

SITE CHARACTERIZATION FINDINGS REPORT

PROPOSED MTA PARATRANSIT FACILITY COMMERCE AVENUE BRONX, NEW YORK

NYSDEC SITE # 203074

EPM Project No. 14099

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SUMMARY

Environmental Planning & Management, Inc. (EPM), on behalf of Hunter Roberts Construction Group and the New York City Economic Development Corporation (NYCEDC), has completed an environmental investigation to further investigate the property proposed for the Metropolitan Transportation Authority (MTA) Paratransit Bus Facility, located on Commerce Avenue, Bronx, New York (Figure 1 – Project Site Location). The subject of this investigation (the site) is the approximate 94,958 square-foot portion of Block 3838, Lot 60 proposed for development as the MTA Paratransit Bus Facility. Refer to Figure 2 for the surveyed boundaries of the site. The remaining portion of Lot 60 is not part of the proposed development and will reportedly remain in its current commercial use.

The site is currently a partially vegetated vacant lot that has been subject to illegal dumping over the years. A previous investigation performed onsite in 2013 identified localized impacts to soil vapor with tetrachloroethene (PCE) and trichloroethene (TCE), and soil across much of the site impacted with metals and semi-volatile organic compounds (SVOCs). Grab groundwater samples collected from temporary piezometers contained metals and SVOCs above NYSDEC Class GA groundwater standards/guidance values. No significant levels of volatile organic compounds (VOCs), including PCE or TCE, were detected in the groundwater or soil samples collected in 2013.

After conducting some initial investigation work with the New York City Department of Environmental Protection (NYCDEP), MTA requested NYSDEC provide input and oversight. NYSDEC requested additional delineation of soil groundwater, and soil vapor impacts at the site. Subsequently, an Interim Remedial Measure (IRM) Work Plan was requested by NYSDEC and is anticipated to include the following mitigation measures: excavation of impacted soils, a site cover, vapor mitigation via a sub-slab depressurization system, an institutional control in the form of an environmental easement and a site management plan which will outline any post-remediation long-term operation, monitoring and maintenance requirements for the site

The objectives of this investigation were to characterize onsite soil, groundwater, and soil vapor conditions; to investigate soil vapor and groundwater conditions offsite along Commerce Avenue; and to determine overburden aquifer flow patterns. The results were used to evaluate the likelihood of any onsite or offsite contaminant sources, and to determine expected mitigation measures to be included in the IRM Work Plan.

Investigation Methods

The investigation was conducted in June 2015 in accordance with the *Site Characterization Work Plan for the Proposed MTA Paratransit Facility, May 21, 2015*,

EPM, Inc. The sampling locations are noted on Figure 2. Ten soil borings were advanced to depths of 15 feet below grade, which exceeded the depth to groundwater at all locations. Soil samples were collected for laboratory analysis from each boring from the 0 to 2-foot depth, from the 2-foot interval at the boring terminus, and from an intermediate depth determined by field observations.

Three temporary soil vapor implants were installed at six feet below grade onsite, and three were installed at six feet below grade in the sidewalk across Commerce Avenue. One vapor sample was collected in Summa canisters from each implant. Five permanent groundwater monitoring wells were installed onsite and three permanent wells were installed offsite in the sidewalk across Commerce Avenue to the northwest of the site. One groundwater sample was collected for analysis from each of the wells.

Soil and groundwater samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (TCL SVOCs), PCBs, Pesticides, and Target Analyte List (TAL) Metals. Soil vapor samples were analyzed for VOCs by Method TO-15. Soil results were compared to NYSDEC Part 375 Environmental Remediation Program Soil Cleanup Objectives (SCOs) and CP-51 Soil Cleanup Guidance. Based on the proposed future use of the site as a Paratransit Bus Facility, it is expected that the targeted soil cleanup goal for the site would be Restricted Commercial SCOs. Groundwater results were compared to NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values (Class GA).

New York State does not have standards, criteria or guidance values for concentrations of VOCs in subsurface vapors. The NYSDOH has issued the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006)*, which addresses soil gas concentrations for certain individual compounds (including PCE and TCE) in relation to their potential to migrate to indoor air spaces and the effects on humans within the structures. Such an evaluation should be conducted for the actual structure to be occupied. Since the new building is not yet present, a direct evaluation of vapor intrusion into the proposed structure is not possible. Therefore, the sub-slab vapor concentration values for the VOC compounds contained in the NYSDOH guidance document's Soil Vapor/Indoor Air Decision Matrix 1 and Matrix 2, as well as the results of onsite ambient air testing, were used as screening tools to evaluate the soil vapor sampling results from this investigation with respect to the potential for future vapor intrusion into the proposed Paratransit Facility Building.

