47	SB47	SB47	SB48	SB48
		Sample Depth (ft.):	3-5	5-7	5-7	14-15	2-4	2-4	5-7	14-15	3-5	8-10	13-14	2-4	7-8	13-15	2-4	8-9
		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	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	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	**25 J**	4.0 U	4.1 U	540 U	550 U	**31 J**	**21 J**	550 U
Carbon Disulfide	2700		0.45 U	62 U	62 U	0.45 U	**17**	57 UD	60 U	0.44 U	0.43 U	0.43 U	0.45 U	63 U	65 U	0.47 U	0.44 U	65 U
Methylene Chloride	100		3.1 UJ	98 U	100 U	5.3 UJ	2.1 U	91 UD	96 U	**9.6 B**	2.1 U	2.1 U	2.2 U	100 U	100 U	2.3 U	**2.9 J**	**180 JB**
2-Butanone	300		3.4 U	450 U	450 U	**8.0 J**	3.3 U	420 UD	440 U	3.4 U	3.3 U	3.3 U	3.4 U	460 U	470 U	3.6 U	3.3 U	470 U
1,1-Dichloropropene	^		0.40 U	120 U	120 U	0.49 UJ	0.38 U	110 UD	120 U	0.39 U	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	^		0.48 U	59 U	60 U	**4.1 J**	0.46 U	55 UD	58 U	0.47 U	0.46 U	0.46 U	0.48 U	61 U	62 U	0.5 U	0.47 U	62 U
Benzene	60		0.49 U	**4300 J**	**8600 J**	**5.9 J**	**12**	35 UD	37 U	**2.2 J**	0.47 U	**5.5 J**	**52**	**91 J**	**830 J**	0.51 U	0.47 U	**730 J**
Trichloroethene	700		0.38 U	110 U	110 U	0.38 U	0.36 U	99 UD	100 U	0.37 U	0.36 U	0.36 U	0.38 U	110 U	110 U	0.39 U	0.36 U	110 U
Toluene	1500		0.49 U	**1100 J**	**3400 J**	**18**	**70**	57 UD	**7700**	0.49 U	0.48 U	0.48 U	**3.6 J**	**370 J**	**310 J**	0.51 U	0.48 U	64 U
Tetrachloroethene	1400		0.89 U	52 UJ	53 U	0.90 U	0.86 U	49 UD	51 U	0.88 U	0.86 U	0.86 U	0.89 U	54 U	55 U	0.92 U	0.86 U	55 U
Ethylbenzene	5500		**2.3 J**	**14000**	**23000**	**160**	**530 E**	60 UD	**61000 D**	**5.7 J**	0.42 U	0.42 U	0.43 U	**1300**	**9200**	0.45 U	0.42 U	**7100**
m/p-Xylenes	1200		**11**	**18000**	**35000**	**340**	**1600 E**	**140 D**	**130000 D**	**26**	1.0 U	1.0 U	**28**	**3900**	**6800**	1.1 U	**2.2 J**	**2600**
o-Xylenes	1200		**2.5 J**	**2500 J**	**7800 J**	**25**	**300 E**	**54 D**	**30000**	**6.0**	0.45 U	0.45 U	**5.5 J**	**2300**	**3900**	0.49 U	**4.4 J**	**1800**
Isopropylbenzene	^		0.51 U	**2400**	**2600**	**11 J**	**94**	49 UD	**18000**	**3.2 J**	0.49 U	**2.1 J**	**17**	**280 J**	**1600**	0.53 U	**22**	**960**
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	0.39 U	**49**	0.41 U	73 U	75 U	0.42 U	0.40 U	75 U
n-Propylbenzene	^		**1.4 J**	**4100**	**3800**	**17 J**	**230**	**120 JD**	**36000 D**	**5.9 J**	0.63 U	**3.8 J**	**12**	**360 J**	**1500**	0.68 U	**8.4**	**1300**
1, 3, 5-Trimenthylbenzene	^		**3.5 J**	**5400**	**7300**	**37**	**1000 E**	**500 JD**	**59000 D**	**21**	0.58 U	**1.6 J**	**13**	**1800**	**3300**	0.63 U	**11**	**2100**
1,2,4-Trimethylbenzene	^		**12**	**27000**	**24000**	**140**	**3600 D**	**3600 D**	**250000 D**	**52**	0.45 U	**2.4 J**	**2.2 J**	**4000**	**10000**	**1.4 J**	**35**	**8300**
Sec-butylbenzene	^		0.51 U	**720 J**	**610 J**	0.52 UJ	0.49 U	63 UD	**6100**	**1.6 J**	0.49 U	0.49 U	0.51 U	69 U	71 U	0.53 U	0.49 U	71 U
p-Isopropyltoluene	^		0.52 U	**620 J**	**600 J**	**1.4 J**	0.50 U	53 UD	**13000**	**6.2**	0.50 U	0.50 U	0.52 U	**540 J**	**1800**	0.54 U	**17**	**770 J**
n-Butylbenzene	^		0.41 U	**1400**	**1300**	**3.1 J**	**370 E**	**310 JD**	**16000**	**10**	0.40 U	0.40 U	0.41 U	76 U	**580 J**	0.43 U	0.40 U	**380 J**
Naphthalene	13000		**5.4 J**	**33000 J**	**91000 J**	**62**	**3800 D**	**3800 D**	**220000 D**	**3.6 J**	0.69 U	**4.8 J**	**15**	**31000**	**180000 D**	**9.2**	**59**	**120000 D**
Semi-Volatile Organic Compounds (ppb)																		
bis(2-Chloroethyl)ether	^		130 U	330 U	66 U	64 U	61 U	NR	640 U	62 U	61 U	61 U	63 U	270 U	1400 U	65 U	120 U	69 U
3+4-Methylphenols	900		130 U	330 U	66 U	64 U	61 U	NR	640 U	62 U	61 U	61 U	63 U	270 U	1400 U	65 U	120 U	69 U
Naphthalene	13,000		140 U	**40000 J**	**7,000 JD**	**230 J**	**3100**	NR	**50000 D**	**120 J**	**110 J**	66 U	68 U	**13000**	**150000 D**	**130 J**	**2400**	**9400 D**
2-Methylnaphthalene	36,400		130 U	**19000 J**	**3000 JD**	**81 J**	**2600 D**	NR	**21000**	66 U	65 U	64 U	67 U	**9200**	**66000**	**84 J**	**710 J**	**3400**
Acenaphthylene	41,000		130 U	**2700 J**	**500 J**	66 U	**150 J**	NR	660 U	64 U	63 U	62 U	65 U	**600 J**	**6500 J**	67 U	**320 J**	**240 J**
Acenaphthene	50,000		140 U	**4400**	**950**	72 U	**440**	NR	**2000 J**	70 U	69 U	68 U	71 U	**1800**	**25000**	74 U	**420 J**	**870**
Dibenzofuran	6,200		130 U	340 U	69 U	67 U	64 U	NR	**950 J**	65 U	64 U	64 U	66 U	280 U	1400 U	68 U	130 U	72 U
Fluorene	50,000		140 U	**4500 J**	**920 J**	68 U	**370 J**	NR	**1900 J**	67 U	**78 J**	65 U	68 U	**3400**	**31000**	70 U	**610 J**	**1400**
Phenanthrene	50,000		**1000**	**36000 J**	**6400 J**	**110 J**	**3000**	NR	**10000**	63 U	**560**	61 U	64 U	**19000 D**	**150000 D**	**190 J**	**2700**	**6800 D**
Anthracene	50,000		**190 J**	**7200 J**	**1500 J**	61 U	**560**	NR	**2100 J**	60 U	**140 J**	58 U	60 U	**1900**	**26000**	62 U	**600 J**	**680**
Fluoranthene	50,000		**680 J**	**13000 J**	**2400 J**	60 U	**780**	NR	**4000 J**	59 U	**640**	57 U	60 U	**8600**	**45000**	**68 J**	**2500**	**1900**
Pyrene	50,000		**630 J**	**29000 J**	**4900 J**	**110 J**	**1800**	NR	**7900**	70 U	**540**	68 U	71 U	**13000**	**69000**	**100 J**	**3600**	**2600**
Butylbenzylphthalate	50,000		**790 J**	330 U	68 U	65 U	63 U	NR	660 U	64 U	63 U	62 U	65 U	280 U	1400 U	67 U	130 U	71 U
Benzo(a)anthracene	224 or MDL		**360 J**	**7400 J**	**1300 J**	57 U	**500**	NR	**2400 J**	55 U	**270 J**	54 U	56 U	**4500**	**26000**	58 U	**1400**	**910**
Chrysene	400		**590 J**	**7100 J**	**1400 J**	73 U	**440**	NR	**2300 J**	71 U	**300 J**	69 U	72 U	**4600**	**24000**	74 U	**1400**	**940**
bis(2-Ethylhexyl)phthalate	50,000		**540 J**	400 U	81 U	78 U	74 U	NR	**880 J**	76 U	74 U	74 U	77 U	330 U	1700 U	79 U	150 U	84 U
Benzo(b) fluoranthene	1,100		**610 J**	**6100 J**	**1200 J**	45 U	**390**	NR	**2400 J**	43 U	**420**	42 U	44 U	**4700**	**22000**	45 U	**1800**	**810**
Benzo(k)fluoranthene	1,100		**240 J**	**1700 J**	**380 J**	89 U	**150 J**	NR	890 U	87 U	**150 J**	85 U	88 U	**1700 J**	**9300**	91 U	**700 J**	**320 J**
Benzo(a)pyrene	61 or MDL		**400 J**	**8400 J**	**1700 J**	65 U	**590**	NR	**2500 J**	63 U	**280 J**	61 U	64 U	**4100**	**27000**	66 U	**1700**	**1000**
Indeno (1,2,3-cd)pyrene	3,200		**130 J**	**1600 J**	**310 J**	51 U	**200 J**	NR	**910 J**	50 U	**54 J**	49 U	51 U	**540 J**	**2200 J**	52 U	**200 J**	**130 J**
Dibenz(a,h)anthracene	14 or MDL		100 U	**380 J**	**65 J**	51 U	49 U	NR	510 U	50 U	49 U	48 U	50 U	**450 J**	**2100 J**	52 U	98 U	**64 J**
Benzo(g,h,i)perylene	50,000		**200 J**	**3700 J**	**690**	67 U	**460**	NR	**1800 J**	65 U	64 U	64 U	66 U	**2000**	**8200 J**	68 U	**760 J**	**380 J**
Pesticides/PCBs/Herbicides (ppb)																		
4,4-DDE	2,100		0.95 U	0.98 U	1.0 U	0.96 U	0.91 U	NR	0.96 U	0.94 U	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		0.85 U	0.88 U	0.90 U	0.86 U	0.82 U	NR	**8.8 P**	0.84 U	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		1.0 U	1.0 U	1.1 U	1.0 U	0.97 U	NR	1.0 U	1.0 U	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		1.1 U	1.1 U	1.1 U	1.1 U	1.0 U	NR	1.1 U	1.0 U	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		**63 J**	2.1 U	2.1 U	2.0 U	1.9 U	NR	2.0 U	2.0 U	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		5.1 U	5.3 U	5.4 U	5.2 U	4.9 U	NR	**44**	5.1 U	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 2
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	TP14	TP15	TP16	TP19 .⇧	TP19 DUP ⇧	TP20 ⇧	TP21	MW-18(27-29)
		Sample Depth (ft.):	14-15	3-5	8-10	8-10	13-15	3-4	4-5	3-4	3-4	3-4	3-4	5-6	5-6	4-5	4-5	27-29
		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	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	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	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		0.53 U	2.0 U	0.46 U	0.45 U	**3.0 J**	0.44 U	0.42 U	0.40 U	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		**2.8 J**	**54 B**	8.9 U	13 U	15 U	2.2 U	2.1 U	**2.8 J**	**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		4.1 U	16 U	3.5 U	3.5 U	3.3 U	3.4 U	3.2 U	3.1 U	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	^		0.47 U	1.8 U	0.40 U	0.40 U	0.38 U	0.39 U	0.37 U	0.36 U	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	^		0.57 U	2.2 U	0.49 U	0.48 U	0.46 U	0.47 U	0.45 U	0.43 U	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		0.58 U	2.2 U	**17**	**5.5 U**	0.47 U	0.48 U	0.46 U	0.44 U	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		0.45 U	1.7 U	0.38 U	0.38 U	0.36 U	0.37 U	0.35 U	0.34 U	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		0.59 U	2.2 U	0.50 U	0.50 U	0.47 U	0.48 U	0.47 U	0.45 U	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		1.1 U	4.1 U	0.90 U	0.90 U	0.85 U	0.87 U	0.84 U	0.80 U	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		0.51 U	2.0 U	0.44 U	0.44 U	0.41 U	0.42 U	0.41 U	0.39 U	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		1.3 U	4.8 U	**6.4**	**6.2**	1.0 U	1.0 U	0.99 U	0.95 U	**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		0.56 U	2.1 U	0.48 U	0.47 U	0.45 U	0.46 U	0.44 U	0.42 U	0.47 U	0.44 U	0.44 U	0.49 U	0.49 UJ	0.46 U	0.44 U	**830 J**
Isopropylbenzene	^		0.60 U	2.3 U	**11**	**9.2**	**1.5 J**	0.50 U	0.48 U	0.46 U	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		0.48 U	1.9 U	0.41 U	0.41 U	0.39 U	0.40 U	0.38 U	0.37 U	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	^		0.78 U	3.0 U	**15**	**16**	0.63 U	0.64 U	0.62 U	0.59 U	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	^		0.72 U	2.7 U	**1.3 J**	**3.1 J**	**1.3 J**	0.59 U	0.57 U	0.54 U	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	^		0.55 U	2.1 U	**4.5 J**	**4.4 J**	0.44 U	0.45 U	0.44 U	0.42 U	0.47 U	**1.5 J**	0.44 U	0.48 U	0.49 UJ	0.45 U	0.44 U	**2500**
Sec-butylbenzene	^		0.61 U	2.3 U	**2.1 J**	**2.8 J**	0.49 U	0.50 U	0.48 U	0.46 U	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	^		0.62 U	2.4 U	0.53 U	0.52 U	0.50 U	0.51 U	0.49 U	0.47 U	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	^		0.49 U	1.9 U	**2.4 J**	**4.6 J**	0.40 U	0.40 U	0.39 U	0.37 U	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		0.85 U	**22 J**	**16 J**	**28 J**	**2.3 J**	0.70 U	**1.2 J**	0.64 U	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	^		75 U	58 U	64 U	64 U	61 U	620 U	600 U	1100 U	640 U	240 U	240 U	1300 U	1300 U	620 U	240 U	140 U
3+4-Methylphenols	900		75 U	58 U	64 U	64 U	61 U	620 U	600 U	1100 U	640 U	240 U	240 U	1300 U	1300 U	620 U	240 U	140 U
Naphthalene	13,000		81 U	**540**	69 U	69 U	66 U	670 U	650 U	1200 U	690 U	260 U	260 U	**4600 J**	1400 U	670 U	260 U	**37000 D**
2-Methylnaphthalene	36,400		80 U	**200 J**	68 U	68 U	65 U	650 U	630 U	1200 U	680 U	250 U	250 U	**2400 J**	1400 U	660 U	260 U	**12000 D**
Acenaphthylene	41,000		77 U	**170 J**	66 U	66 U	63 U	**720 J**	610 U	1200 U	**930 J**	**280 J**	**340 J**	**1600 J**	1400 U	640 U	250 U	**9100 D**
Acenaphthene	50,000		85 U	**150 J**	72 U	72 U	69 U	700 U	670 U	1300 U	720 U	270 U	270 U	**9200 J**	**3600 J**	700 U	270 U	**4500 JD**
Dibenzofuran	6,200		79 U	**400**	67 U	67 U	64 U	650 U	630 U	1200 U	670 U	250 U	250 U	**6800 J**	**2200 J**	650 U	250 U	150 U
Fluorene	50,000		80 U	**300 J**	68 U	69 U	65 U	660 U	**670 J**	1200 U	680 U	250 U	**280 J**	**11000 J**	**4200 J**	660 U	260 U	**8400 JD**
Phenanthrene	50,000		76 U	**610**	64 U	65 U	62 U	**8000**	**3500**	1100 U	**4800**	**760 J**	**3300**	**65000 J**	**33000 J**	**1800 J**	**1700**	**41000 D**
Anthracene	50,000		72 U	**230 J**	61 U	61 U	58 U	**1600 J**	**82 J**	1100 U	**1100 J**	**250 J**	**890 J**	**17000 J**	**8600 J**	590 U	**360 J**	**7200**
Fluoranthene	50,000		71 U	**910**	60 U	60 U	57 U	**13000**	**5700**	**2000 J**	**13000**	**2200**	**5800**	**79000 D**	**45000**	**3300 J**	**3300**	**15000 D**
Pyrene	50,000		84 U	**1100**	72 U	72 U	68 U	**12000**	**4900**	**1800 J**	**11000**	**2200**	**5500**	**63000 J**	**37000 J**	**2700 J**	**3900**	**21000 D**
Butylbenzylphthalate	50,000		77 U	59 U	65 U	66 U	63 U	630 U	610 U	1200 U	**2300 J**	240 U	240 U	1300 U	1400 U	**53000 D**	250 U	**140**
Benzo(a)anthracene	224 or MDL		67 U	**530**	57 U	57 U	54 U	**6400**	**2700**	**1100 J**	**6100**	**1300 J**	**2900**	**31000**	**19000**	**1400 J**	**1800**	**6800 JD**
Chrysene	400		85 U	**550**	73 U	73 U	69 U	**6900**	**2900**	1300 U	**7500**	**1400 J**	**3100**	**31000**	**19000**	**1500 J**	**1800**	**6000**
bis(2-Ethylhexyl)phthalate	50,000		91 U	70 U	78 U	78 U	74 U	750 U	730 U	1400 U	**2200 J**	290 U	290 U	1600 U	1600 U	**4100**	290 U	170 U
Benzo(b) fluoranthene	1,100		52 U	**850**	44 U	45 U	43 U	**8100**	**3100**	**1600 J**	**8800**	**1900**	**4200**	**34000**	**23000**	**2500 J**	**1900**	**6900**
Benzo(k)fluoranthene	1,100		100 U	**380**	89 U	90 U	85 U	**2200 J**	**120 J**	1600 U	**2900 J**	**730 J**	**1300 J**	**11000**	**7000 J**	860 U	**690 J**	**3300**
Benzo(a)pyrene	61 or MDL		76 U	**580**	65 U	65 U	62 U	**5500**	**2400**	1200 U	**5600**	**1400 J**	**2600**	**23000**	**15000**	**1800 J**	**1500 J**	**6600 JD**
Indeno (1,2,3-cd)pyrene	3,200		60 U	**130 J**	51 UJ	52 UJ	49 UJ	**2000 J**	**1000 J**	910 U	**2200 J**	**690 J**	**580 J**	**7900 J**	**4700 J**	**660 J**	**340 J**	**1400 JD**
Dibenz(a,h)anthracene	14 or MDL		60 U	46 U	51 U	51 U	49 U	490 U	470 U	900 U	510 U	190 U	190 U	**1100 J**	1100 U	490 U	190 U	**500 J**
Benzo(g,h,i)perylene	50,000		79 U	**230 J**	67 U	67 U	64 U	**2500 J**	**1100 J**	1200 U	**2400 J**	**780 J**	**970 J**	**9300**	**6300 J**	**1100 J**	**590 J**	**3500**
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	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		1.0 U	NR	NR	NR	NR	0.82 U	0.80 U	0.77 U	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		1.2 U	NR	NR	NR	NR	0.98 U	0.96 U	0.91 U	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		1.3 U	NR	NR	NR	NR	1.0 U	1.0 U	0.95 U	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		2.4 U	NR	NR	NR	NR	2.0 U	1.9 U	1.8 U	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		6.0 U	NR	NR	NR	NR	**720 D**	**350**	4.6 U	**260**	**120**	**290**	**390 J**	**880 J**	5.0 U	4.9 U	N/A