Summary of Findings

Urban fill was encountered in all of the soil borings to depths of up to 15 feet below grade. Based on test pits performed during the prior investigation, the fill includes construction and demolition debris as well as buried automobile parts. Photoionization Detector (PID) readings on recovered soils ranged from non-detect to a maximum of 27.2 parts per million (ppm) at boring SB-7; however, laboratory analysis on soil samples collected from boring SB-7 did not identify any petroleum or solvent impacts at this location. Slight petroleum-like odors were observed at boring locations SB-5 and SB-10. No free-phase petroleum was observed in any of the groundwater monitoring wells. The overburden aquifer flows in a southeast direction across the site towards Westchester Creek based on measurements collected from the permanent wells.

Soil Analysis

Table 1 contains a summary of the parameters detected in soil samples above Part 375 SCOs. The parameters detected in soil above Restricted Residential and Commercial SCOs are summarized on Figure 3.

No VOCs were detected in any of the soil samples at concentrations exceeding Restricted Residential SCOs. With exception of acetone, a common laboratory-introduced contaminant, only two samples contained VOCs above Unrestricted SCOs. Xylenes were detected in samples SB-7(1-1.5') and SB-10(13-15') at concentrations of 0.29 ppm and 1.2 ppm; respectively, which exceed the Unrestricted SCO for xylenes of 0.26 ppm, but below the Restricted Residential SCO of 100 ppm. Soil sample SB-10(13-15') also contained benzene at 0.12 ppm and ethylbenzene at 1.1 ppm, exceeding the respective Unrestricted SCOs for these compounds of 0.06 ppm and 1.0 ppm, but below the Restricted Residential SCOs for benzene of 4.8 ppm and for ethylbenzene of 41 ppm. All results for TCE in the soil samples were non-detect. The maximum concentration of PCE detected in the soil samples was 0.0055 ppm in sample SB-9(9-12'), which is below the Unrestricted Use SCO for PCE of 1.3 ppm, with the majority of PCE results at non-detectable levels.

The majority of soil samples collected across the site contained one or more metals above Commercial SCOs, including lead, copper, barium, mercury, nickel, and arsenic. SVOCs, primarily polycyclic aromatic hydrocarbons (PAHs), were also detected in many of the soil samples at concentrations above their respective Restricted Residential or Commercial SCOs. Refer to Figure 3 for a summary of the metals and SVOCs detected above SCOs.

PCBs and pesticides were detected in the majority of soil samples above their respective Unrestricted SCOs. No pesticides were detected above Restricted Residential SCOs. Total PCBs were detected in sample SB-8(0-0.5') at 3.8 ppm, and in sample SB-9(0-0.5') at 1.24 ppm, exceeding the Commercial SCO for PCBs of 1.0 ppm.

Groundwater Analysis

The previous groundwater results from the temporary wells and current results from the permanent wells are summarized on Figure 4. No SVOCs, PCBs, or pesticides were detected in any of the groundwater samples collected from the permanent wells at concentrations above Class GA values, with the majority of results below laboratory detection limits. One VOC, p-isopropyltoluene, was detected in offsite monitoring well MW-8 at a concentration of 6.0 parts per billion (ppb), slightly exceeding its Class GA value of 5 ppb. No other VOCs were detected in the groundwater samples above Class GA values, with the majority of results below laboratory detection limits. All results for PCE and TCE in onsite and offsite groundwater were at non-detectable levels. The VOC carbon disulfide was detected in wells MW-5 and MW-6 at concentrations of 1.1 ppb and 1.3 ppb, respectively. There is no Class GA value for carbon disulfide. Well MW-7 contained the VOC 1,2,4,5-Tetramethylbenzene at 2.6 ppb, which is below the Class GA value for this compound of 5 ppb.

The only metals detected above Class GA values in groundwater collected from the permanent wells were iron, magnesium, manganese, and sodium. Several additional metals and SVOCs were detected in the grab groundwater samples collected from the temporary piezometers in 2013. It is apparent based on the results from the permanent wells that the elevated metals and SVOCs in the prior samples were likely due to suspended solids in the grab samples.