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

Table 2
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	SB23	SB24 ⇧
				Sample Depth (ft.):	NA	NA	NA	NA	14-16	4-6	3-5	6-8	10-11	6-8	6-8
				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	04/15/05	04/18/05
				Sample Classification:	SOIL	SOIL	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	8560	10400
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	1.140 J	1.110 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	1.490	1.960
Barium	300 or SB	15-600	38.5-187		122	108	1040 N	153 N	385	49.1	1120	891	23.2 J	51.0	72.1
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	0.456 J	0.497 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	0.045 U	0.038 U
Calcium	SB	130-35,000	N/A		27100	59100	29200	15600	6760	71300	37400	12400	928	2440	7600
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	11.4 N	20.4 J
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	5.450 J	10.1
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	11.4	28.6
Iron	2,000 or SB	2,000-550,000	N/A		71400	34400	16200	51500	10100	17600	15000	22300	12100	12900	15800
Lead	SB	200-500	6.9-303		742 J	146	1970 N	989 N	53.9 J	199 J	283	1170	37.2	35.0	74.1 J
Magnesium	SB	100-5,000	N/A		12200	31800	5990	2240	4070	46800	9400	2600	2490	2480	8120
Manganese	SB	50-5,000	N/A		616	942	417	307	137	294	219	110	96.2	138	232
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	0.643 N	0.232
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	10.6	17.1
Potassium	SB	8,500-43,000	N/A		1150 J	1240	1440 N	444 JN	1080 J	770 J	3130	866	793	701 N	3320 J
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	0.464 U	0.395 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	1.320 J	0.091 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	65.8 JN	162 UJ
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	2.320	0.610 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	16.1 N	27.7
Zinc	20 or SB	9-50	35.7-225		364	302	901 N	218 N	227	82.1	731	1250	46.7	42.0 N	72.7
Total Petroleum Hydrocarbons (mg/kg)															
TPH	^	N/A	N/A		NR	560	NR	NR	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	0.688 U	0.585 U

Table 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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:	SB25	SB25	SB25	SB25A	SB25A	SB26	SB27 ⇧	SB27DUP ⇧	SB-28	SB-29	SB-30
			Sample Depth (ft.):	2-4	6-8	14-16	4-6	6-8	10-12	14-16	14-16	4-6	4-6	0-2
			Sample Date:	04/15/05	04/15/05	04/15/05	04/15/05	04/15/05	04/15/05	04/19/05	04/19/05	04/14/05	04/13/05	04/14/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)														
Aluminum	SB	33000	N/A	**6790**	**7630**	**6260**	**5060**	**6340**	**2340**	**10300**	**7390**	**5010**	**8770**	**4280**
Antimony	SB	N/A	N/A	**2.490 J**	**0.874 J**	**1.010 J**	**4.540 J**	**1.500 J**	**0.730 J**	0.534 U	0.443 U	**1.420 J**	0.384 U	**3.530 J**
Arsenic	7.5 or SB	3-12	2.2-23.1	**8.600**	**1.560**	**0.423 J**	**9.330**	**2.760**	0.448 U	0.638 U	1.760 U	**3.730**	**3.080**	**39.2**
Barium	300 or SB	15-600	38.5-187	**336**	**88.9**	**84.6**	**553**	**125**	**23.6**	**69.7**	**56.6**	**54.9**	**135**	**158**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.311 J**	**0.308 J**	**0.286 J**	**0.373 J**	**0.355 J**	**0.154 J**	**0.529 J**	0.383 UJ	**0.264 J**	**0.499 J**	**0.253 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	**0.321 J**	0.055 U	0.054 U	**0.374 J**	**0.130 J**	0.038 U	0.130 UJ	**0.045 U**	0.037 U	0.039 U	**1.020**
Calcium	SB	130-35,000	N/A	**37500**	**10200**	**13200**	**42500**	**7120**	**24600**	**3880 J**	**12800 J**	**40800**	**40300**	**75400**
Chromium	10 or SB	1.5-40	11.2-51.2	**17.1 N**	**13.9 N**	**14.0 N**	**20.4 N**	**14.5 N**	**6.540 N**	**16.7**	**14.1**	**10.9 N**	**14.4 N**	**41.5 N**
Cobalt	30 or SB	2.5-60	N/A	**6.200**	**4.840 J**	**7.670**	**8.410**	**4.340 J**	**3.920 J**	**6.310 J**	**6.020 J**	**5.490 J**	**5.870**	**8.110**
Copper	25 or SB	1-50	5.8-64.8	**93.0**	**27.8**	**16.8**	**141**	**29.8**	**8.990**	**14.9 J**	**62.4 J**	**24.0**	**23.0**	**228**
Iron	2,000 or SB	2,000-550,000	N/A	**15700**	**10700**	**10700**	**29200**	**9530**	**5490**	**10600**	**11900**	**10400**	**12400**	**59000**
Lead	SB	200-500	6.9-303	**341**	**72.0**	**14.8**	**422**	**81.4**	**11.0**	**10.5 J**	**33.1 J**	**72.5**	**77.0**	**698**
Magnesium	SB	100-5,000	N/A	**7220**	**3720**	**6980**	**5140**	**3990**	**11400**	**4220**	**5110**	**17700**	**5580**	**15300**
Manganese	SB	50-5,000	N/A	**262**	**140**	**100**	**315**	**131**	**106**	**98.7 J**	**224 J**	**238**	**224**	**413**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.450 N**	**0.097 N**	0.007 UN	**0.310 N**	**0.063 N**	0.007 UN	**0.034 N**	**0.052 N**	0.006 U	**0.088**	**0.317**
Nickel	13 or SB	0.5-25	8.7-54.5	**19.0**	**13.2**	**13.5**	**24.7**	**13.5**	**5.890**	**14.4 J**	**25.1 J**	**11.3 N**	**14.1 N**	**36.0 N**
Potassium	SB	8,500-43,000	N/A	**2260 N**	**1050 N**	**3300 N**	**1470 N**	**707 N**	**915 N**	**1030 J**	**1800 J**	**1970 N**	**1600 N**	**1100 N**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.358 U	0.372 U	0.365 U	0.372 U	0.390 U	0.358 U	0.555 U	0.460 U	**1.310**	**0.930 J**	**1.430**
Silver	SB	N/A	N/A	0.120 U	0.125 U	0.123 U	0.125 U	**0.471 J**	0.120 U	**0.129**	**0.107**	0.088 U	0.092 U	0.088 U
Sodium	SB	6,000-8,000	N/A	**526 JN**	**146 JN**	**260 JN**	**312 JN**	**223 JN**	**215 JN**	49.0 UJ	**281 J**	**75.2 JN**	**421 JN**	**37.9 JN**
Thallium	SB	N/A	N/A	**0.602 J**	0.626 U	0.385 U	0.626 U	**1.260**	**1.250**	0.858 U	0.711 U	0.586 U	**0.616 U**	**1.870**
Vanadium	150 or SB	1-300	N/A	**29.8**	**14.3 N**	**20.4 N**	**31.1 N**	**22.3 N**	**8.580**	**17.7**	**19.3**	**16.2**	**26.8**	**43.9**
Zinc	20 or SB	9-50	35.7-225	**558**	**127 N**	**54.5 N**	**445 N**	**112 N**	**23.5**	**86.5**	**65.5**	**98.9**	**125**	**239**
Total Petroleum Hydrocarbons (mg/kg)														
TPH	^	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)														
Cyanide	^	N/A	N/A	0.571 U	0.594 U	0.583 U	0.594 U	0.630 U	0.583 U	0.822 U	0.675 U	0.556 U	0.585 U	0.561 U

Table 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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:	SB-30	SB-30	SB-33	SB-34	SB35	SB-36	SB37	SB41	SB42	SB43 ⇧	SB44 ⇧
			Sample Depth (ft.):	6-8	12-14	0-4	6-8	0-2	2-4	4-6	4-6	4-6	2-4	3-5
			Sample Date:	04/14/05	04/14/05	04/14/05	04/13/05	04/20/05	04/14/05	04/20/05	04/15/05	04/20/05	04/19/05	04/27/05
			Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)														
Aluminum	SB	33000	N/A	**10400**	**10100**	**6160**	**26500**	**3760**	**11200**	**12600**	**9370**	**8050**	**7260**	**12300**
Antimony	SB	N/A	N/A	0.387 U	0.386 U	**0.482 J**	**0.555 J**	**1.400 J**	0.361 U	0.393 U	0.699 U	**1.620 J**	1.370 UJ	0.398 U
Arsenic	7.5 or SB	3-12	2.2-23.1	**1.410**	**0.560 J**	**16.2**	**0.481 J**	**70.3**	**2.340**	**4.160**	**3.250**	**9.400**	**7.280**	**9.690**
Barium	300 or SB	15-600	38.5-187	**26.9**	**41.2**	**153**	**25.6**	**89.1**	**129**	**58.8**	**200**	**145**	**117**	**338 J**
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.429 J**	**0.907**	**0.384 J**	**0.397 J**	**0.388 J**	**0.385 J**	**0.429 J**	**0.454 J**	**0.542 J**	**0.425 J**	0.467 UJ
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.039 U	0.039 U	**0.353 J**	0.039 U	**0.885**	0.036 U	0.040 U	0.057 U	**0.626**	0.753 U	0.040 U
Calcium	SB	130-35,000	N/A	**945**	**56900**	**42800**	**151000 D**	**64200**	**28000**	**2740**	**9320**	**29400**	**20100**	**43800**
Chromium	10 or SB	1.5-40	11.2-51.2	**14.5 N**	**14.3**	**14.7 N**	**17.3 N**	**28.2**	**23.5 N**	**17.7**	**14.0 N**	**20.8**	**17.0**	**9.140 J**
Cobalt	30 or SB	2.5-60	N/A	**9.620**	**28.2**	**8.050**	**5.73 J**	**7.820**	**12.9**	**8.350**	**7.480**	**13.9**	**8.480**	**3.090 J**
Copper	25 or SB	1-50	5.8-64.8	**13.6**	**16.5**	**170**	**7.25**	**178**	**38.2**	**42.6**	**16.5**	**103**	**130**	**7.710**
Iron	2,000 or SB	2,000-550,000	N/A	**19300**	**13500**	**17900**	**6200**	**42100**	**19500**	**16800**	**14200**	**42200**	**16400**	**7350**
Lead	SB	200-500	6.9-303	**11.5**	**2.610**	**241**	**3.91**	**543**	**96.1**	**121**	**57.0**	**390**	**891 N**	**187**
Magnesium	SB	100-5,000	N/A	**3130**	**44900**	**13100**	**69200**	**25000**	**17200**	**4340**	**6850**	**16100**	**10700**	**3590**
Manganese	SB	50-5,000	N/A	**221**	**604**	**254**	**166**	**440**	**249**	**243**	**652**	**346**	**277**	**167**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.132**	0.007 U	**0.809 D**	0.007 U	**0.552 ND**	**0.101**	**0.058 N**	**0.161 N**	**0.888 ND**	**1.1 ND**	**0.132 N**
Nickel	13 or SB	0.5-25	8.7-54.5	**12.7 N**	**39.3 N**	**16.5 N**	**5.31 N**	**29.2**	**21.7 N**	**15.9**	**13.7**	**27.5**	**18.8**	**6.050**
Potassium	SB	8,500-43,000	N/A	**557 JN**	**2400 N**	**2590 N**	**594 JN**	**989**	**7770 N**	**1470**	**1460 N**	**1990**	**1940**	**1040 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.402 U	0.401 U	**0.772 J**	0.405 U	0.372 U	0.376 U	0.408 U	0.388 U	0.399 U	0.406 U	0.414 U
Silver	SB	N/A	N/A	0.093 U	0.093 U	**0.285 J**	0.094 U	**3.330 N**	**0.515 J**	**1.250 N**	0.130 U	**6.430 N**	0.094 UN	0.096 UJ
Sodium	SB	6,000-8,000	N/A	30.4 UN	**247 JN**	**256 JN**	**178 JN**	**231 J**	**171 JN**	**60.2 J**	**184 JN**	**292 J**	**197 J**	**1710**
Thallium	SB	N/A	N/A	0.621 U	0.620 U	0.636 U	0.627 U	0.575 U	0.580 U	0.631 U	**1.410**	0.616 U	0.628 U	0.640 U
Vanadium	150 or SB	1-300	N/A	**18.2**	**21.5**	**27.1**	**35**	**47.7**	**35.7**	**23.8**	**18.7 N**	**29.6**	**25.4**	**17.9 J**
Zinc	20 or SB	9-50	35.7-225	**47.8**	**94.7**	**338**	**30.3**	**239**	**92.7**	**68.7**	**89.7 N**	**487**	**492**	**265 J**
Total Petroleum Hydrocarbons (mg/kg)														
TPH	^	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Wet Chemistry (mg/kg)														
Cyanide	^	N/A	N/A	0.601 U	0.594 U	0.604 U	0.595 U	0.545 U	0.551 U	0.605 U	0.633 U	0.590 U	0.596 U	0.613 U

Table 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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	SB44 DUP	SB44	SB45	SB45	SB45	SB46	SB46	SB46	SB47	SB47
			Sample Depth (ft.):	5-7	5-7	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	04/27/05	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	SOIL	SOIL
TAL Metals (mg/kg)														
Aluminum	SB	33000	N/A	**6900**	**5620**	**5550**	**9100**	**1720**	**6770**	**4390**	**6780**	**4780**	**9360**	**6930**
Antimony	SB	N/A	N/A	**0.464 J**	0.422 U	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	**3.580**	**2.730**	**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	**40.3 J**	**31.8 J**	**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	0.395 UJ	0.343 UJ	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	0.042 U	0.042 U	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	**11700**	**9570**	**1140**	**28700**	**9680**	**1400**	**6900**	**949**	**4810**	**36900**	**3260**
Chromium	10 or SB	1.5-40	11.2-51.2	**10.5 J**	**7.640 J**	**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	**5.070 J**	**3.920 J**	**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	**42.3 J**	**12.7 J**	**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	**12200**	**8910**	**9040**	**6940**	**12400**	**10200**	**16800**	**10500**	**9850**	**11500**	**10300**
Lead	SB	200-500	6.9-303	**73.1 J**	**15.5 J**	**12.1**	**6.190**	**150000 D**	**139**	**456**	**89.0**	**4.650**	**163**	**36.6**
Magnesium	SB	100-5,000	N/A	**5590 J**	**2980 J**	**2650**	**2110**	**2130**	**3040**	**4290**	**2790**	**4780**	**12300**	**3410**
Manganese	SB	50-5,000	N/A	**184**	**127**	**123**	**201**	**255**	**99.0**	**175**	**103**	**210**	**439**	**165**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.056 N**	**0.046 N**	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	**10.3**	**7.900**	**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	**1130 J**	**747 J**	**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	0.434 U	0.439 U	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	1.330 UJ	0.102 UJ	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	**260 J**	**245 J**	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	0.671 U	0.678 U	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	**16.4 J**	**11.9 J**	**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	**77.9 J**	**54.7 J**	**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	NR	NR	**200**	**2700**	31 U	**960**	**110**	**150**	NR	NR
Wet Chemistry (mg/kg)														
Cyanide	^	N/A	N/A	0.637 U	0.644 U	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 3
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Former Metro-North Property (Mott Haven)
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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	TP12	TP13
Sample Depth (ft.):				13-15	2-4	8-9	14-15	3-5	8-10	8-10	13-15	3-4	4-5	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	04/19/05	04/18/05
Sample Classification:				SOIL	SOIL	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**	**5410**	**5180**
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**	**7.250**	**1.270 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**	**19.7**	**4.810**
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**	**74.6**	**103**
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**	**0.348 J**	**0.247 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**	**0.404 J**	**0.365 J**
Calcium	SB	130-35,000	N/A	**2190**	**20700**	**946**	**4110**	**28800**	**888**	**885**	**1840**	**37300**	**20700**	**35600**
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**	**20.7**	**12.4 N**
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**	**9.180**	**5.620**
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**	**198**	**58.8**
Iron	2,000 or SB	2,000-550,000	N/A	**12900**	**14200**	**8900**	**14700**	**19600**	**11700**	**8130**	**6520**	**25900**	**34200**	**12200**
Lead	SB	200-500	6.9-303	**4.510**	**649**	**5.890**	**3.470**	**120**	**8.300**	**3.660**	**2.380**	**660 N**	**361 N**	**239**
Magnesium	SB	100-5,000	N/A	**3960**	**7360**	**2650**	**4260**	**16900**	**4400**	**2640**	**1290**	**6820**	**9560**	**15700**
Manganese	SB	50-5,000	N/A	**106**	**263**	**97.1**	**165**	**173**	**114**	**79.3**	**56.8**	**343**	**330**	**201**
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**	**0.465 N**	**0.271**
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**	**21.9**	**13.8**
Potassium	SB	8,500-43,000	N/A	**708**	**1080**	**644 J**	**547 J**	**1140**	**1390**	**643**	**342 J**	**1300**	**2650**	**1370**
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	0.393 U	0.367 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	**3.290 N**	0.085 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**	**170 J**	**216 JN**
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	0.608 U	0.567 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**	**33.2**	**24.5**
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**	**162**	**223**
Total Petroleum Hydrocarbons (mg/kg)														
TPH	^	N/A	N/A	NR	**790**	**150**	**170**	NR	NR	NR	NR	**2700**	**1200**	**2100**
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	0.577 U	0.549 U

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Remedial Investigation

Compound	TAGM 4046 Recc. Soil Cleanup Objective**	TAGM Eastern USA Background**	NYSDEC Region 3 Background Soil Heavy Metals Conc. ^^	Sample ID:	TP14	TP15	TP16	TP19 ⇧	TP19 DUP ⇧	TP20 ⇧	TP21	MW-18(27-29)	MW-20(17-19)	MW-20(19-21)
				Sample Depth (ft.):	3-4	3-4	3-4	5-6	5-6	4-5	4-5	27-29	17-19	19-21
				Sample Date:	04/19/05	04/19/05	04/19/05	04/18/05	04/18/05	04/18/05	04/18/05	8/22/2005	08/23/05	08/23/05
				Sample Classification:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
TAL Metals (mg/kg)														
Aluminum	SB	33000	N/A		**5760**	**5260**	**6450**	**4950**	**4350**	**8630**	**6790**	**8160**	**5930**	**6360**
Antimony	SB	N/A	N/A		**3.100 J**	**3.490 J**	**5.410 J**	**15.4**	**10.8**	0.913 UJ	0.376 U	0.441 UN	0.383 U	0.381 UN
Arsenic	7.5 or SB	3-12	2.2-23.1		**9.710**	**11.9**	**21.4**	**22.7**	**22.9**	**4.910**	**4.880**	**1.730**	**1.010 J**	**1.930**
Barium	300 or SB	15-600	38.5-187		**469**	**61.5**	**82.5**	**137**	**114**	**693**	**90.7**	**102 N**	**23.7**	**28.8 N**
Beryllium	0.16 or SB	0-1.75	0.24-2.2		**0.382 J**	**0.529 J**	**0.498 J**	**0.461 J**	**0.317 J**	**0.384 J**	**0.566 J**	**0.321 J**	**0.249 J**	**0.233 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2		**0.461 J**	0.038 U	0.038 U	**2.150**	**1.420**	**1.120**	0.038 U	0.044 U	0.039 U	0.038 U
Calcium	SB	130-35,000	N/A		**53600**	**53900**	**35200**	**25100**	**19700**	**34000**	**56800**	**1820**	**876**	**958**
Chromium	10 or SB	1.5-40	11.2-51.2		**19.8**	**16.5**	**24.7**	**40.7 J**	**31.4 J**	**18.0 J**	**13.7 N**	**12.2**	**6.78**	**7.520**
Cobalt	30 or SB	2.5-60	N/A		**5.480 J**	**6.300**	**8.740**	**8.230**	**7.420**	**7.080 J**	**6.810**	**4.330 J**	**4.2 J**	**4.570 J**
Copper	25 or SB	1-50	5.8-64.8		**79.5**	**125**	**150**	**467 J**	**231 J**	**46.8**	**52.2**	**35**	**10**	**11.2**
Iron	2,000 or SB	2,000-550,000	N/A		**17200**	**29000**	**41900**	**43400**	**52700**	**14900**	**13500**	**14600**	**11500**	**12500**
Lead	SB	200-500	6.9-303		**525 N**	**219 N**	**365 N**	**1220 J**	**877 J**	**216 J**	**110**	**93.3**	**4.18**	**4.450**
Magnesium	SB	100-5,000	N/A		**7130**	**30300**	**17700**	**9660**	**8900**	**4440**	**32700**	**2290**	**2580**	**2630**
Manganese	SB	50-5,000	N/A		**243**	**370**	**446**	**418**	**365**	**255**	**322**	**90.7**	**317**	**449**
Mercury	0.1	0.001-0.2	0.04-0.92		**0.584 N**	**0.429 N**	**0.407 N**	**0.726 D**	**1.1 D**	**0.276**	**0.301**	**0.144**	0.007 U	**0.016**
Nickel	13 or SB	0.5-25	8.7-54.5		**17.4**	**20.4**	**24.5**	**35.1**	**25.8**	**13.9**	**10.1**	**8.840**	**8.250**	**8.100**
Potassium	SB	8,500-43,000	N/A		**1170**	**1340**	**1490**	**746 J**	**688 J**	**1910 J**	**1590**	**925 N**	723 U	**710**
Selenium	2 or SB	0.1-3.9	0.20-2.9		0.414 U	0.392 U	0.392 U	0.434 U	0.437 U	0.405 U	0.391 U	**0.897 J**	0.399 U	0.396 U
Silver	SB	N/A	N/A		0.096 UN	0.091 UN	0.091 UN	0.101 UN*	0.101 UN*	1.430 UJ	0.091 UN*	**0.239 J**	0.092 U	0.092 U
Sodium	SB	6,000-8,000	N/A		**277 J**	**71.3 J**	**139 J**	**374 J**	149 UJ	**784 J**	**169 JN**	**247 JN**	**37.6 J**	30.0 U
Thallium	SB	N/A	N/A		0.639 U	0.606 U	0.605 U	0.720 UJ	2.590 UJ	0.625 U	0.605 U	0.708 U	**0.981 J**	**1.7**
Vanadium	150 or SB	1-300	N/A		**35.7**	**26.3**	**38.1**	**55.2**	**47.8**	**29.4**	**22.4**	**14**	**8.67**	**9.290**
Zinc	20 or SB	9-50	35.7-225		**391**	**122**	**197**	**995 J**	**328 J**	**597**	**134**	**44.3**	**35.6**	**32.900**
Total Petroleum Hydrocarbons (mg/kg)														
TPH	^	N/A	N/A		**2300**	**720**	**1400**	**NR**	**NR**	**NR**	**520**	N/A	N/A	N/A
Wet Chemistry (mg/kg)														
Cyanide	^	N/A	N/A		0.619 U	0.575 U	0.574 U	0.636 U	**2.240**	0.593 U	0.579 U	N/A	N/A	N/A

Table 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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:	MW-21 (5-7)	RB-41905A	RB-41905B	RB-42005
			Sample Depth (ft.):	5-7	---	---	---
			Sample Date:	8/24/2005	4/19/2005	4/19/2005	4/19/2005
			Sample Classification:	SOIL	WATER	WATER	WATER
TAL Metals (mg/kg)							
Aluminum	SB	33000	N/A	**9790**	**12.4 J**	**10.1 J**	5.310 U
Antimony	SB	N/A	N/A	0.367 U	3.170 U	3.170 U	3.170 U
Arsenic	7.5 or SB	3-12	2.2-23.1	**3.450**	**4.510 J**	**3.520 J**	3.320 U
Barium	300 or SB	15-600	38.5-187	**136**	**0.930 J**	0.732 U	0.732 U
Beryllium	0.16 or SB	0-1.75	0.24-2.2	**0.325 J**	**0.145 J**	**0.170 J**	**0.160 J**
Cadmium	1 or SB	0.1-1	0.04U-1.2	0.037 U	0.327 U	**0.510 J**	**0.450 J**
Calcium	SB	130-35,000	N/A	**43000**	**850 J**	**1.340 J**	**1.860 J**
Chromium	10 or SB	1.5-40	11.2-51.2	**17.6**	**4.93 J**	**5.150 J**	**5.200 J**
Cobalt	30 or SB	2.5-60	N/A	**7.86**	**3.640 J**	**4.380 J**	**5.380 J**
Copper	25 or SB	1-50	5.8-64.8	**109**	**8.190 J**	**5.670 J**	**6.920 J**
Iron	2,000 or SB	2,000-550,000	N/A	**14500**	**84.0 J**	27.0 U	27.0 U
Lead	SB	200-500	6.9-303	**134**	2.180 U	2.180 U	2.180 U
Magnesium	SB	100-5,000	N/A	**21700**	**194 J**	**21.7 J**	**22.8 J**
Manganese	SB	50-5,000	N/A	**297**	**2.220 J**	**0.980 J**	**0.810 J**
Mercury	0.1	0.001-0.2	0.04-0.92	**0.202**	0.0300 U	0.0300 U	0.0300 U
Nickel	13 or SB	0.5-25	8.7-54.5	**15.7**	**3.540 J**	**3.530 J**	**3.060 J**
Potassium	SB	8,500-43,000	N/A	**3940**	**71.4 J**	**116 J**	**85.5 J**
Selenium	2 or SB	0.1-3.9	0.20-2.9	0.381 U	3.040 U	3.040 U	3.040 U
Silver	SB	N/A	N/A	0.088 U	**3.440 J**	**4.420 J**	**4.770 J**
Sodium	SB	6,000-8,000	N/A	**561**	**1240 J**	**912 J**	**1320 J**
Thallium	SB	N/A	N/A	**1.73**	3.050 U	3.050 U	3.050 U
Vanadium	150 or SB	1-300	N/A	**38.1**	**2.390 J**	**2.680 J**	**2.100 J**
Zinc	20 or SB	9-50	35.7-225	**223**	**6.800 J**	0.611 U	0.611 U
Total Petroleum Hydrocarbons (mg/kg)							
TPH	^	N/A	N/A	N/A	NR	NR	NR
Wet Chemistry (mg/kg)							
Cyanide	^	N/A	N/A	N/A	0.010 U	0.010 U	0.010 U

Table 3
New York City School Construction Authority
Former Metro-North Property (Mott Haven)
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 4
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of Organics 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-5GW DUP 5/16/2005	MW6-GW 5/17/2005	MW7-GW 5/18/2005	MW8-GW 5/18/2005
Volatile Organic Compounds (ppb)										
Vinyl Chloride	2	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Acetone	50*	**84**	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Methyl tert-Butyl Ether	10*	**1.6 J**	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	**0.73 J**	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Chloroform	7	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.29 U	**2.2 J**	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Naphthalene	10*	0.34 U	0.34 U	0.34 U	0.34 U	0.29 U	0.34 U	0.34 U	**1300 D**	**270 D**
Benzene	1	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	**6100 D**	**170**
Toluene	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	**150 D**	**14000 D**
Tetrachloroethene	5	**9.1**	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Ethylbenzene	5	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	**1600 D**	**1600 D**
m,p-Xylene	5	**1.4 J**	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	**1800 D**	**9800 D**
o-Xylene	5	**0.68 J**	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	**310 D**	**4700 D**
Isopropylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	**180**	**110**
N-propylbenzene	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	**140 D**	**140 D**
1,3,5-Trimethylbenzene	5	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	**170 D**	**360 D**
1,2,4-Trimethylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	**1300 D**	**1500 JD**
sec-butylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	**18**
p-Isoproylbenzne	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	**30**	**32**
n-butylbenzene	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	**18**	**16**
Base Neutral Compounds (ppb)										
Phenol	1	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	**22**	1.3 U
2-Methylphenol	^	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**7.9 J**
3+4-Methylphenols	^	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
2,4-Dimethylphenol	1	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	**24**	**6.7 J**
Benzoic acid	^	1.2 U	1.2 U	1.2 UJ	1.2 U	1.2 U	1.2 UJ	1.2 UJ	1.2 U	1.2 U
Naphthalene	10	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	**750 D**	**220 D**
2-Methylnaphthalene	^	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	**130 D**	**45**
Acenaphthylene	^	1.3 U	1.4 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	**2.1 J**	1.4 U
Acenaphthene	20*	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**29**	1.4 U
Dibenzofuran	^	1.3 U	1.4 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
Fluorene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	**13**	1.5 U
Phenanthrene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	**27**	1.5 U
Anthracene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	**4.5 J**	1.5 U
Di-n-butylphthalate	^	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**1.4 J**
Fluoranthene	50*	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	**2.2 J**	1.3 U
Pyrene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	**5.2 J**	1.5 U
Butylbenzylphthalate	50*	**38**	**41**	**12**	**18**	**20**	**19**	**23**	1.5 U	**37**
bis(2-Ethylhexyl)phthalate	5	**8.5 J**	**19**	1.6 U	**2.9 J**	1.6 U	1.6 U	**3.5 J**	1.6 U	**14**
Benzo(a)anthracene	0.002*	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Chrysene	0.002*	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
Benzo(b)fluoranthene	0.002*	0.780 U	0.790 U	0.790 U	0.780 U	0.780 U	0.780 U	0.780 U	0.780 U	0.800 U
Benzo(k)fluoranthene	0.002*	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(a)pyrene	ND	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Indeno(1,2,3-cd)pyrene	0.002*	0.860 U	0.870 U	0.870 U	0.860 U	0.860 U	0.860 U	0.860 U	0.860 U	0.880 U
Benzo(g,h,i)perylene	^	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U

Table 4
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of Organics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW9-GW 5/18/2005	MW-9 4/19/2005	MW10-GW 5/17/2005	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
Volatile Organic Compounds (ppb)										
Vinyl Chloride	2	0.33 U	0.33 U	**9.4**	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Acetone	50*	2.3 U	**61**	2.3 U	2.3 U	2.3 U	**13 J**	**29**	2.3 U	**11 JB**
Methyl tert-Butyl Ether	10*	0.28 U	0.28 U	**1.5 J**	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Chloroform	7	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	**13**	0.29 U	0.29 U	**3.5 J**	**4.4 J**	**8.0**	**5.6**
Naphthalene	10*	**170 D**	**130**	0.34 U	0.34 U	**2500 D**	**48**	**950 D**	**1600 D**	0.34 U
Benzene	1	**23**	**13**	0.39 U	0.39 U	**3700 D**	**1200 D**	**470 D**	**1400 D**	0.39 U
Toluene	5	**1400 D**	**170**	0.36 U	0.36 U	**450 D**	**55**	**230 D**	**39**	0.36 U
Tetrachloroethene	5	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Ethylbenzene	5	**870 D**	**580 D**	0.45 U	0.45 U	**2400 D**	**47**	**280 D**	**470 D**	0.45 U
m,p-Xylene	5	**3700 D**	**3200 D**	1.2 U	1.2 U	**3900 D**	**200**	**450 D**	**200**	1.2 U
o-Xylene	5	**1800 D**	**1400 D**	0.46 U	0.46 U	**910 D**	**25**	**240 D**	**140**	0.46 U
Isopropylbenzene	5	**110**	**100**	0.44 U	0.44 U	**190**	**96**	**46**	**64**	0.44 U
N-propylbenzene	5	**200**	**160**	0.49 U	0.49 U	**240 D**	**130**	**50**	**77**	0.49 U
1,3,5-Trimethylbenzene	5	**350 D**	**560 D**	0.42 U	0.42 U	**410 D**	**61**	**61**	**84**	0.42 U
1,2,4-Trimethylbenzene	5	**1400 D**	**1900 D**	0.44 U	0.44 U	**2200 D**	**3.7 J**	**150 D**	**120**	0.44 U
sec-butylbenzene	5	**19**	**21**	0.44 U	0.44 U	0.44 U	**4.4 J**	**4.3 J**	0.44 U	0.44 U
p-Isoproylbenzne	5	**34**	**41**	0.49 U	0.49 U	**31**	**0.69 J**	**9.7**	**7.2**	0.49 U
n-butylbenzene	5	**14**	**22**	0.49 U	0.49 U	**18**	**7.2**	**3.8 J**	**3.2 J**	0.49 U
Base Neutral Compounds (ppb)										
Phenol	1	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	**8.0 J**	1.3 U	1.3 U
2-Methylphenol	^	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
3+4-Methylphenols	^	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	**5.4 J**	1.4 U	1.4 U
2,4-Dimethylphenol	1	**9.0 J**	1.2 U	1.2 U	1.2 U	**4.5 J**	1.2 U	**2.4 J**	1.2 U	1.3 U
Benzoic acid	^	1.2 U	1.2 U	1.2 UJ	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	**1.6 J**
Naphthalene	10	**80**	1.5 U	1.5 U	1.5 U	**1300 D**	**28**	**310 D**	**750 D**	1.5 U
2-Methylnaphthalene	^	**22**	1.1 U	1.1 U	1.1 U	**80 JD**	**21**	**60**	**78 JD**	1.2 U
Acenaphthylene	^	1.4 U	1.4 U	1.4 U	1.4 U	1.3 U	1.3 U	1.4 U	1.3 U	1.4 U
Acenaphthene	20*	1.4 U	1.4 U	1.4 U	1.4 U	**17**	**2.8 J**	**19**	**8.6 J**	1.4 U
Dibenzofuran	^	1.4 U	1.4 U	1.4 U	1.4 U	**3.0 J**	1.3 U	1.4 U	1.3 U	1.4 U
Fluorene	50*	1.5 U	1.5 U	1.5 U	1.5 U	**5.6 J**	1.5 U	**6.3 J**	**7.4 J**	1.5 U
Phenanthrene	50*	1.5 U	1.5 U	1.5 U	1.5 U	**9.1 J**	1.5 U	**10 J**	**16**	1.5 U
Anthracene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Di-n-butylphthalate	^	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Fluoranthene	50*	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Pyrene	50*	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Butylbenzylphthalate	50*	**64**	1.5 U	**41**	**49**	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
bis(2-Ethylhexyl)phthalate	5	**3.5 J**	**2.0 J**	**4.6 J**	**41**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Benzo(a)anthracene	0.002*	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Chrysene	0.002*	1.8 U	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.8 U
Benzo(b)fluoranthene	0.002*	0.800 U	0.790 U	0.790 U	0.790 U	0.780 U	0.780 U	0.790 U	0.780 U	0.800 U
Benzo(k)fluoranthene	0.002*	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzo(a)pyrene	ND	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Indeno(1,2,3-cd)pyrene	0.002*	0.880 U	0.870 U	0.910 U	0.870 U	0.900 U	0.860 U	0.870 U	0.900 U	0.880 U
Benzo(g,h,i)perylene	^	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U

Table 4
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of Organics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	TW-SB42-GW 4/21/2005	MW-18 9/15/2005	MW-20 9/15/2005	MW-21 9/15/2005
Volatile Organic Compounds (ppb)					
Vinyl Chloride	2	0.33 U	0.33 U	0.33 U	0.33 U
Acetone	50*	**25 B**	**13 JB**	2.3 U	2.3 U
Methyl tert-Butyl Ether	10*	0.28 U	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U	0.43 U
Chloroform	7	0.33 U	0.33 U	**27**	**7.2**
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	0.29 U	0.29 U
Naphthalene	10*	**43**	**1400 D**	0.34 U	0.34 U
Benzene	1	0.39 U	**8.0**	0.39 U	0.39 U
Toluene	5	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	5	0.48 U	0.48 U	0.48 U	0.48 U
Ethylbenzene	5	0.45 U	0.45 U	0.45 U	0.45 U
m,p-Xylene	5	1.2 U	**17**	1.2 U	1.2 U
o-Xylene	5	0.46 U	**26**	0.46 U	0.46 U
Isopropylbenzene	5	0.44 U	**2.9 J**	0.44 U	0.44 U
N-propylbenzene	5	0.49 U	**1.1 J**	0.49 U	0.49 U
1,3,5-Trimethylbenzene	5	0.42 U	**9.1**	0.42 U	0.42 U
1,2,4-Trimethylbenzene	5	0.44 U	**16**	0.44 U	0.44 U
sec-butylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U
p-Isoproylbenzne	5	0.49 U	**1.7 J**	0.49 U	0.49 U
n-butylbenzene	5	0.49 U	0.49 U	0.49 U	0.49 U
Base Neutral Compounds (ppb)					
Phenol	1	1.3 U	2.7 U	1.3 U	1.3 U
2-Methylphenol	^	1.5 U	3.1 U	1.6 U	1.6 U
3+4-Methylphenols	^	1.4 U	2.8 U	1.4 U	1.4 U
2,4-Dimethylphenol	1	1.5 U	2.5 U	1.2 U	1.2 U
Benzoic acid	^	**4.3 J**	2.4 U	1.2 U	1.2 U
Naphthalene	10	**25**	**56**	1.4 U	1.5 U
2-Methylnaphthalene	^	**6.9 J**	**41**	1.1 U	1.1 U
Acenaphthylene	^	1.3 U	**35**	1.3 U	1.4 U
Acenaphthene	20*	**8.5 J**	**15 J**	1.4 U	1.4 U
Dibenzofuran	^	**5.5 J**	2.7 U	1.3 U	1.4 U
Fluorene	50*	**6.8 J**	**36**	1.5 U	1.5 U
Phenanthrene	50*	**9.9 J**	**190 D**	1.5 U	1.5 U
Anthracene	50*	**1.9 J**	**38**	1.5 U	1.5 U
Di-n-butylphthalate	^	1.4 U	2.7 U	1.4 U	1.4 U
Fluoranthene	50*	**2.6 J**	**94**	1.3 U	1.3 U
Pyrene	50*	1.5 U	**140**	1.5 U	1.5 U
Butylbenzylphthalate	50*	1.5 U	3.0 U	1.5 U	1.5 U
bis(2-Ethylhexyl)phthalate	5	**2.0 J**	3.2 U	1.6 U	**2.1 J**
Benzo(a)anthracene	0.002*	1.1 U	**42**	1.2 U	1.2 U
Chrysene	0.002*	1.7 U	**41**	1.7 U	1.8 U
Benzo(b)fluoranthene	0.002*	0.770 U	**45**	0.780 U	0.790 U
Benzo(k)fluoranthene	0.002*	1.9 U	**9.0 J**	2.0 U	2.0 U
Benzo(a)pyrene	ND	1.2 U	**50**	1.2 U	1.2 U
Indeno(1,2,3-cd)pyrene	0.002*	0.850 U	**27**	0.860 U	0.870 U
Benzo(g,h,i)perylene	^	1.1 U	**41**	1.1 U	1.1 U

Table 4
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of Organics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	RB041905 4/19/2005	RB051805 5/18/2005	TB-42105 04/21/05	TB-051605 04/21/05	TB-051705 04/21/05	TB-051805 5/18/2005	TB-051905 5/19/2005	TB-091505 9/15/2005
Volatile Organic Compounds (ppb)									
Vinyl Chloride	2	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Acetone	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
Methyl tert-Butyl Ether	10*	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Methylene Chloride	5	0.43 U	0.43 U	0.43 U	0.43 U	**1.6 JB**	0.43 U	0.43 U	**3.8 J**
Chloroform	7	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Naphthalene	10*	0.29 U	0.29 U	0.29 U	0.34 U	0.34 U	0.29 U	0.29 U	0.34 U
Benzene	1	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Toluene	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	5	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Ethylbenzene	5	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
m,p-Xylene	5	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
o-Xylene	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Isopropylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
N-propylbenzene	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,3,5-Trimethylbenzene	5	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
1,2,4-Trimethylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
sec-butylbenzene	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
p-Isoproylbenzne	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
n-butylbenzene	5	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
Base Neutral Compounds (ppb)									
Phenol	1	1.3 U	1.3 U	NA	NA	NA	NA	NA	NA
2-Methylphenol	^	1.6 U	1.6 U	NA	NA	NA	NA	NA	NA
3+4-Methylphenols	^	1.4 U	1.4 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1	1.2 U	1.2 U	NA	NA	NA	NA	NA	NA
Benzoic acid	^	1.2 U	1.2 U	NA	NA	NA	NA	NA	NA
Naphthalene	10	1.4 U	1.4 U	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	^	1.1 U	1.1 U	NA	NA	NA	NA	NA	NA
Acenaphthylene	^	1.3 U	1.3 U	NA	NA	NA	NA	NA	NA
Acenaphthene	20*	1.4 U	1.4 U	NA	NA	NA	NA	NA	NA
Dibenzofuran	^	1.3 U	1.3 U	NA	NA	NA	NA	NA	NA
Fluorene	50*	1.5 U	1.5 U	NA	NA	NA	NA	NA	NA
Phenanthrene	50*	1.5 U	1.5 U	NA	NA	NA	NA	NA	NA
Anthracene	50*	1.5 U	1.5 U	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate	^	1.4 U	1.4 U	NA	NA	NA	NA	NA	NA
Fluoranthene	50*	1.3 U	1.3 U	NA	NA	NA	NA	NA	NA
Pyrene	50*	1.5 U	1.5 U	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	50*	1.5 U	1.5 U	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	5	**1.8 J**	1.6 U	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	0.002*	1.2 U	1.2 U	NA	NA	NA	NA	NA	NA
Chrysene	0.002*	1.8 U	1.7 U	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.002*	0.800 U	0.780 U	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	0.002*	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ND	1.2 U	1.2 U	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.002*	0.880 U	0.860 U	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	^	1.2 U	1.1 U	NA	NA	NA	NA	NA	NA