Soil Vapor Results

PCE was detected in onsite soil vapor sample SS-V2 at a concentration of 130 $\mu\text{g}/\text{m}^3$, above the NYSDOH guidance value of 30 $\mu\text{g}/\text{m}^3$. PCE was also detected in onsite sample SS-V1 at a concentration of 92.9 $\mu\text{g}/\text{m}^3$. No other VOCs were detected above their respective NYSDOH guidance values in the onsite or offsite soil vapor samples collected in 2015. In 2013, TCE and PCE were detected in soil vapor sample SV2 at concentrations of 240 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 28,000 $\mu\text{g}/\text{m}^3$, respectively. PCE was also detected in 2013 at a concentration of 239 $\mu\text{g}/\text{m}^3$ in sample SV1. The soil vapor results for the previous and current samples are summarized on Figure 5.

Conclusions and Recommendations

SVOCs and metals were detected in soils across the site at concentrations above Restricted Residential and Commercial SCOs. PCBs were detected in soil above Commercial SCOs at two locations. No VOCs were detected in soil samples above Restricted Residential SCOs, with results for PCE and TCE in soil at or near non-detectable levels.

No significant contaminants were detected in the permanent onsite or offsite monitoring wells above Class GA values. The data collected from the upgradient offsite wells does not indicate the potential for an upgradient contaminant source. The data collected from the onsite permanent wells does not indicate that the site is a source of groundwater impacts, and does not indicate that contamination is migrating offsite.

The results for soil vapor samples collected from the upgradient offsite locations along Commerce Avenue do not provide evidence of an offsite source of vapor impacts to the site. There appears to be a localized area onsite with soil vapor impacted with PCE and TCE in the area of vapor samples SV-1, SV-2, and SS-V2.

There is a potential for direct human contact with contaminated soils at the site. This exposure pathway would be eliminated by construction and maintenance of the pavement cap proposed as part of the new Paratransit Facility. The data indicates that existing contamination in site soils is not impacting groundwater. Installation of the pavement cap would further eliminate the potential for soil contaminants to leach to groundwater.

There is a potential for vapor intrusion into the proposed new building for the Paratransit Facility. This exposure pathway would be eliminated by installation and operation of the anticipated sub-slab depressurization system (SSDS) as part of the proposed IRM Work Plan.

The project site is also associated with NYSDEC open Spill No. 1405821, which was issued on August 13, 2014 due to the discovery of an approximate 6-foot diameter area of surficial soil impacted with an apparent petroleum material. The spill location is noted on Figure 2. A Spill Closure Work Plan is being incorporated into the proposed IRM Work Plan to describe procedures for removing the impacted soil and closing the spill case. It is likely that the spill closure activities would be performed by the Contractor during the early stages of construction of the Paratransit Facility.

An Interim Remedial Measures (IRM) Work Plan will be prepared for submission to NYSDEC to describe the required mitigation measures. Per comments received from NYSDEC on the August 7, 2015 Draft Site Characterization Report, the IRM will also

need to include the removal of lead impacted soils from the northwestern corner of the site.

1.0 INTRODUCTION

1.1 Project Description and Purpose

Environmental Planning & Management, Inc. (EPM), on behalf of Hunter Roberts Construction Group and the New York City Economic Development Corporation (NYCEDC) has completed an environmental investigation at the request of the New York State Department of Environmental Conservation (NYSDEC) to further investigate the property proposed for the new Metropolitan Transportation Authority (MTA) Paratransit Facility, located on Commerce Avenue, Bronx, New York (**Figure 1** – Project Site Location). The subject of this investigation is the approximate 94,958 square foot portion of Block 3838, Lot 60 proposed for development as the MTA Paratransit Facility. Refer to **Figure 2** for the surveyed boundaries of the site. The remaining portion of Lot 60 is not part of the proposed development, and will reportedly remain in its current commercial use.

The proposed Paratransit Facility will comprise an approximate 5,000 square-foot building that will include a training room, administrative offices, and other back of house areas, as well as parking for approximately 150 Paratransit vehicles. The remainder of the site will be completed as paved parking, with small planting areas possible within the sidewalk area along Commerce Avenue. It is expected that the new facility will serve to receive new vehicles from manufacturers and retired vehicles from private operators for temporary storage onsite until disbursed to new operators/owners, to perform asset recovery of selected vehicle equipment, and to train drivers and maintainers in the operation and maintenance of the vehicles. A proposed site plan is provided as **Figure 6**.

The investigation was conducted in general accordance with the *Site Characterization Work Plan for the Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, New York*, April 20, 2015 (Rev. May 21, 2015), EPM, Inc.

The objectives of this investigation were to further characterize onsite soil, groundwater, and soil vapor conditions; to investigate soil vapor and groundwater conditions offsite along Commerce Avenue; and to determine overburden aquifer flow patterns.