Table 4
New York City School Construction Authority
Former Metro North Property (Mott Haven)
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 5
New York City School Construction Authority
Former Metro North Property (Mott Haven)
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 5
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of Inorganics in Groundwater
Remedial Investigation

Compound	NYSDEC Class GA Groundwater Standard ^^	MW-9 4/19/2005	MW10-GW 5/17/2005	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 5
New York City School Construction Authority
Former Metro North Property (Mott Haven)
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 6
New York City School Construction Authority
Former Metro North Property (Mott Haven)
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 6
New York City School Construction Authority
Former Metro North Property (Mott Haven)
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 ($\mu g/m^3$)
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 6
New York City School Construction Authority
Former Metro North Property (Mott Haven)
Bronx, New York
Summary of VOCs in Soil-Gas
Remedial Investigation

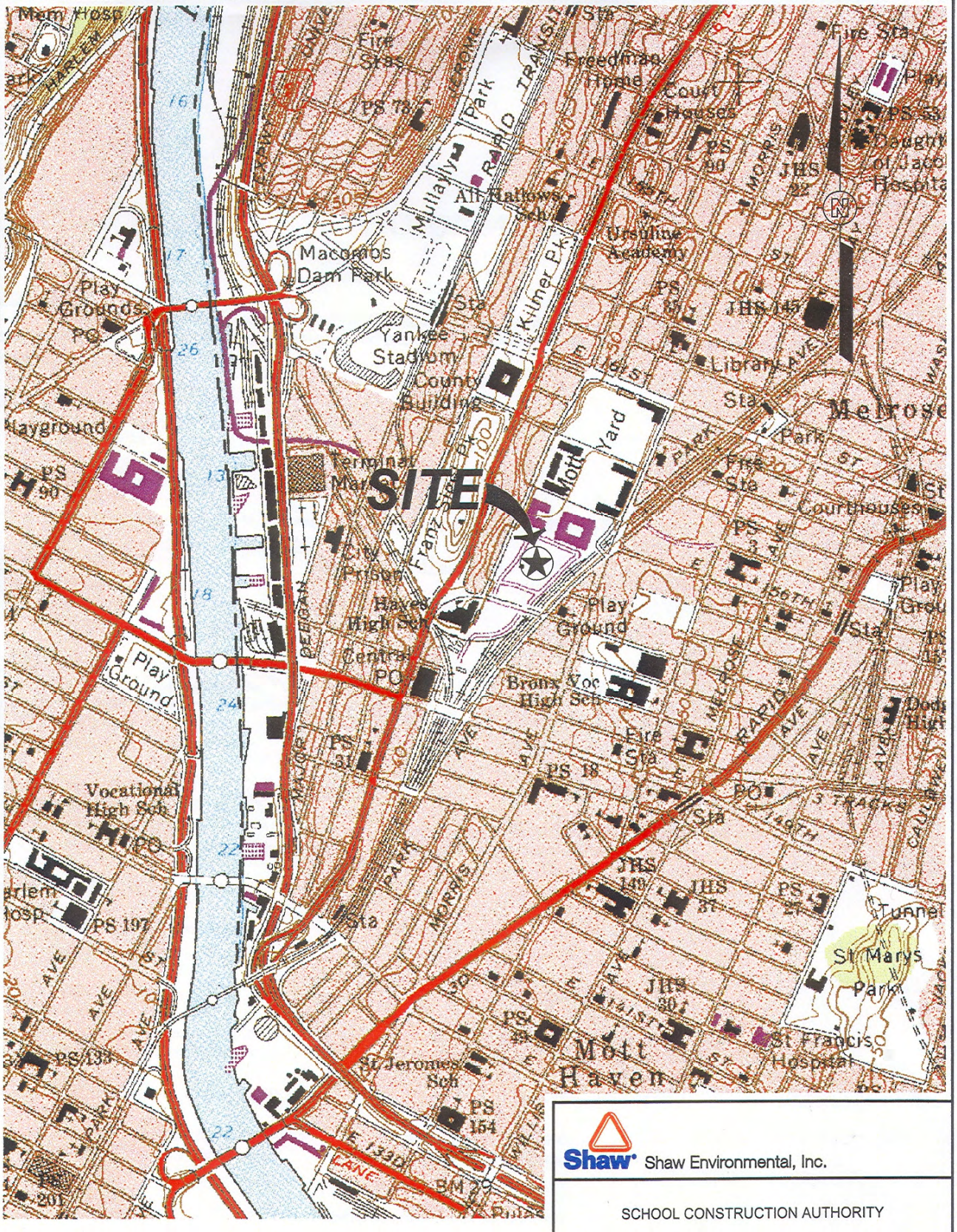
Compound	PSGI-9	PSGI-10	Trip Blank	Trip Blank	Trip Blank
	8/17/05	9/21/05	3/31/05	4/4/05	4/1/05
Volatile Organic Compounds					
Propene	**89 M**	**6.0**	0.50 U	0.50 U	0.50 U
Dichlorodifluoromethane (CFC 12)	**2.6**	**2.8**	0.50 U	0.50 U	0.50 U
Chloromethane	**1.4**	**0.71**	0.50 U	0.50 U	0.50 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane (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 7
New York City School Construction Authority
Mott Haven Campus
SMP Monitoring & Maintenance Activities

Engineering Control	Monitoring Frequency	Monitoring Personnel	Personnel Qualifications	Maintenance Frequency	Maintenance Personnel	Reporting Requirements	Training Requirements	Training Personnel	Responsible Agency
Cover Systems	Monthly	Custodial Engineer	Completion of Initial SMP Training and up to date with Annual SMP Refresher Training - Synthetic Turf Training	As needed	Custodial Engineer	Submit Monthly Inspection Checklist to DOE by 15th of Each Month	Initial SMP Training; Annual SMP Refresher Training; Synthetic Turf Training	Initial & Refresher SMP Training by Independent Professional Engineer; Initial Synthetic Turf Training by Manufacturer	DOE
	Annual	Independent Professional Engineer	Minimum 5 years experience in the design and operation of cover systems, gas vapor barriers, and SSDSs; thorough understanding of SMP requirements	---	---	Provide Annual Site Management Report to NYSDEC by March 1st of the following year	Complete understanding of SMP requirements and ability to educate all parties responsible for its implmentation	Synthetic Turf manufacturer	DOE
	Annual (for duration of warranty)	Turf Manufacturer	Fully knowledgeable of the materials, construction, installation and repair of the turf	Annual (minimum)	Employees of Turf Installer	All repairs to the turf will be documented and included in the Annual Site Management Report	Skilled employees of an Installer certified by the Manufacturer	Synthetic Turf Manufacturer	DOE
Sub-slab Depressurization System	24/7	Custodial Engineer (Building Management System)	Completion of Intiial SMP & BMS Training and up to date with Annual SMP Refresher Training	---	---	In the event of an alarm, perform inspection on fans & contact DOE, DSF immediately	Initial SMP and BMS Training; Annual SMP Refresher Training	Initial & Refresher SMP Training by Independent Professional Engineer - BMS training by manufacturer	DOE
	Monthly	Custodial Engineer	Completion of Initial SMP Training and up to date with Annual SMP Refresher Training; Synthetic Turf Training	---	---	Submit Monthly Inspection Checklist to DOE by 15th of Each Month	Initial SMP Training; Annual SMP Refresher Training	Initial & Refresher SMP Training by Independent Professional Engineer	DOE
	Annual	Independent Professional Engineer	Minimum 5 years experience in the design and operation of cover systems, gas vapor barriers, and SSDSs; thorough understanding of SMP requirements	---	---	Provide Annual Site Management Report to NYSDEC by March 1st of the following year	---	---	DOE
Vapor Barrier	Annual	Independent Professional Engineer	See above for Cover Systems; Must also be familiar with proper use and interpretation of smoke tests for verifying integrity of vapor barrier	---	---	Provide Annual Site Management Report to NYSDEC by March 1st of the following year	---	---	DOE
Groundwater Monitoring	Quarterly for one year, semiannual afterwards	Qualified Environmental Professional	HAZWOPER training plus 2 years experience for sample collection; data evaluation and interpretation to be performed by geologist/hydrogeologist with at least 7 years of related experience	As needed	Qualified Contractor	Quarterly and Semi-Annual Reports submitted to NYSDEC; annual summary in Annual Site Management Report	---	---	SCA

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

L:\project\114926\114926A3.dwg
Plot Date/Time: 10/13/05 11:57am
Plotted by: Samuil.Shkolnik

Xref: .
Image: 040073G8

N

LEGEND:

- SITE
- BCP AREA
- NON-BCP AREA A
- NON-BCP AREA B

SCALE

0 150 300 FEET

Shaw Shaw Environmental, Inc.

DESIGNED BY: CK	NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: B. Snyder	FIGURE 2 SITE LOCATION MAP FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: C. Kraemer	
APPROVED BY:	DATE: 8/13/08 | SCALE: AS SHOWN | DRAWING NO.: Figure 2 8-13-08 | FIGURE: 2

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	8/13/08	--	B. Snyder	C. Kraemer	--	Figure 2 8-13-08

File: O:\Shaw Offices - CAD Files\Harriman NY\Mott Haven Campus\FIGURE 2 8-13-08.dwg
Plot Date/Time: Aug 13, 2008 - 1:40pm
Plotted By: william.snyder
Xref:
Image: Site Aerial.jpg

OFFICE ALBANY, NY

DRAWING NUMBER 114926B56-SMP

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

PS 156

IS 151

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

PBSB-1
PBSB-2
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

BSB-50
BSB-51
BSB-52
BSB-53
BSB-54
BSB-55

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

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

SCALE
0 100 200 FEET

LEGEND

- MONITORING WELL
- SOIL BORING
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

PS–PUBLIC SCHOOL.

IS–INTERMEDIATE SCHOOL.

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.

VERIFY SCALE 0 1"

C:\Shaw Offices – CAD Files\Harriman NY\114926\114926B56-SMP.dwg Xref: .
Plot Date/Time: 11/27/07 04:42pm Image: .
Plotted by: william.snyder

REV	DESCRIPTION / ISSUE	DATE	APPROVED

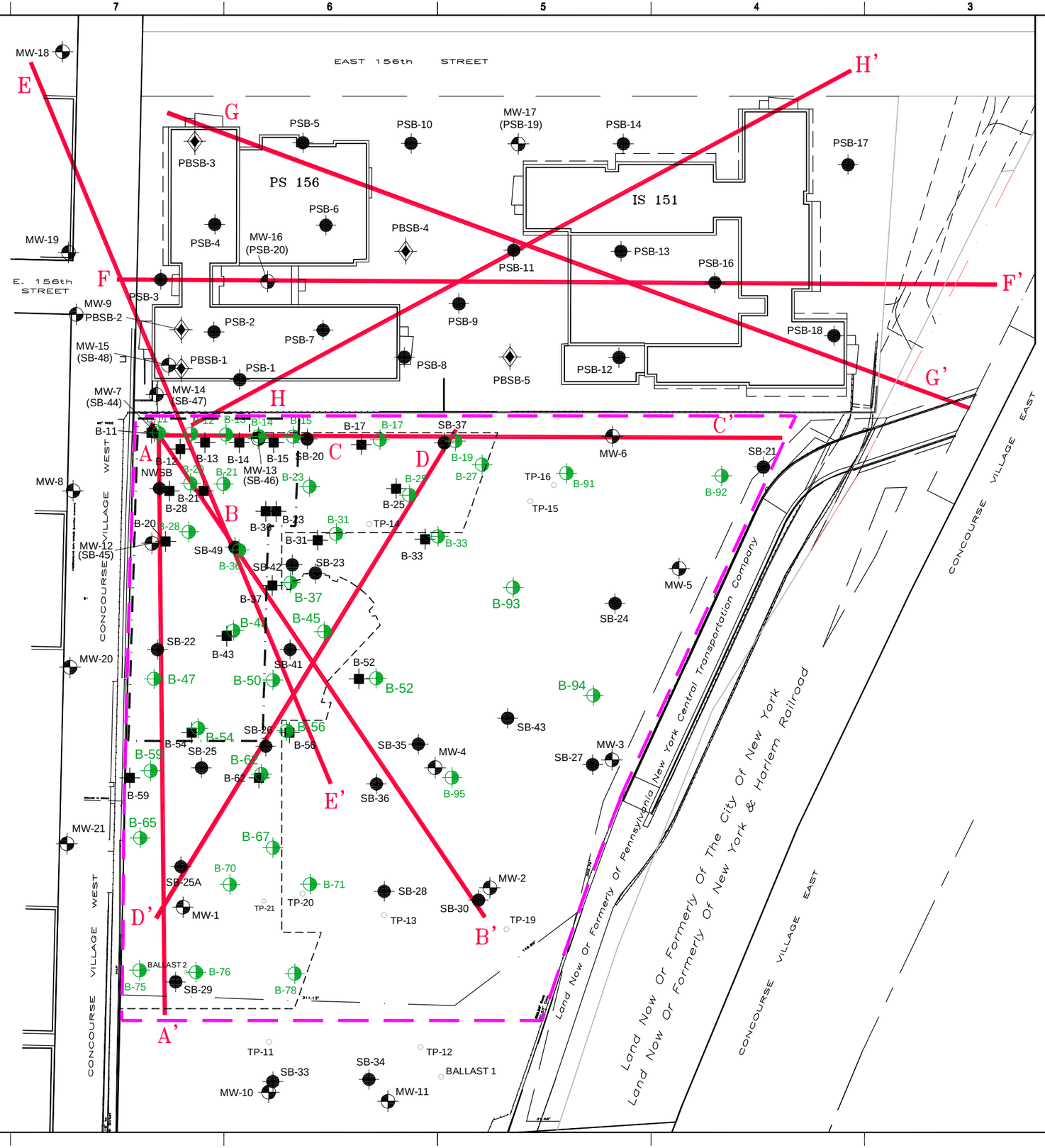
Shaw Environmental, Inc.

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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B56–SMP	FIGURE 3

OFFICE ALBANY, NY

DRAWING NUMBER 114926B58-SMP

VERIFY SCALE 0 1"



LEGEND

- GEOTECHNICAL SOIL BORINGS
- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- GEOTECHNICAL BORINGS (BY LANGAN ENGINEERING)
- BEDROCK SOIL BORING
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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	CROSS SECTION LOCATIONS
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	7/30/07	AS SHOWN	114926B58-SMP	4

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: 11/27/07 04:45pm Image: .
Plotted by: william.snyder

8 7 6 5 4 3 2 1

A

SB-48/MW-15 SB-47/MW-14 SB-44/MW-7 B-11 B-20 MWSB 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

A'

0 10 20 30 40 50 60 70 80

LEGEND

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

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 10 20 FEET

VERIFY SCALE 0 1"

OFFICE ALBANY, NY

DRAWING NUMBER 114926B20-SMP

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw 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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B20-SMP
			FIGURE 5

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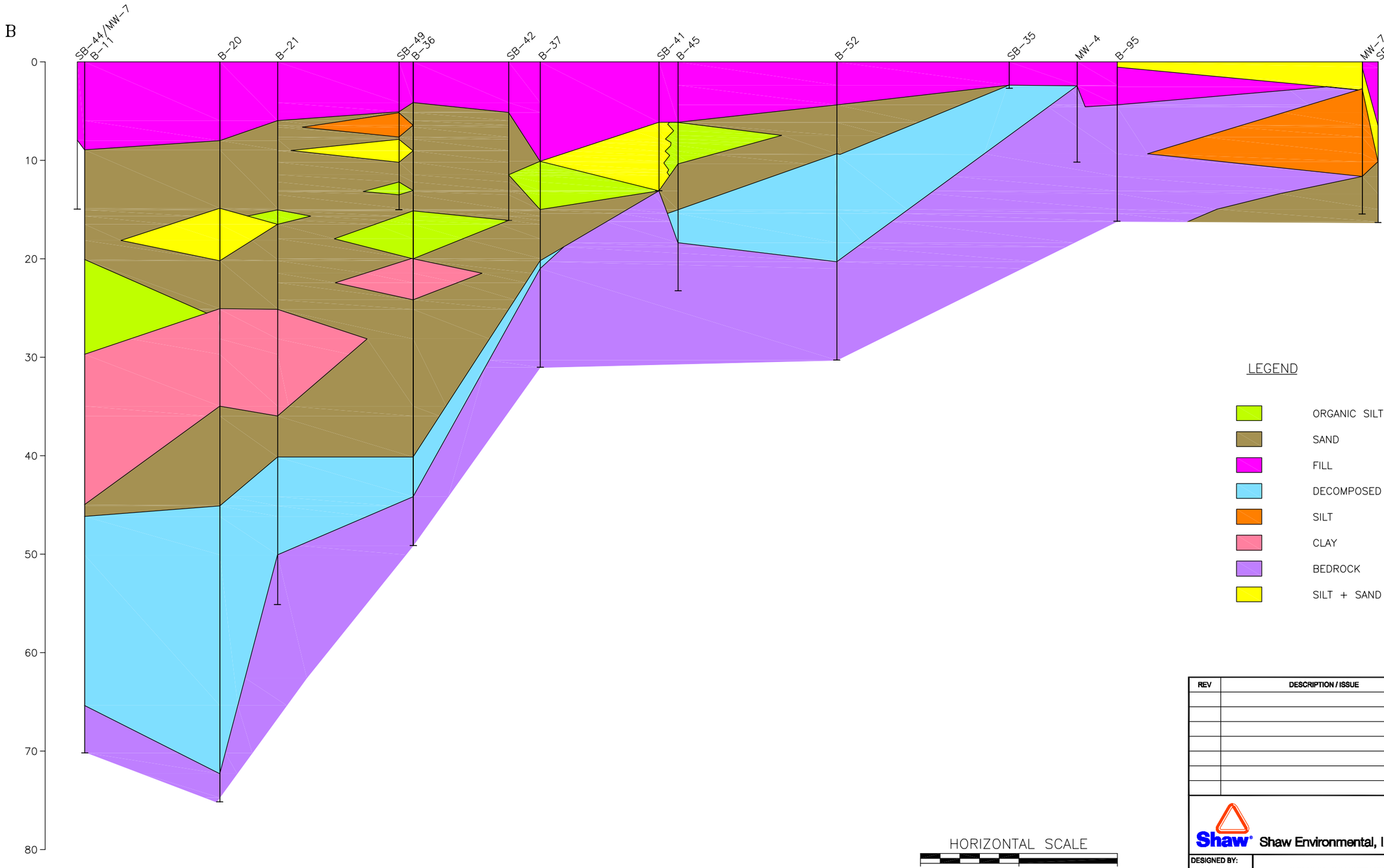
Plotted by: william.snyder
Image: .

OFFICE ALBANY, NY

DRAWING NUMBER 114926B17-SMP

B

B'



LEGEND

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

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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B17-SMP	FIGURE 6

VERIFY SCALE 0 1"

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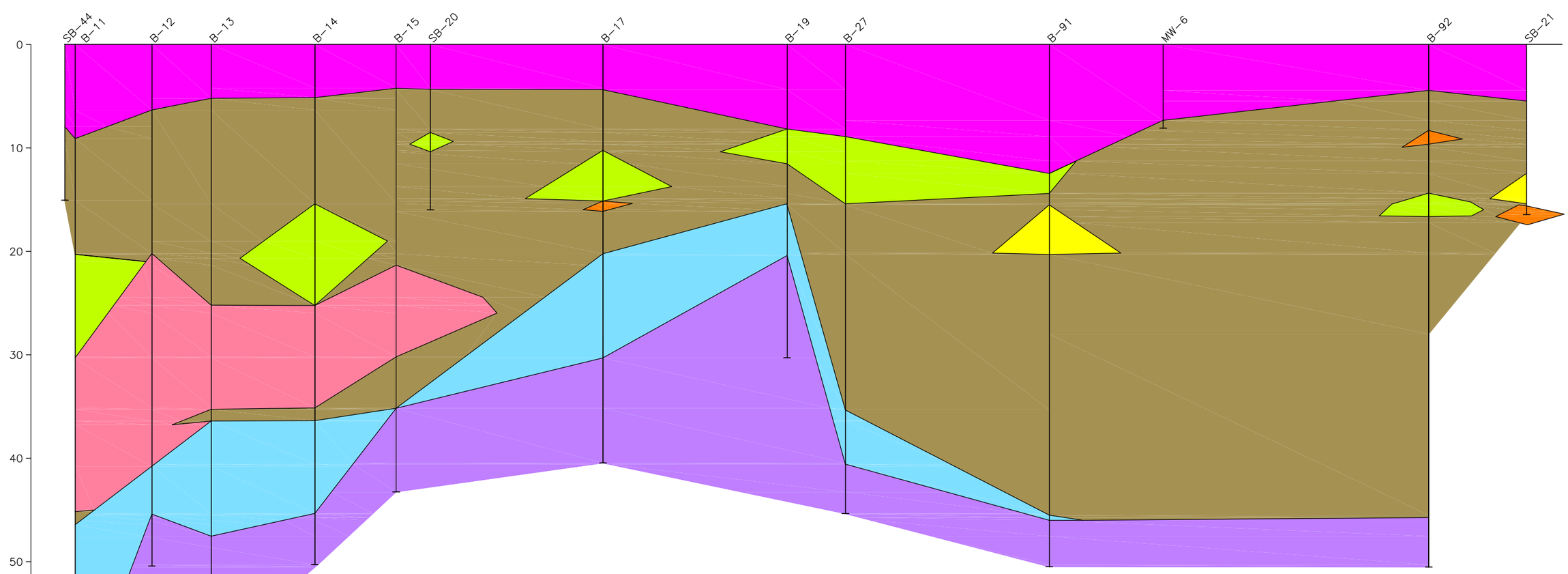
Plot Date/Time: 07/30/07 07:29am
Plotted by: william.snyder
Image: .

OFFICE ALBANY, NY

DRAWING NUMBER 114926B18-SMP

C

C'



LEGEND

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

HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 10 20 FEET

VERIFY SCALE 0 1"

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: D. STOLL	DATE: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B18-SMP	FIGURE 7

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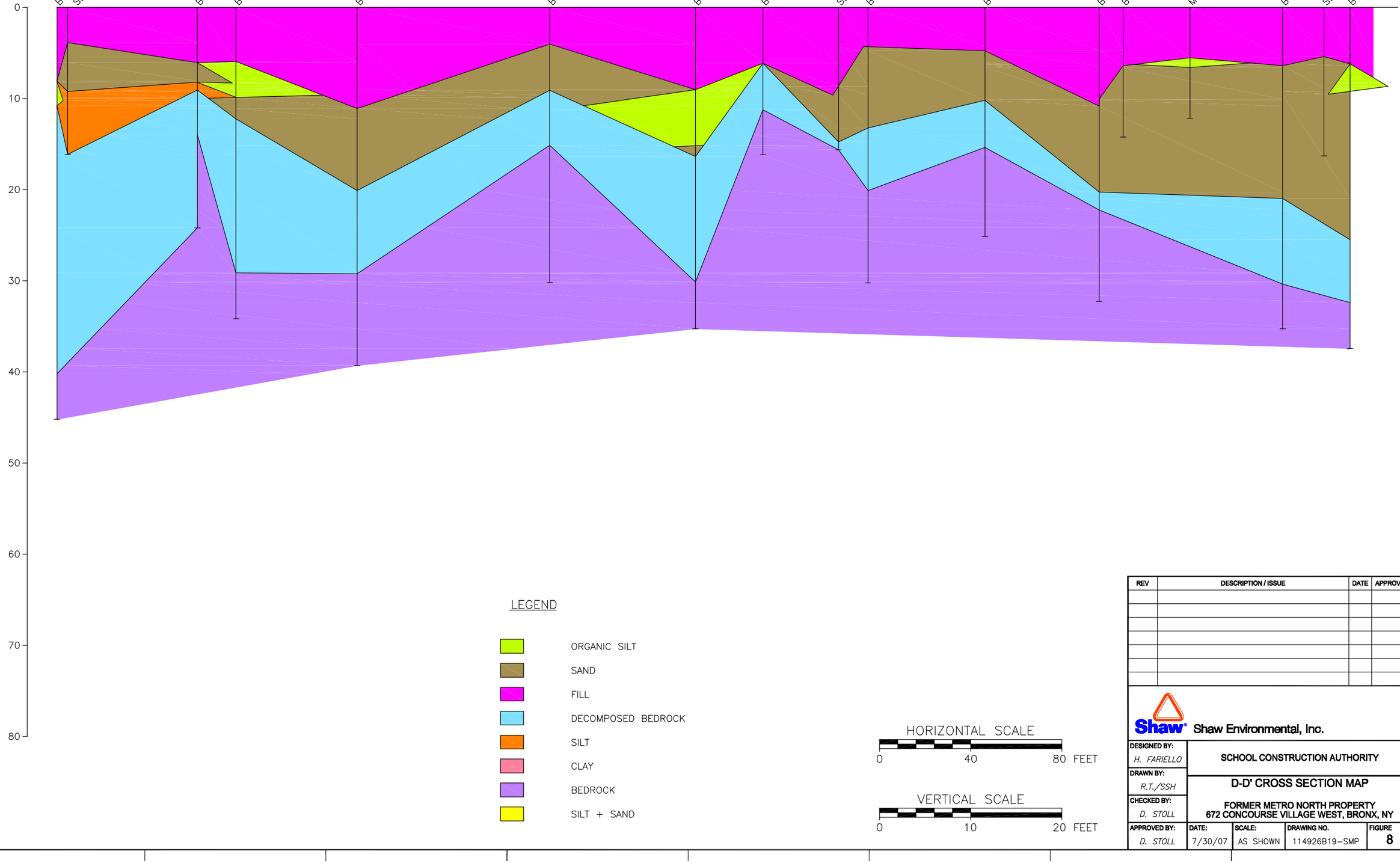
Plotted by: william.snyder
Image: .

OFFICE ALBANY, NY

DRAWING NUMBER 114926B19-SMP

D

D'



LEGEND

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

HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 10 20 FEET

VERIFY SCALE 0 1"

REV	DESCRIPTION / ISSUE	DATE	APPROVED

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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B19-SMP	FIGURE 8

\\seihqfs01\Common\PROJ\NYC-SCA\Matt Haven\114926\114926B19-SMP.dwg
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Plotted by: william.snyder
Image: .

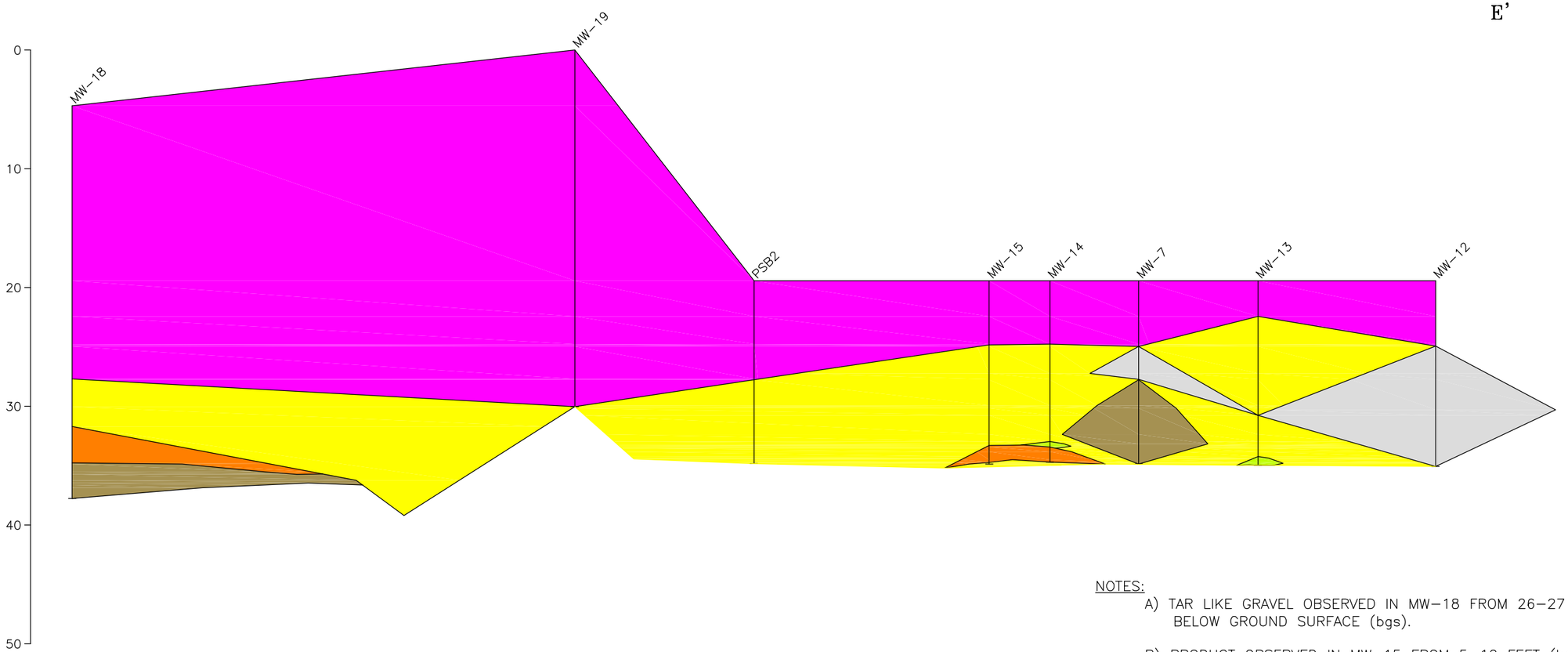
OFFICE ALBANY, NY

DRAWING NUMBER 114926B37-SMP

VERIFY SCALE 0 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

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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B37-SMP	FIGURE 9

\\seiharfs01\Common\PROJ\NYC-SCA\Mott Haven\114926\114926B37-SMP.dwg
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Plotted by: william.snyder
Image: .

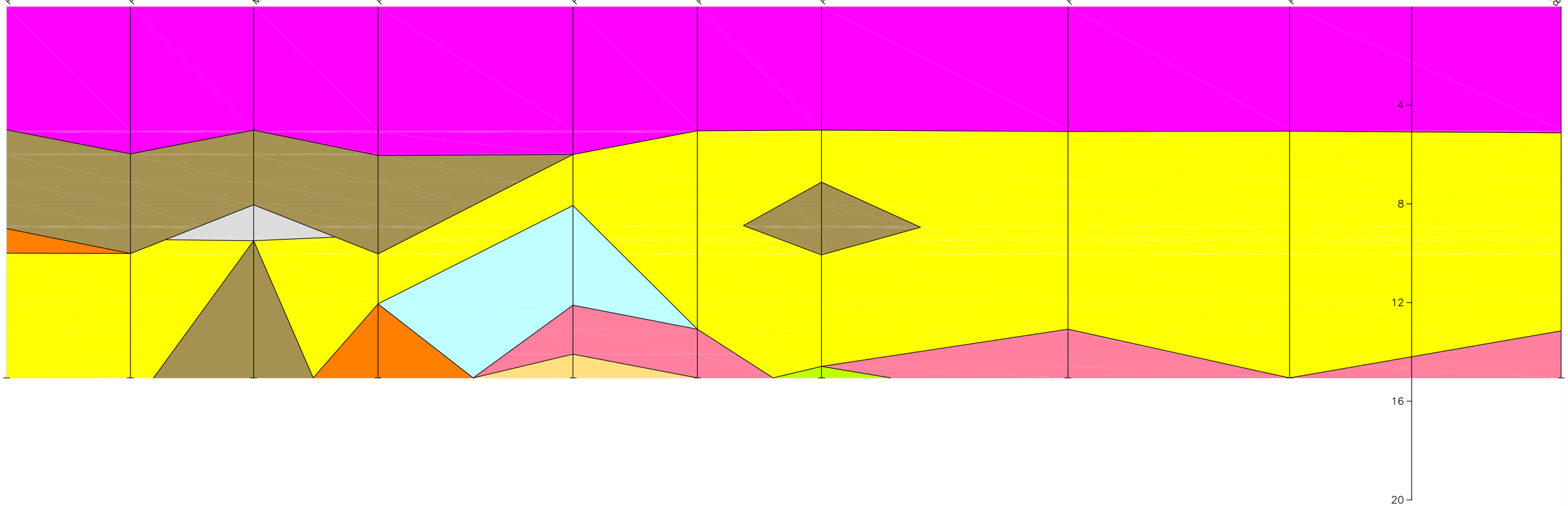
OFFICE ALBANY, NY

DRAWING NUMBER 114926B59-SMP

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

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:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	7/30/07	AS SHOWN	114926B59-SMP	10

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Plotted by: william.snyder
Image: .

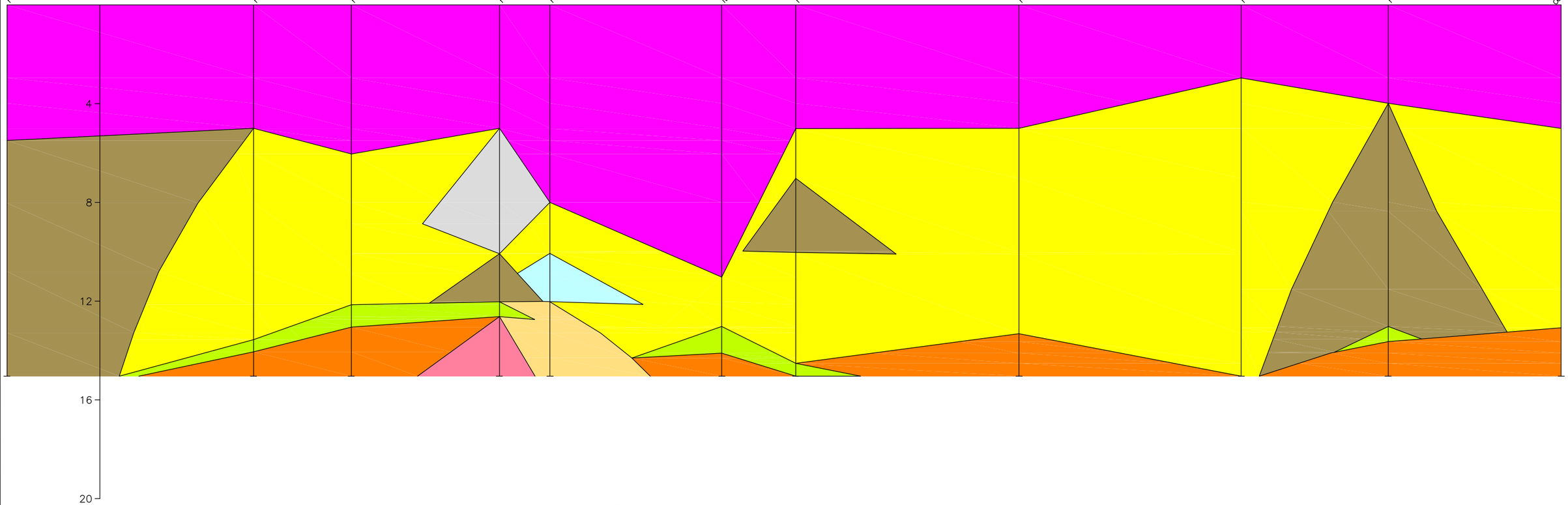
8 7 6 5 4 3 2 1

OFFICE ALBANY, NY

DRAWING NUMBER 114926B60-SMP

G

G'



VERIFY SCALE 0 1"

LEGEND

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

APPROXIMATE HORIZONTAL SCALE

0 40 80 FEET

VERTICAL SCALE

0 4 8 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: JN/SG	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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B60-SMP	FIGURE 11

\\sahafs01\Common\PROJ\NYC-SCA\Mott Haven\114926\SIR & RIR\114926B60-SMP.dwg
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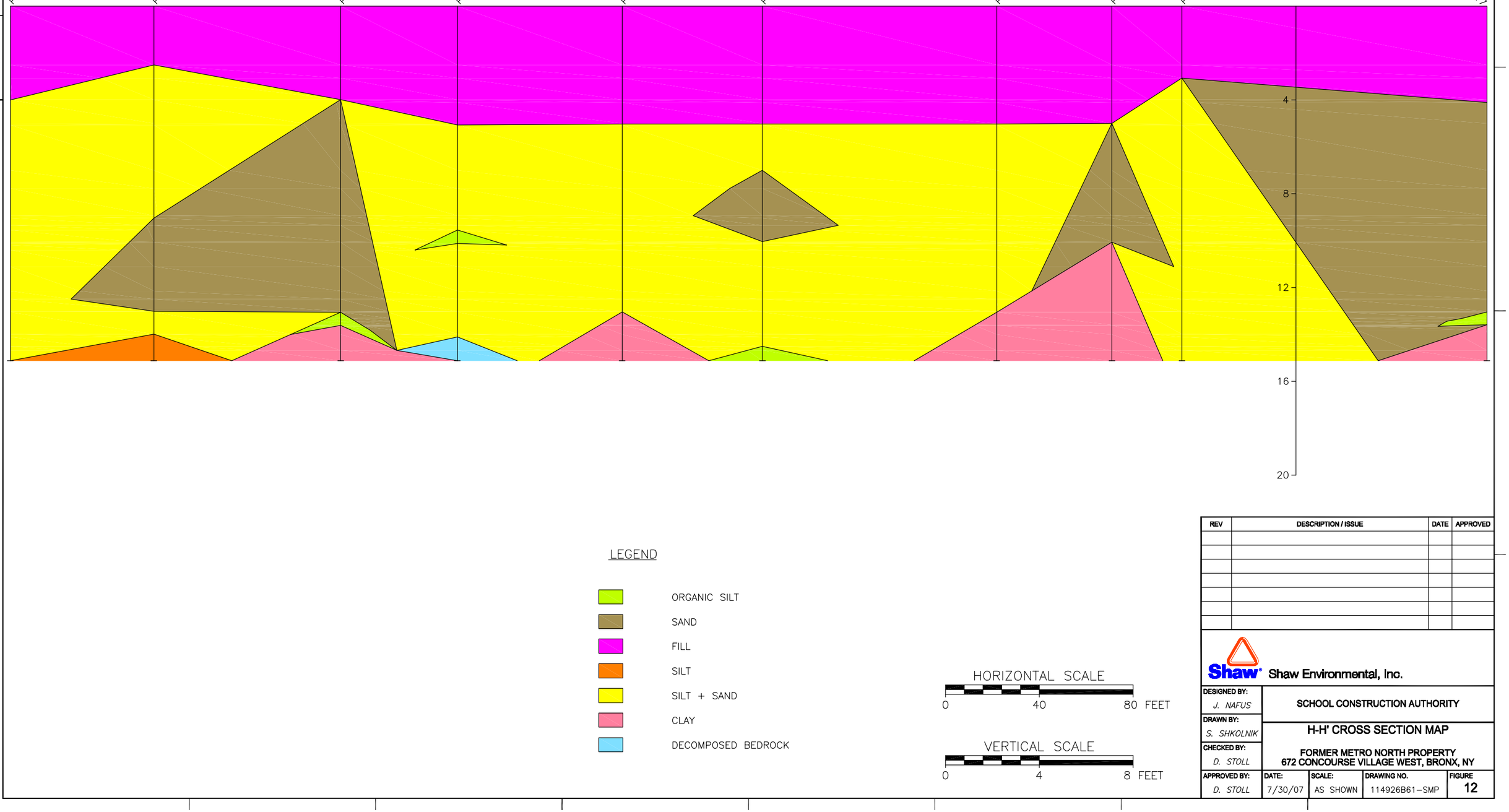
Plotted by: william.snyder
Image: .