The results of the investigation were used to identify appropriate mitigation measures to protect future users of the new Paratransit Facility from exposure to hazardous materials. The results were also used to evaluate the likelihood of any onsite or offsite sources of groundwater or soil vapor impacts.

1.2 Site History

EPM completed a Phase I Environmental Site Assessment (ESA) for the project site, the results of which are provided in the *Phase I Environmental Site Assessment Report, Commerce Avenue, Bronx, NY*, May 16, 2013.

According to the ESA, the site was undeveloped until as early as 1977, when the southern third was occupied by an automotive junk yard. The northern two-thirds of the property were used as a truck storage yard from as early as 1981. The project site was also listed with NYSDEC as having a closed-status hazardous material spill reportedly associated with a scrap metal dealer improperly storing vehicles on the project site which lead to gasoline leaking onto the site. A subsequent site inspection by NYSDEC in August 2014 resulted in the issuance of Active Spill Number 1405821 due to oil observed on the ground surface in an area where five gallon containers of waste oil were dumped on the site. The NYSDEC Spill Report states that it appeared the waste oil containers were recently dumped at the site.

The areas adjacent to the project site have historically been occupied by commercial and industrial uses including bulk fuel and coal storage, metal works, and automotive repair. An area to the southwest of the project site was once occupied by a manufactured gas plant (MGP) as Bronx Gas and Electric facility, and a bulk fuel storage facility as Cirillo Brothers Petroleum Company. This former MGP site is listed as a New York State Brownfield Site, a Major Oil Storage Facility, and Hazardous Material Spill site.

A prior Phase I ESA for the project site completed by Metcalf & Eddy in 2004 was reviewed. During the 2004 site inspection, evidence was observed of petroleum stained soils, abandoned vehicles, a tanker trailer, containers of identifiable hazardous materials and petroleum products and several containers of unidentifiable material. It is suspected that illegal dumping may also have occurred at the site over the years.

EPM's 2013 Phase I ESA included a review of prior soil and groundwater investigations performed at the project site by TRC Corporation in 2002 and GEI Consultants in 2005. These prior investigations identified volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals in soil samples collected from the site above guidance values. VOCs and metals were detected in onsite groundwater samples. However only iron, manganese, and magnesium were found in concentrations exceeding NYSDEC Class GA values. A prior soil vapor sample collected by GEI in 2005 in the vicinity of the proposed Paratransit Training Structure contained concentrations of refrigerants and VOCs in excess of their onsite ambient concentrations, including Freon 11 and 12, methyl tert butyl ether (MTBE), hexane,

methyl ethyl ketone (MEK), 1,1,1-trichloroethane, cyclohexane, toluene, tetrachloroethene, ethylbenzene, and xylenes.

1.3 Previous Sampling Results

EPM collected soil, groundwater, and soil vapor samples from the project site in June 2013 for laboratory analysis from a combination of Geoprobe soil borings and test pits. The findings are detailed in the *Site Investigation Findings Report, Proposed MTA Paratransit Training Facility*, July 12, 2013, EPM, Inc. The prior sampling locations and pertinent analytical results are summarized in Figures 2, 3, 4, and 5.

Existing Soil Conditions (2013 Investigation)

Soils encountered in the borings and test pits generally consisted of urban fill with grey to dark brown sand and silt, and included glass, brick, masonry, plastic, textile, and automotive parts. SVOCs and metals were found at concentrations exceeding NYSDEC Part 375 Commercial Soil Cleanup Objectives (SCOs) in the majority of soil samples collected from the project site. PCBs, pesticides, and the VOCs 1,2,4-trimethylbenzene and mixed xylenes were detected at concentrations exceeding Part 375 Unrestricted SCOs.

Existing Groundwater Conditions (2013 Investigation)

SVOCs and metals were detected in the onsite groundwater samples that were collected from temporary piezometers at concentrations above NYSDEC Class GA values. No VOCs were detected in onsite groundwater above Class GA values, which is consistent with the findings of the prior groundwater sampling performed at the site discussed in section 1.2.

Existing Soil Vapor Conditions (2013 Investigation)

The VOCs trichloroethene (TCE) and tetrachloroethene (PCE) were detected in 2013 in soil vapor sample SV2 at concentrations of 240 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 28,000 $\mu\text{g}/\text{m}^3$, respectively. PCE was also detected at a concentration of 239 $\mu\text{g}/\text{m}^3$ in sample SV1. Methane was not detected in any of the soil gas samples above the lower explosive level for methane of 50,000 ppmv.