8 7 6 5 4 3 2 1

H H'

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



LEGEND

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

HORIZONTAL SCALE
0 40 80 FEET

VERTICAL SCALE
0 4 8 FEET

VERIFY SCALE 0 1"

OFFICE ALBANY, NY

DRAWING NUMBER 114926B61-SMP

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

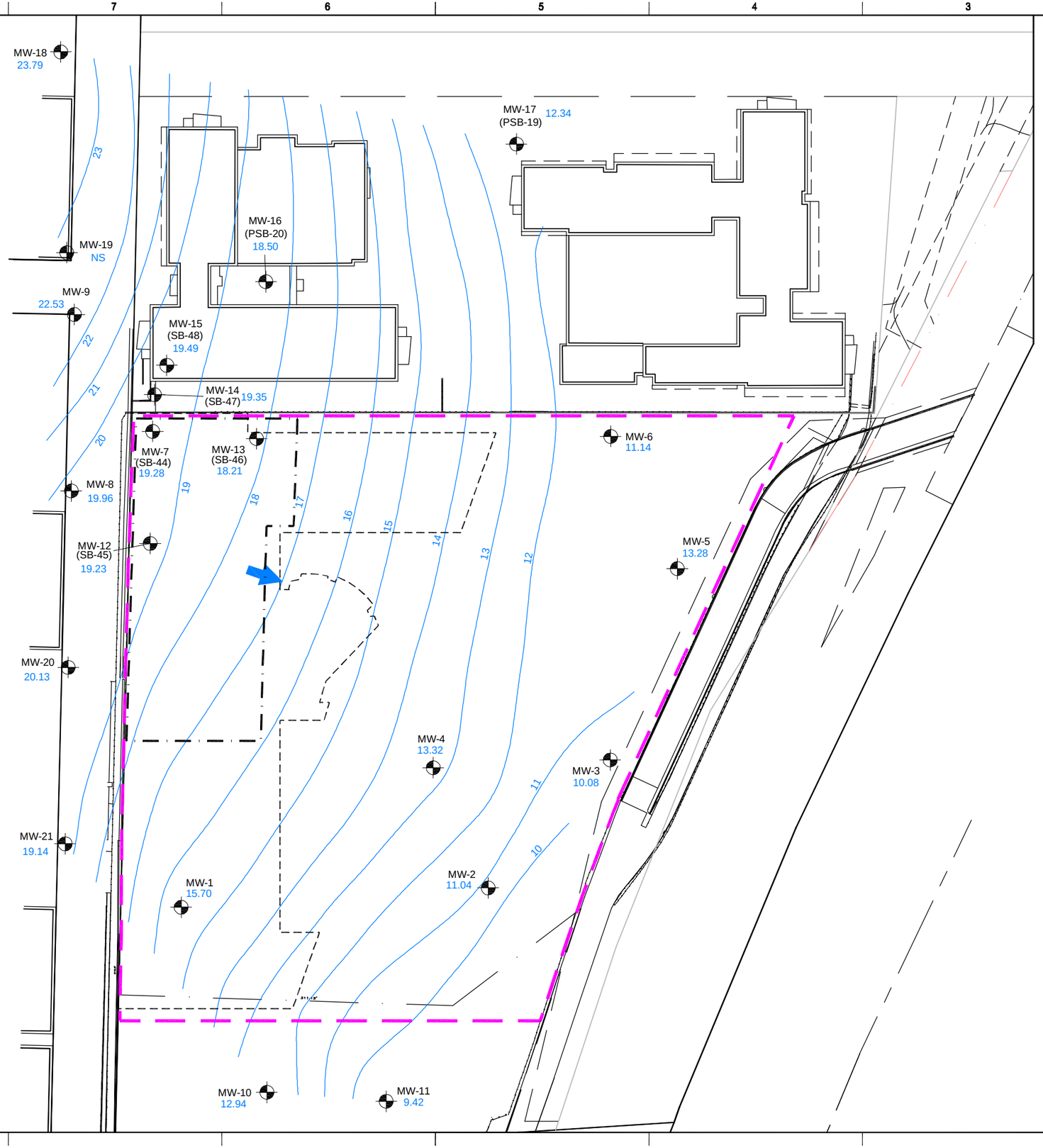
DESIGNED BY: J. NAFUS	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: S. SHKOLNIK	H-H' CROSS SECTION MAP			
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY: D. STOLL	DATE: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B61-SMP	FIGURE 12

\\seiharfs01\Common\PROJ\NYC-SCA\Mott Haven\114926\SIR & RIR\114926B61-SMP.dwg
Plot Date/Time: 07/30/07 08:23am
Plotted by: william.snyder
Image: .

OFFICE ALBANY, NY

DRAWING NUMBER 114926B46-SMP

VERIFY SCALE 0 1"



LEGEND

- MONITORING WELL (MW)
- 11.14 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- NS NOT SAMPLED
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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: 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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B46-SMP	FIGURE 13

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Plot Date/Time: 11/27/07 04:34pm Image: .
Plotted by: william.snyder

OFFICE ALBANY, NY

DRAWING NUMBER 114926B55-SMP

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

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-7 (SB-44)
MW-8 27000
MW-12 (SB-45) 220000
MW-20 16
MW-21 96
MW-1
MW-10
MW-11
MW-2 7900
MW-3
MW-4
MW-5
MW-6
MW-13 (SB-46) 15
MW-16 (PSB-20) 7.4
MW-17 (PSB-19) 0

PBSB-1 5800
PBSB-2
PBSB-3 0
PBSB-4 3600
PBSB-5 0

PSB-1 2400
PSB-2 800
PSB-3 91
PSB-4 1.4
PSB-5 0
PSB-6 0
PSB-7 250
PSB-8 210
PSB-9 0
PSB-10 19
PSB-11 0
PSB-12 0
PSB-13 0
PSB-14 0
PSB-16 0
PSB-17 0
PSB-18 0

SB-20 4.7
SB-21 0
SB-22 32000
SB-23 0
SB-24 0
SB-25 27
SB-25A 5.7
SB-26 0
SB-27
SB-28 0
SB-29 1.2
SB-30
SB-33 0
SB-34 0
SB-35 2.5
SB-36 0
SB-37 0
SB-38 38
SB-41 6.8
SB-42
SB-43 0
SB-49 28

NWSB GRAB 7100
NWSB

BALLAST 1
BALLAST 2

4700
5000
10000

LEGEND

- MONITORING WELL
- SOIL BORING
- SOIL BORING (12 TO 15 FEET) (PSB)
- BEDROCK SOIL BORING (PBSB)
- TEST PIT/BALLAST PILE
- 250 NAPHTHALENE CONCENTRATION
- NAPHTHALENE CONTOUR (ppb) (DASHED WERE INFERRED)
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

O:\Shaw Offices - CAD Files\Harriman NY\114926\114926B55-SMP.dwg Xref: .
Plot Date/Time: 11/27/07 04:40pm Image: .
Plotted by: william.snyder

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw 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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B55-SMP	FIGURE 14

OFFICE ALBANY, NY

DRAWING NUMBER 114926B53-SMP

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-9 7793
MW-15 (SB-48) 2249
MW-14 (SB-47) 1670
MW-7 (SB-44) 9960
MW-8 30270
MW-12 (SB-45) 11360
MW-13 (SB-46) 1527
MW-17 (PSB-19) 0
MW-16 (PSB-20) 0
MW-6 0
MW-5 0
MW-3 0
MW-4 0
MW-2 0
MW-1 2
MW-20 0
MW-21 0
MW-10 0
MW-11 0

10000
5000
1000

LEGEND

- MONITORING WELL
- 1527 BTEX CONCENTRATION
- BTEX CONTOUR (ppb) (DASHED WERE INFERRED)
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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/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: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B53-SMP	FIGURE 15

DRAWING NUMBER 114926B62-SMP_V2

OFFICE ALBANY, NY

8 7 6 5 4 3 2 1

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-Trimenthylbenzene	1200
1,2,4-Trimethylbenzene	2500
Naphthalene	220000 D

CONCOURSE VILLAGE WEST

EAST 156th STREET

E. 156th STREET

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	14-15
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			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	

SB30			
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)
NWSB
NWSB GRAB
MW-12 (SB-45)
MW-20
MW-21
BALLAST 2
SB-49
SB-42
SB-23
SB-41
SB-22
SB-26
SB-25
SB-25A
SB-29
SB-37
SB-20
TP-16
TP-15
TP-14
TP-21
TP-20
TP-13
TP-19
TP-11
TP-12
BALLAST 1
SB-33
SB-34
SB-35
SB-36
SB-28
SB-30
SB-43
SB-27
SB-24
SB-21
CONCOURSE VILLAGE EAST
Land Now Or Formerly City of New York & New York Central Railroad

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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.

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Plot Date/Time: 11/27/07 04:47pm Image: .
Plotted by: william.snyder

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	VOC COMPOUNDS DETECTED IN SOIL (FIGURE 1 OF 2)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B62-SMP_V2	16A

OFFICE ALBANY, NY | DRAWING NUMBER 114926B63-SMP_V2

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

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 | MW-12 (SB-45) | MW-20 | MW-21 | 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 | NWSB | NWSB GRAB | BALLAST 1 | BALLAST 2

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

SB36	
2-4	
04/14/05	
Methylene Chloride	5.6

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

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

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

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

SB28	
4-6	
04/14/05	
Methylene Chloride	2.9 J

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

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

TP13	
3-4	
04/18/2005	
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			

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

SCALE
0 100 200 FEET

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

Shaw Environmental, Inc.

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

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B63-SMP_V2	16B

VERIFY SCALE 0 1"

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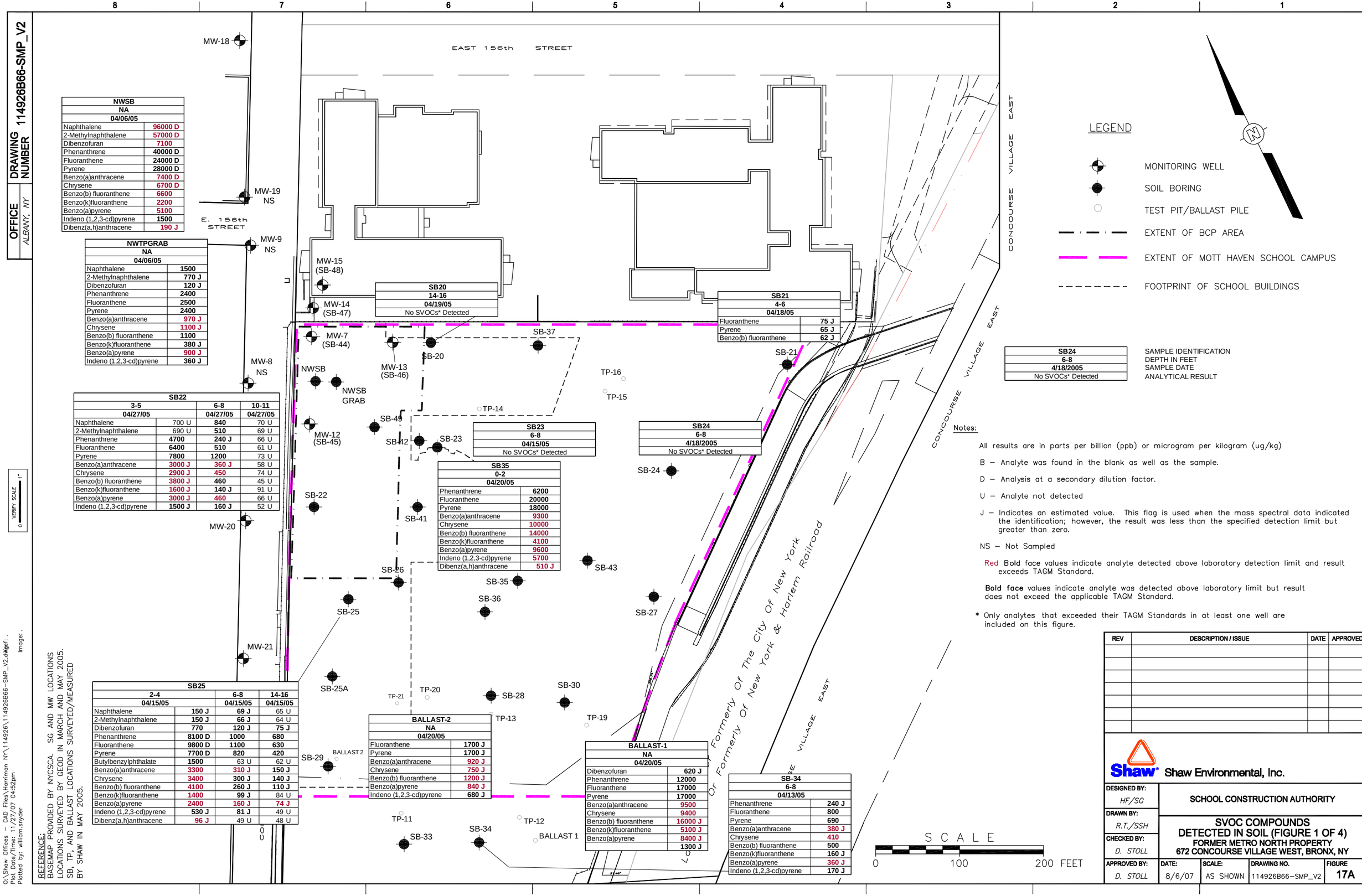
Plot Date/Time: 11/27/07 04:49pm
Plotted by: william.snyder
Xref: .
Image: .

DRAWING NUMBER 114926B66-SMP_V2

OFFICE ALBANY, NY



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
4/18/2005
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

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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 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 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	SVOC COMPOUNDS DETECTED IN SOIL (FIGURE 1 OF 4)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY
	672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B66-SMP_V2	17A

VERIFY SCALE 0 1"

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Plot Date/Time: 11/27/07 04:52pm
Plotted by: william.snyder
Xref: .
Image: .

OFFICE ALBANY, NY
DRAWING NUMBER 114926B67-SMP_V2

EAST 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

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
04/14/2005		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)
MW-12 (SB-45)
MW-20
MW-21
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
NWSB
NWSB GRAB
BALLAST 1
BALLAST 2
TP-11
TP-12
TP-13
TP-14
TP-15
TP-16
TP-19
TP-20
TP-21

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

SCALE
0 100 200 FEET

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

VERIFY SCALE 0 1"

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Plotted by: william.snyder

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 2 OF 4)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY
	672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B67-SMP_V2	17B

OFFICE ALBANY, NY

DRAWING NUMBER 114926B68-SMP_V2

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

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

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

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

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-21
TP-16
TP-15
TP-14
SB-49
SB-42
SB-23
SB-22
SB-41
SB-24
SB-26
SB-43
SB-35
SB-36
SB-25
SB-27
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

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

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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

VERIFY SCALE 0 1"

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 4) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B68-SMP_V2	17C

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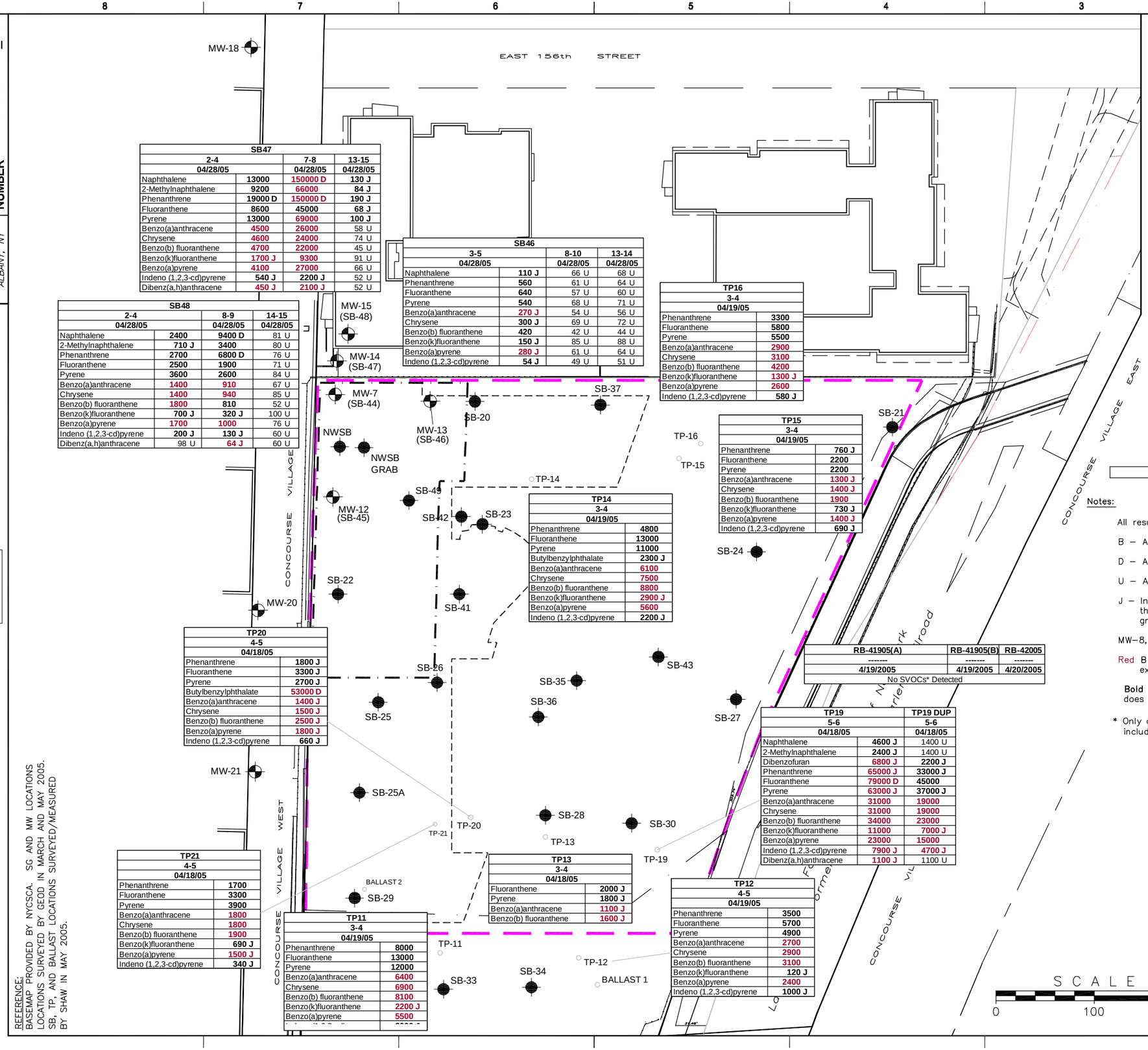
Plot Date/Time: 11/28/07 06:46am
Plotted by: william.snyder
Xref: .
Image: .

DRAWING NUMBER 114926B69-SMP_V2

OFFICE ALBANY, NY



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

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

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
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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 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.

VERIFY SCALE 0 1"

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Plot Date/Time: 11/27/07 04:59pm
Plotted by: william.snyder
Xref:
Image:

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 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	8/6/07	AS SHOWN	114926B69-SMP_V2	17D

OFFICE ALBANY, NY

DRAWING NUMBER 114926B72-SMP_V2

EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

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-22
SB-25
SB-25A
SB-26
SB-41
SB-42
SB-23
SB-49
SB-37
SB-20
SB-21
SB-24
SB-43
SB-27
SB-35
SB-36
SB-28
SB-30
SB-34
SB-29
SB-33
TP-11
TP-12
TP-13
TP-14
TP-15
TP-16
TP-19
TP-20
TP-21
BALLAST 1
BALLAST 2

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

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

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

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

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

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

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

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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 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

VERIFY SCALE 0 1"

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 1 OF 3)
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY
	672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B72-SMP_V2	18A

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Plot Date/Time: 11/27/07 05:01pm
Plotted by: william.snyder
Xref: .
Image: .

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EAST 156th STREET

E. 156th STREET

CONCOURSE VILLAGE WEST

CONCOURSE VILLAGE EAST

New York Central Transportation Company (formerly of Pennsylvania New York Central Railroad)

Land Now Or Formerly Of Harlem Railroad

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

SB48	2-4 04/28/05	8-9 04/28/05	14-15 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 5-6 04/18/05	TP19 DUP 5-6 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 --- 4/19/2005	RB-41905B --- 4/19/2005	RB-42005 --- 4/19/2005
Beryllium	0.145 J	0.170 J	0.160 J

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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.

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Plot Date/Time: 11/27/07 05:03pm Image: .
Plotted by: william.snyder

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 2 OF 3) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B73-SMP_V2	18B

OFFICE ALBANY, NY
DRAWING NUMBER 114926B74-SMP_V2

8 7 6 5 4 3 2 1

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

New York Central Transportation Company Pennsylvania

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	5-7	14-15
04/27/05		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-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

SCALE
0 100 200 FEET

VERY SCALE 0 1"

LEGEND

- MONITORING WELL
- SOIL BORING
- TEST PIT/BALLAST PILE
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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	INORGANICS DETECTED IN SOIL (FIGURE 3 OF 3) FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
CHECKED BY: D. STOLL	

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	8/6/07	AS SHOWN	114926B74-SMP_V2	18C

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Plot Date/Time: 11/27/07 05:05pm Image: .
Plotted by: william.snyder

DRAWING NUMBER 114926B77-SMP

OFFICE ALBANY, NY

8 7 6 5 4 3 2 1

EAST 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

56th STREET

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	MW17-GW 09/14/05
cis-1,2-Dichloroethene	1.0 J
Dimethylphthalate	1.4 J

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-Isoproylbenzne	34	41
n-butylbenzene	14	22

Compound	MW16-GW 09/14/05	MW16-GWD 09/14/05
Methyl tert-butyl Ether	1.5 J	1.5 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

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

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

MW6-GW 5/17/2005	
Methyl tert-Butyl Ether	0.73 J

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

MW5-GW 5/16/2005	MW5-GWDUP 5/16/2005
No VOC Detections *	

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

MW-20 9/15/2005
No VOCs Detected *

MW3-GW 5/16/2005
No VOC Detections *

MW-21 9/15/2005
No VOCs Detected *

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	RB051805
4/19/2005	5/18/2005
No VOC Detections	

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

Land Now Or Formerly Of The City Of New York
Land Now Or Formerly Of New York & Harlem Railroad
New York Central Transportation Company Pennsylvania

LEGEND

- MONITORING WELL
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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.

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Plot Date/Time: 11/27/07 05:07pm Image: .
Plotted by: william.snyder

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B77-SMP	FIGURE 19

DRAWING NUMBER 114926B78-SMP

OFFICE ALBANY, NY

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

MW3-GW	
5/16/2005	
Butylbenzylphthalate	12

MW4-GW	
5/17/2005	
Butylbenzylphthalate	18
bis(2-Ethylhexyl)phthalate	2.9 J

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

Compound	MW16-GW 09/14/05	MW16-GWD 09/14/05
No Detection	-	-

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	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-12 (SB-45), MW-13 (SB-46), MW-15 (SB-48), MW-14 (SB-47), MW-16 (PSB-20), MW-17 (PSB-19), MW-6, MW-5, MW-4, MW-3, MW-2, MW-1, MW-10, MW-11

EAST 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

New York Central Transportation Company of Pennsylvania

LEGEND

- MONITORING WELL
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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.

O:\Shaw Offices - CAD Files\Harriman NY\114926\114926B78-SMP.dwg Xref: .
Plot Date/Time: 11/27/07 05:09pm Image: .
Plotted by: william.snyder

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY:	SCHOOL CONSTRUCTION AUTHORITY			
HF/SG				
DRAWN BY: R.T./SSH	SEMI VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
CHECKED BY: D. STOLL				
APPROVED BY: D. STOLL	DATE: 7/30/07	SCALE: AS SHOWN	DRAWING NO. 114926B78-SMP	FIGURE 20

DRAWING NUMBER 114926B79-SMP_V2

OFFICE ALBANY, NY

EAST 156th STREET

CONCOURSE VILLAGE EAST

CONCOURSE VILLAGE WEST

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-21

MW-4

MW-2

MW-1

MW-10

MW-11

Transit Authority Formerly The City Of New York & Harlem Railroad Land

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

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

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

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

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

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	43.0 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

LEGEND

- MONITORING WELL
- EXTENT OF BCP AREA
- EXTENT OF MOTT HAVEN SCHOOL CAMPUS
- FOOTPRINT OF SCHOOL BUILDINGS

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.

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

VERIFY SCALE 0 1"

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/SG	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	INORGANICS 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	8/6/07	AS SHOWN	114926B79-SMP_V2	21

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Plot Date/Time: 11/27/07 05:13pm
Plotted by: william.snyder
Xref: .
Image: .

8 7 6 5 4 3 2 1

OFFICE ALBANY, NY

DRAWING NUMBER 114926B81-SMP

VERIFY SCALE 0 1"

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

PSGI-10 341.6

PSGI-5 204.16

PSGI-7 192.6

PSGI-8 256.65

PSGI-6 291.9

PSGI-4 1446.14

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-27 173.57

SG-28 203.10

SG-29 155.60 (174.80)

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)

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:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	7/30/07	AS SHOWN	114926B81-SMP	22

\\sehartsf01\Common\PROJ\NYC-SCA\Mott Haven\114926\SIR & RIR\114926B81-SMP.dwg
Plot Date/Time: 07/30/07 11:05am
Plotted by: william.snyder
Image: .

OFFICE: New York, NY | DRAWING NUMBER: Figure 10 MOD-SMP

SECTION #1
BOTTOM OF EXCAVATION
EL. +9.30'

SECTION #3
BOTTOM OF EXCAVATION
EL. +9.97'

SECTION #2
BOTTOM OF EXCAVATION
EL. +14.47'

100'
150'
125'
691.24'
TAX LOT 78
TAX BLOCK 2443

REMEDIATION ELEVATION

RE=9.30'	SECTION #1
RE=9.97'	SECTION #3
RE=14.47'	SECTION #2

LEGEND

- REMEDIATION AREA
- LIMITS OF PROPOSED BUILDING
- RE=9.30' — REMEDIATION ELEVATION (BPDB)

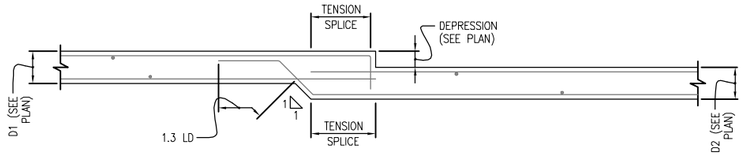
0 50 100
SCALE IN FEET

Driveway
New York & Harlem Rail Road
CONCOURSE

Shaw Environmental, Inc.

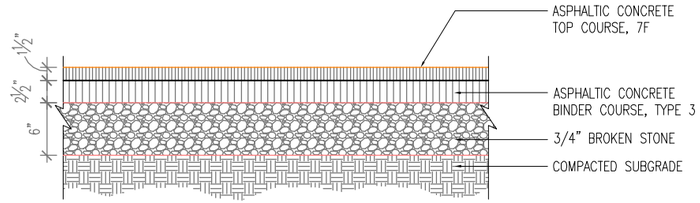
DESIGNED BY: HF/CK	NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	LIMIT OF EXCAVATION
CHECKED BY:	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY:	DATE: 7/30/07 · SCALE: AS SHOWN · DRAWING NO.: Figure 10 MOD-SMP · FIGURE: 23

File: \\seihorfs01\Common\PROJ\NYC-SCA\Mott Haven\RAWP\Figures\Figure 10 MOD-SMP.dwg Layout: Layout1 User: william.snyder Jul 30, 20



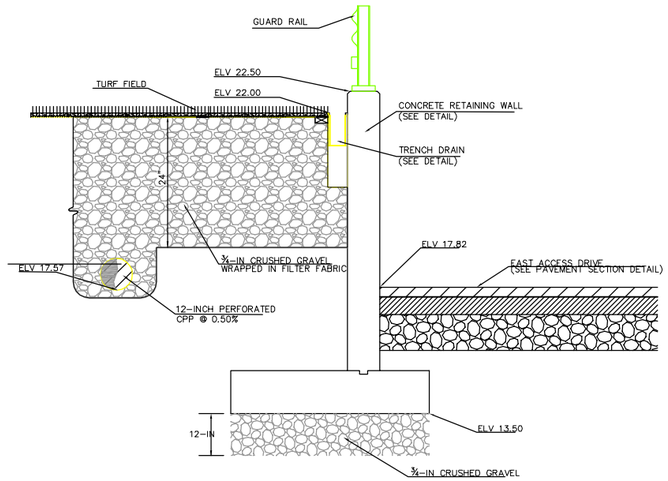
STEP IN SLAB

DETAIL 1



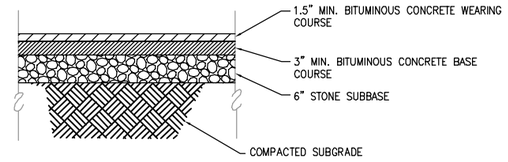
ASPHALT PAVEMENT AT RECREATION AREA

DETAIL 3



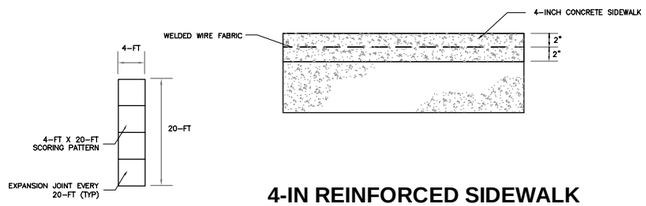
ATHLETIC FIELD

DETAIL 2



NEW BITUMINOUS PAVEMENT SECTION

DETAIL 4

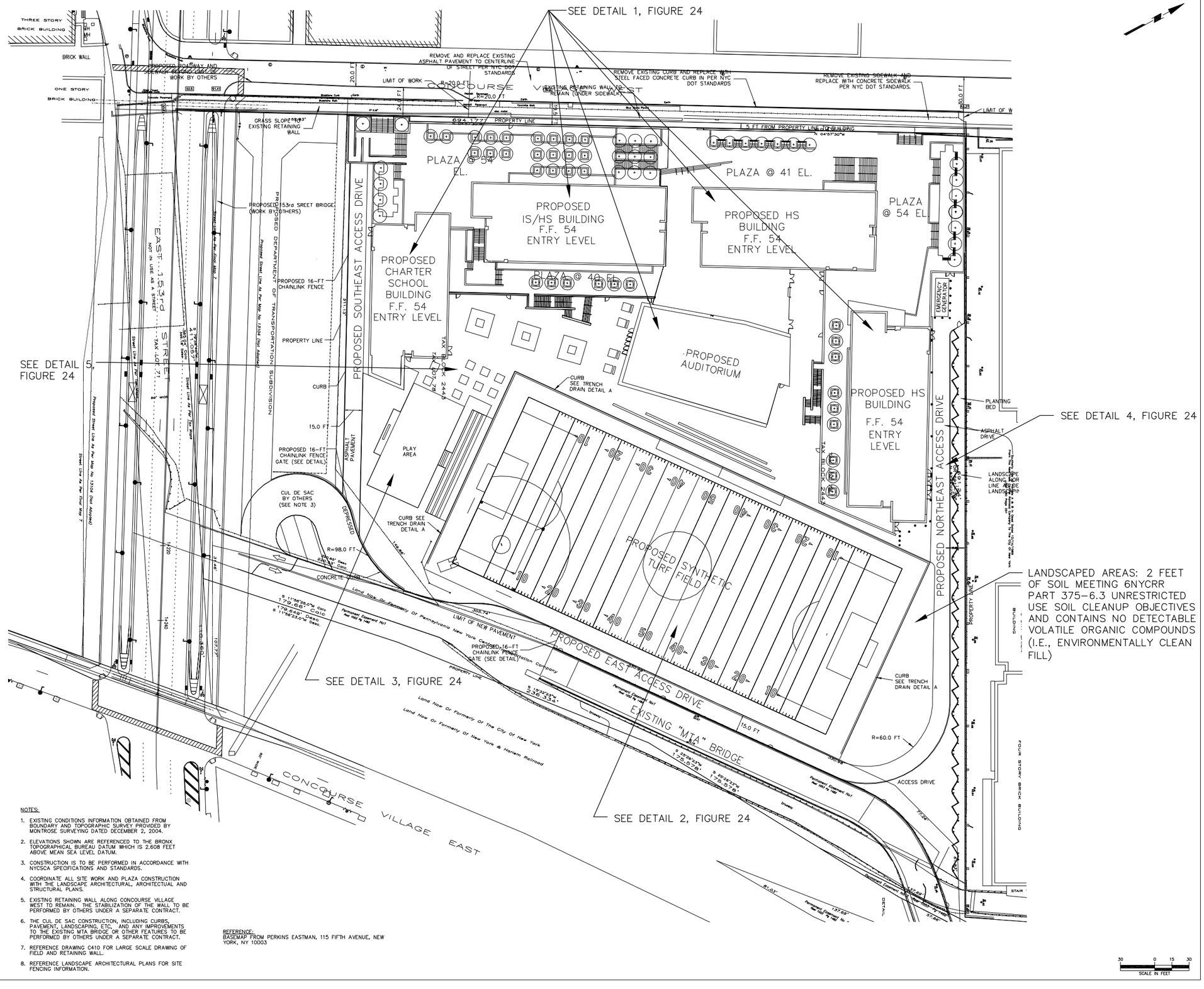


4-IN REINFORCED SIDEWALK SECTION WITH SCORING PATTERN

DETAIL 5

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY			
DRAWN BY: R.T./SSH	DETAILS			
CHECKED BY:	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY:	DATE: 1/16/08	SCALE: AS SHOWN	DRAWING NO. Figure 24–SMP	FIGURE 24



NOTES:

1. EXISTING CONDITIONS INFORMATION OBTAINED FROM BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY MONTROSE SURVEYING DATED DECEMBER 2, 2004.
2. ELEVATIONS SHOWN ARE REFERENCED TO THE BRONX TOPOGRAPHICAL BUREAU DATUM WHICH IS 2.608 FEET ABOVE MEAN SEA LEVEL DATUM.
3. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH NYCSCA SPECIFICATIONS AND STANDARDS.
4. COORDINATE ALL SITE WORK AND PLAZA CONSTRUCTION WITH THE LANDSCAPE ARCHITECTURAL, ARCHITECTUAL AND STRUCTURAL PLANS.
5. EXISTING RETAINING WALL ALONG CONCOURSE VILLAGE WEST TO REMAIN. THE STABILIZATION OF THE WALL TO BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT.
6. THE CUL DE SAC CONSTRUCTION, INCLUDING CURBS, PAVEMENT, LANDSCAPING, ETC., AND ANY IMPROVEMENTS TO THE EXISTING MTA BRIDGE OR OTHER FEATURES TO BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT.
7. REFERENCE DRAWING C410 FOR LARGE SCALE DRAWING OF FIELD AND RETAINING WALL.
8. REFERENCE LANDSCAPE ARCHITECTURAL PLANS FOR SITE FENCING INFORMATION.

REFERENCE:
BASEMAP FROM PERKINS EASTMAN, 115 FIFTH AVENUE, NEW YORK, NY 10003

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

Sharon L. Greenberger, MCP, President & CEO

Board of Trustees

Chancellor Joel I. Klein, Chairman
Stanley E. Grayson, Trustee
Lilliam Barrios-Paoli, Trustee

Architecture & Engineering
E. Bruce Barrett, R.A., Vice President

Elan R. Abneri, P.E., Director of Design Studio 1
Timothy F. Ng, R.A., PP., Director of Design Studio 2
George D. Roussey, P.E., Director of Design Studio 3
Gary Deane, Director of Operations, Special Projects

OWNER: NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
30-30 THOMSON AVENUE
LONG ISLAND CITY, NY 11101-3045

ARCHITECT: PERKINS EASTMAN
115 FIFTH AVENUE
NEW YORK, NY 10003

CONSULTING ARCHITECT: ALEXANDER GORLIN ARCHITECT LLC
137 VARICK STREET
NEW YORK, NY 10013

STRUCTURAL ENGINEER: LESLIE E. ROBERTSON ASSOCIATES, RLLP
30 BROAD STREET
NEW YORK, NY 10004

MECHANICAL ENGINEER: FLACK + KURTZ ENGINEERS
475 FIFTH AVENUE
NEW YORK, NY 10017

CIVIL ENGINEER: LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES
21 PENN PLAZA
360 WEST 31ST SIREET, 8TH FLOOR
NEW YORK, NY 10001

FOOD SERVICE CONSULTANT: ROMANO GAETANO
99 WEST HOFFMAN AVENUE
LINDENHURST, NY 11757

ACOUSTIC AND THEATER CONSULTANT: HARVEY MARSHALL BERLING ASSOCIATES, LLC.
173 WEST 81ST STREET
SUITE 2, LOWER LEVEL
NEW YORK, NY 10024

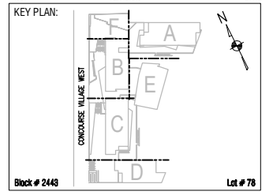
LANDSCAPE ARCHITECT: RGR LANDSCAPE
116 FIFTH AVENUE
NEW YORK, NY 10003

BID SET

NOTE: Drawing may be printed at reduced scale

NO.	REVISION	DATE
1	ISSUED FOR ADDENDUM No. 1	JULY 31, 2006

KEY PLAN:



Block # 2443 Lot # 78

SCA Design Manager:	Bohdan Huhlewych
Project Architect/Engineer:	Christine Schlendorf
Designer:	Ernesto Vela
Drawn by:	Christine Schlendorf
Checked by:	Perry Nuñez

LLW No.:	Facility Code:	Date:
033485	1215-05	1/16/08

Project:
MOTT HAVEN CAMPUS
-
Address: 730 CONCOURSE VILLAGE WEST
BRONX, NEW YORK 10451

Drawing Title:
FIGURE 25
PRINCIPAL SITE COVERS

Drawing No.:
Figure 25 SMP

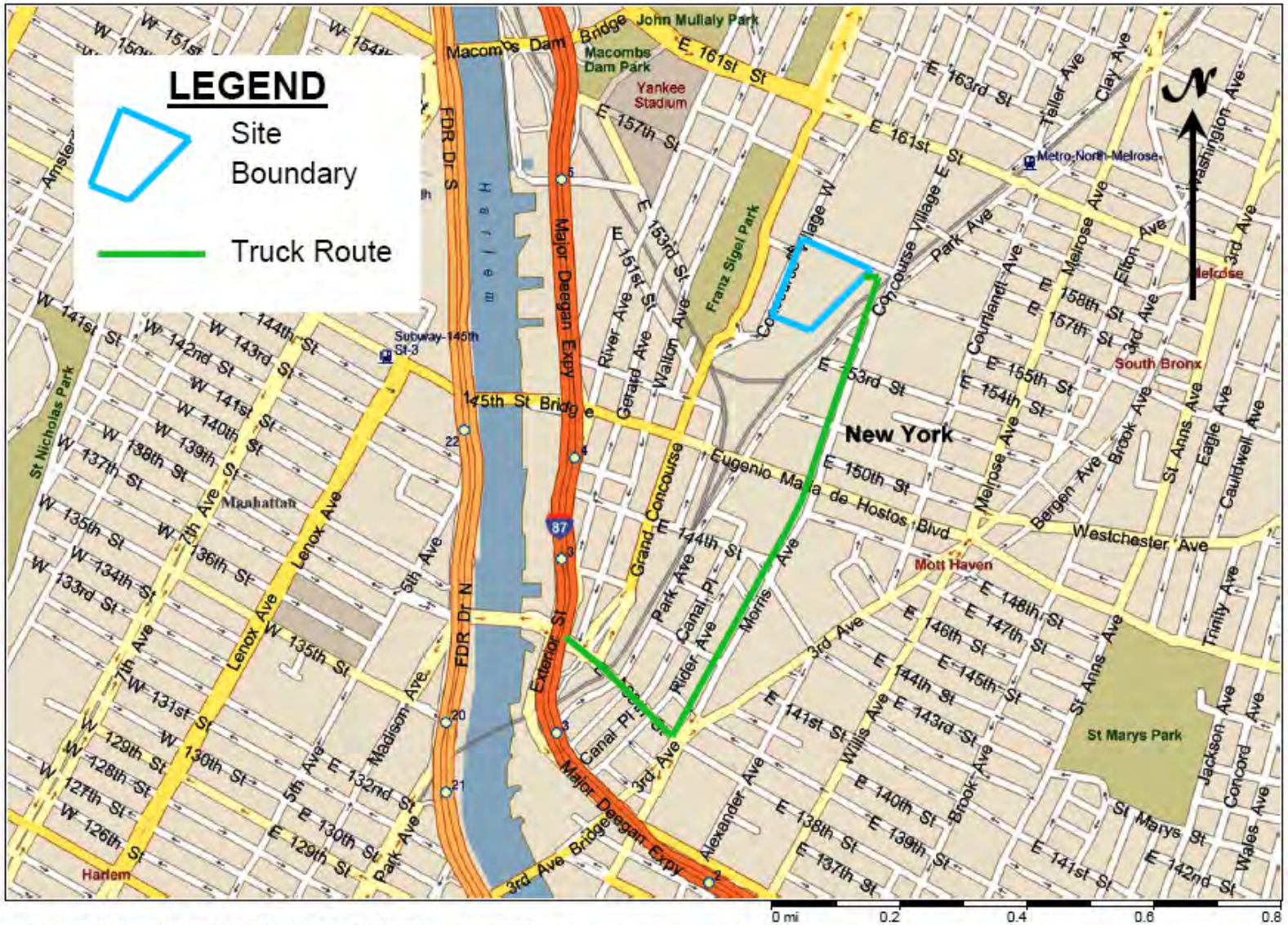
Sheets in Contract:
of 1072

PFA No. 21200.00

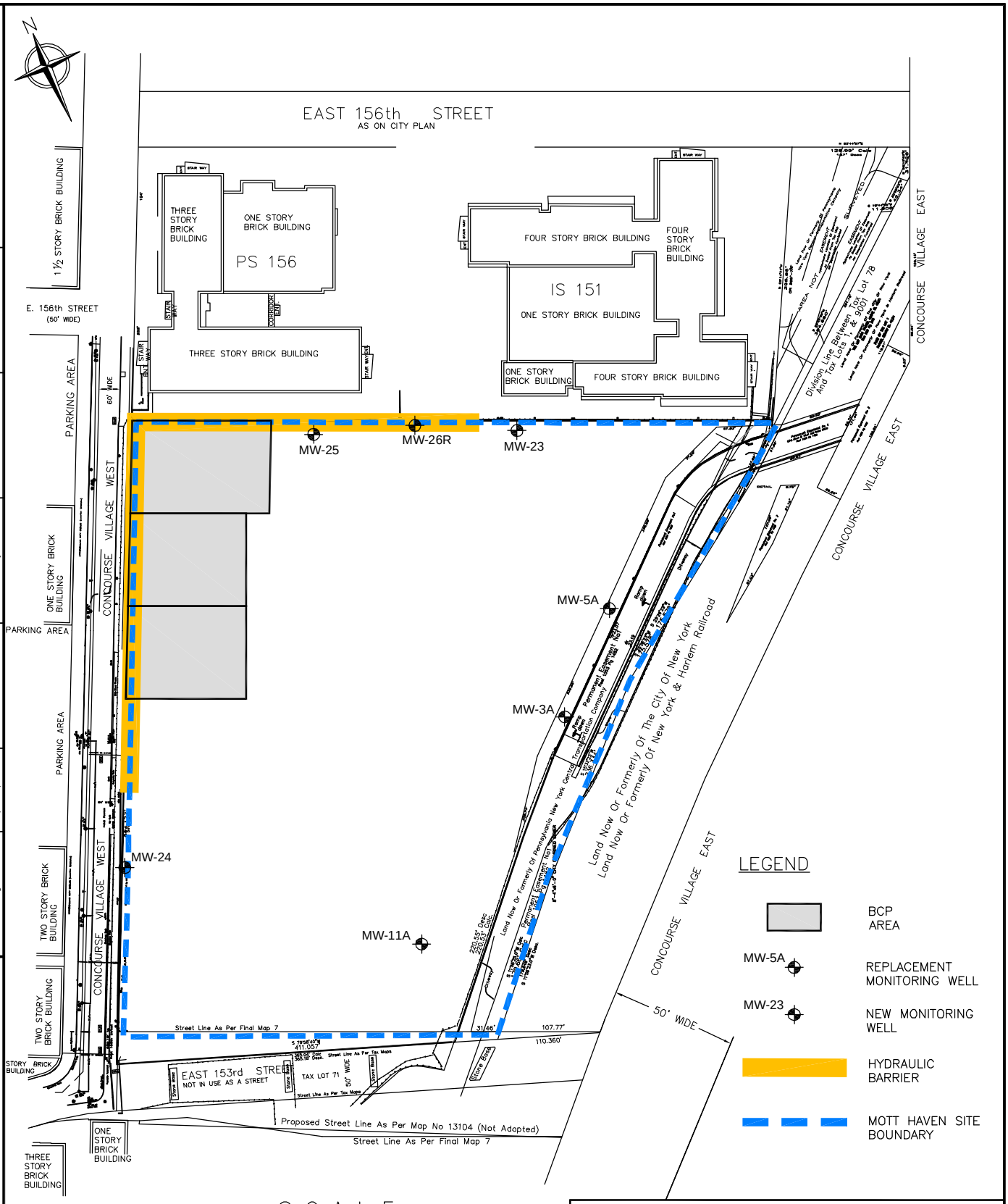
O:\Shaw Offices - CAD Files\Harrison NY\114926\SMP - DEC 2007\Figure 25-SMP.dwg 01/16/08 - 1:33pm

FIGURE 26

TRUCK ROUTE FOR OFF-SITE MATERIAL REMOVAL



OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	1/22/08	--	B. Snyder	C. Kraemer	--	Figure 27-SMP



NOTES:

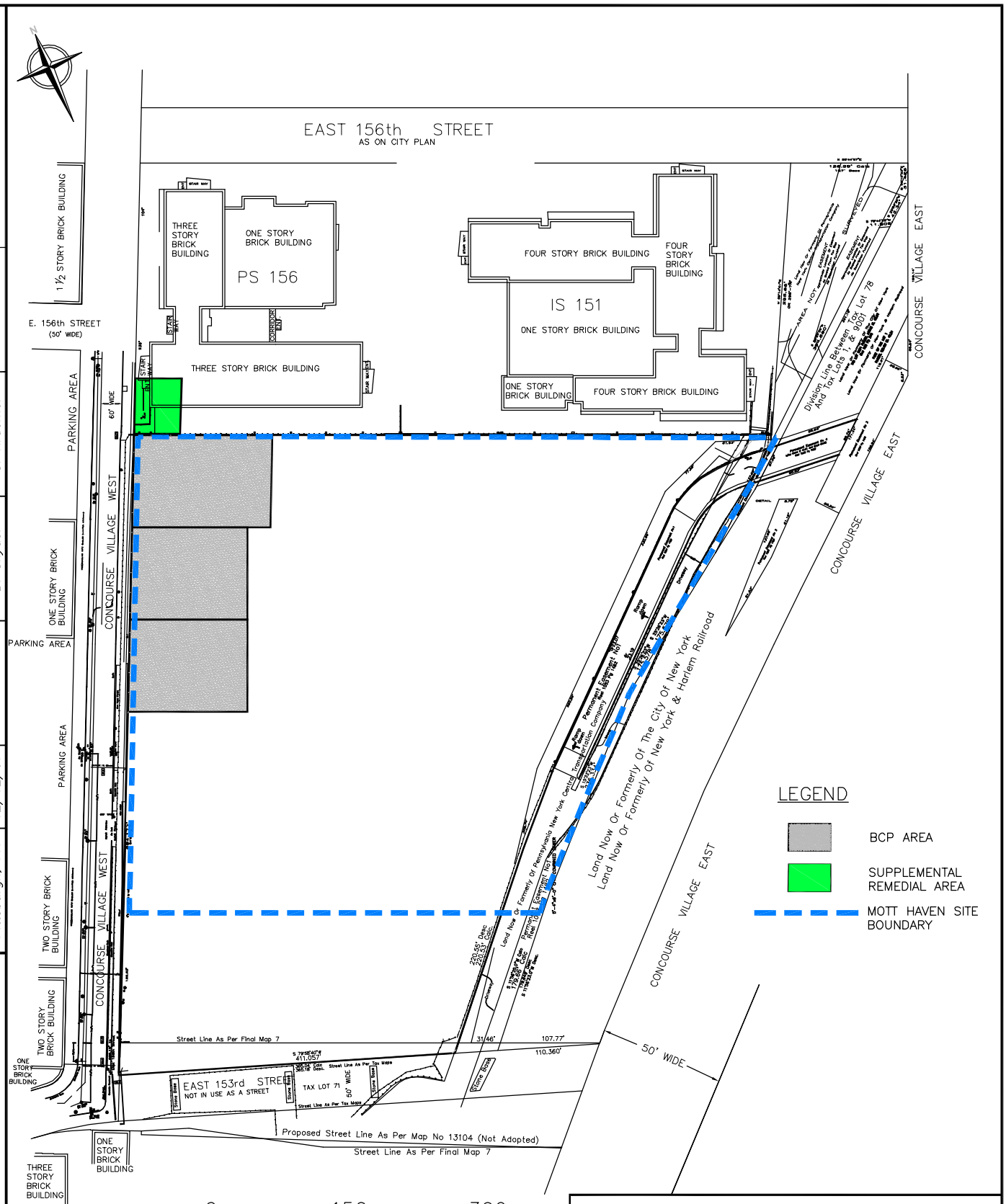
1. HORIZONTAL DATUM: COORDINATE SYSTEM BASED UPON PUBLISHED COORDINATES OF EXISTING WELLS AND MH AT CP 802
2. VERTICAL DATUM: QUEENS BOROUGH PRESIDENT'S DATUM WHICH IS 2.725 FT ABOVE U.S. COAST AND GEODETIC SURVEY DATUM, SANDY HOOK, NJ (NGVD 29)

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	MONITORING WELL LOCATION PLAN
CHECKED BY:	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
	1/22/08	AS SHOWN	FIGURE 27-SMP	27

File: O:\Shaw Offices - CAD Files\Harriman NY\114926\SMP - DEC 2007\Figure 27 - SMP.dwg
Plot Date/Time: Aug 13, 2008 - 11:01am
Plotted By: william.snyder
Xref :
Image :



NOTES:

1. HORIZONTAL DATUM: COORDINATE SYSTEM BASED UPON PUBLISHED COORDINATES OF EXISTING WELLS AND MH AT CP 802
2. VERTICAL DATUM: QUEENS BOROUGH PRESIDENT'S DATUM WHICH IS 2.725 FT ABOVE U.S. COAST AND GEODETIC SURVEY DATUM, SANDY HOOK, NJ (NGVD 29)

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	DESIGNED BY	DATE	OFFICE
Figure 28 - SMP	--	C. Kraemer	B. Snyder	--	12/12/07	Pittsburgh, PA

Shaw Environmental, Inc.

DESIGNED BY:	NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY			
HF/CK				
DRAWN BY:	SUPPLEMENTAL REMEDIAL AREA (SRA)			
R.T./SSH				
CHECKED BY:	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY			
APPROVED BY:	DATE: 1/16/08	SCALE: AS SHOWN	DRAWING NO. FIGURE 28–SMP	FIGURE 28

File: O:\Shaw Offices - CAD Files\Harriman NY\114926\SMP - DEC 2007\Figure 28 - SMP.dwg
Plot Date/Time: Jan 16, 2008 - 1:41pm
Plotted By: william.snyder
Xref :
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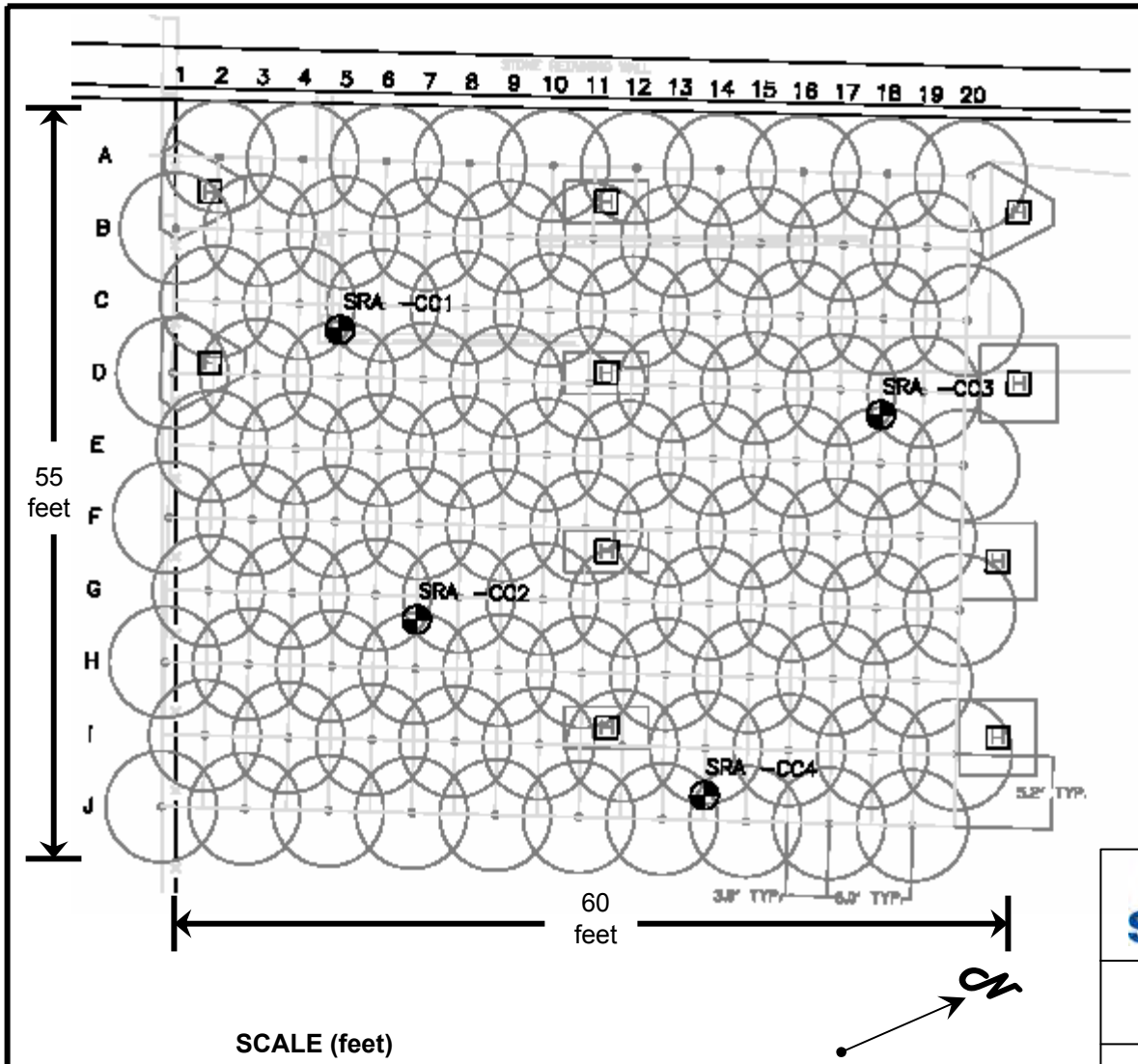

LEGEND

OUTLINE OF 8' DIAMETER SRA JET GROUT COLUMN

PILE CAP PC2

PILE CAP PC3

PILE CAP PC4

SRA -CCX
CONFIRMATION CORE LOCATION

SCALE (feet)

0 10 25

Shaw® Shaw Environmental, Inc.

NEW YORK CITY
SCHOOL CONSTRUCTION AUTHORITY

FIGURE 29

SRA JET GROUT COLUMNS AND CONFIRMATION CORE LOCATION PLAN

Appendix A

Metes and Bounds

BCP Area
Legal Description

Legal Description
MSC NO. 57239-10
Tax Block 2443 Tax Lot 78
BCP Area

ALL that certain plot piece or parcel of land situate lying and being in the Borough and County of The Bronx, City and State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of Concourse Village West (60 feet wide), distant 394.18 feet northerly from the corner formed by the intersection of the easterly side of Concourse Village West with the northerly side of East 153rd Street (50 feet wide), as said street is shown on the Tax Maps of New York City.

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, 125.00 feet to a point;

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, 200.00 feet to a point;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, 25.00 feet to a point;

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, 100.00 feet to the southerly line of that parcel of land described and designated as Parcel B in deed dated December 14, 1966 from the New York Central railroad Company to the City of New York recorded in the Office of the Register of the City of New York in Bronx County in Record Liber 180 Page 251;

RUNNING THENCE South 83 degrees 44 minutes 07 seconds West, along the southerly line of those parcels of land designated as Parcel B in the aforementioned deed, 150.00 feet to the easterly side of Concourse Village West;

RUNNING THENCE South 04 degrees 57 minutes 30 seconds East along the easterly side of Concourse Village West, 300.00 feet to the point or place of BEGINNING.

Non-BCP Area A
Legal Description

Legal Description
MSC NO. 57239-10
Tax Block 2443 Tax Lot 78
Non-BCP Area A

ALL that certain plot piece or parcel of land situate lying and being in the Borough and County of The Bronx, City and State of New York bounded and described as follows:

BEGINNING at a point on the northerly line of East 153rd Street (50 feet wide), as said street is shown on the Tax Maps of New York City, distant westerly as measured along the same, 110.360 feet from the corner formed by its intersection with the westerly line of Concourse Village East (formerly Park Avenue);

RUNNING THENCE South 79 degrees 58 minutes 40 seconds West, along the said northerly line of East 153rd Street, 46.02 feet to a point;

RUNNING THENCE North 12 degrees 08 minutes 37 seconds East, 220.55 feet to a point;

RUNNING THENCE South 46 degrees 35 minutes 09 seconds West, 149.86 feet to a point;

RUNNING THENCE South 85 degrees 35 minutes 46 seconds West, 311.13 feet to the easterly line of Concourse Village West (formerly Sheridan Avenue);

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, along the easterly line of Concourse Village West, 241.35 feet to a point;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, 125.00 feet to a point;

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, 200.00 feet to a point;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, 25.00 feet to a point;

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, 100.00 feet to the southerly line of that parcel of land described and designated as Parcel B in deed dated December 14, 1966 from the New York Central Railroad Company to the City of New York recorded in the Office of the Register of the City of New York in Bronx County in Record Liber 180 Page 251;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, along the southerly line of those parcels of land designated as Parcel B and A in the aforementioned deed, 691.34 feet to a point;

RUNNING THENCE North 02 degrees 14 minutes 41 seconds West, along the easterly line of that parcel of land designated as Parcel A in the aforesaid deed, 295.66 feet to the southerly side of East 156th Street as shown on the City Plan;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, along the southerly line of East 156th Street, 126.99 feet to the westerly line of Concourse Village East (formerly Morris Avenue);

RUNNING THENCE South 06 degrees 15 minutes 53 seconds East along the westerly line of Concourse Village East (formerly Morris Avenue), 31.426 feet;

RUNNING THENCE South 20 degrees 58 minutes 23 seconds West, 42.34 feet to the division line between lands now or formerly of the Pennsylvania New York Central Transportation Company on the west and lands of the New York and Harlem Railroad Company on the east;

RUNNING THENCE along the division line between said lands, the following two courses and distances:

1. South 79 degrees 44 minutes 25 seconds West, 11.806 feet to a point;

2. South 20 degrees 25 minutes 25 seconds West, 394.680 feet to a point;

RUNNING THENCE through lands now or formerly of Pennsylvania New York Central Transportation Company, the following three courses and distances:

1. South 25 degrees 26 minutes 23 seconds West, 175.578 feet to a point;

2. South 15 degrees 32 minutes 23 seconds West, 236.334 feet to a point;

3. South 11 degrees 56 minutes 25 seconds West, 179.66 feet to the point or place of BEGINNING.

Non BCP Area B
Legal Description

Legal Description
MSC NO. 57239-9
Tax Block 2443 Tax Lots 79 & 190
Non-BCP Area B

ALL that certain plot piece or parcel of land situate lying and being in the Borough and County of The Bronx, City and State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of Concourse Village West, distant 694.177 feet northerly from the corner formed by the intersection of the northerly side of East 153rd Street as shown on the tax map with the easterly side of Concourse Village West;

RUNNING THENCE North 04 degrees 57 minutes 30 seconds West, along the easterly side of Concourse Village West, 355.02 feet to the northerly line of East 156th Street, as shown on the City Plan;

RUNNING THENCE North 83 degrees 44 minutes 07 seconds East, along the northerly line of East 156th Street and along the southerly line of property conveyed by the New York Central Railroad Company to Concourse Village Inc., by deed dated 11/14/1962, Liber 2508 page 414, 830.86 feet to the westerly side of Concourse Village East;

RUNNING THENCE southerly along the westerly side of Concourse Village East, 60 feet to the southerly line of East 156th Street as shown on the City Plan;

RUNNING THENCE South 83 degrees 44 minutes 07 seconds West along the southerly side of East 156th Street, 126.99 feet (calculated, 127 feet description) to a point;

RUNNING THENCE South 02 degrees 14 minutes 41 seconds East, 295.66 feet to the southerly line of Parcels A & B in deed dated 12/14/1966 from the New York Central Railroad Company to the City of New York in Liber 180 Page 251;

RUNNING THENCE South 83 degrees 44 minutes 07 seconds West along the aforementioned southerly line of Parcels A & B, 691.24 feet to the easterly side of Concourse Village West, the point or place of BEGINNING.

Appendix B

Sanborn Maps