Geophysical Survey Results (2013 Investigation)

Diversified Geophysics of New Hyde Park, NY was contracted to perform a Geophysical Survey with ground penetrating radar (GPR) in June 2013 to investigate for buried tanks across the area proposed for construction of the new Paratransit Facility Building, and to

clear the Geoprobe boring locations of utilities and obstructions. The remainder of the site was inaccessible due to heavy vegetation. No anomalies indicative of buried tanks were observed over the areas investigated. However, there was significant interference to the instrumentation due to the presence of scattered buried debris at the site.

2.0 METHODS

The following sections describe the field sampling and data evaluation methods for the investigation.

2.1 Objectives

The objectives of this investigation were to further characterize onsite soil, groundwater, and soil vapor conditions; to investigate soil vapor and groundwater conditions offsite along Commerce Avenue; and to determine overburden aquifer flow patterns. Shallow groundwater is expected to flow towards the east beneath the project site based on the proximity to Westchester Creek.

The results of this investigation were used to identify appropriate mitigation measures to protect future users of the new Paratransit Facility from exposure to hazardous materials. The results were also used to evaluate the likelihood of any onsite or offsite sources of groundwater or soil vapor impacts.

The data collected during this investigation was utilized to provide information to satisfy the following Data Quality Objectives (DQOs):

- Further delineate soil, groundwater, and soil vapor conditions within the boundaries of the project site;
- Identify conditions in offsite soil vapor and offsite groundwater along Commerce Avenue; and,
- Determine groundwater flow patterns in the immediate vicinity of the site.

The data was evaluated as follows:

- Onsite data was used to determine expected mitigation measures to be included in the IRM Work Plan for construction of the proposed Paratransit Facility;
- Offsite and onsite data was evaluated in the context of groundwater flow patterns to determine the likelihood of any onsite or offsite contaminant sources.

A qualitative human health exposure assessment was performed to determine the potential for future exposure to site contaminants identified during this investigation. The exposure assessment was performed in accordance with NYSDEC DER-10 –

Technical Guidance for Site Investigation and Remediation, May 2010, Appendix 3B, for the purpose of identifying potential human exposure pathways to contaminants at the site. Potential exposure pathways were evaluated by identifying 1) contaminant sources, 2) contaminant release and transport mechanisms, 3) points of exposure, 4) routes of exposure, and 5) receptor populations.

2.2 Standards, Criteria and Guidance Values

Soil results were compared to NYSDEC Part 375 Remedial Program SCOs. Based on the proposed future use of the site as an MTA Paratransit Bus Facility, achievement of Part 375 Commercial SCOs is the proposed soil cleanup goal for the site.

Groundwater results were compared to NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (Class GA), June 1998. Groundwater beneath the site is not proposed for potable use and strict adherence to the Class GA criteria may not be applicable.

New York State does not have standards, criteria or guidance values for concentrations of VOCs in subsurface vapors. The NYSDOH has issued the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006)*, which addresses soil gas concentrations for certain individual compounds (including PCE and TCE) in relation to their potential to migrate to indoor air spaces and the effects on humans within the structures. Such an evaluation should be conducted for the actual structure to be occupied. Since the new building is not yet present, a direct evaluation of vapor intrusion into the proposed structure is not possible. Therefore, the sub-slab vapor concentration values for the VOC compounds contained in the NYSDOH guidance document's Soil Vapor/Indoor Air Decision Matrix 1 and Matrix 2, as well as the results of onsite ambient air testing, were used as screening tools to evaluate the soil vapor sampling results from this investigation with respect to the potential for future vapor intrusion into the proposed Paratransit Facility Building.

2.3 Installation of Soil Borings, Monitoring Wells and Soil Vapor Implants

Soil Borings

Aquifer Drilling and Testing (ADT) used a Geoprobe direct push rig to advance 10 soil borings at the locations shown on Figure 2 – Sample Location Plan. The targeted completion depth for the borings was 15 feet below grade or the water table, whichever was greater.

Groundwater Monitoring Wells

A hollow stem auger drill was used to install five permanent groundwater monitoring wells on the project site, and to install three permanent wells to the northwest of the site within the sidewalk along Commerce Avenue as shown on Figure 2. The wells were constructed with 2-inch diameter PVC risers and screens, with the screens set to bracket the ground water table. The screened intervals of the wells were gravel packed, fine sand was placed above the gravel pack, and a bentonite seal was placed above the sand. The wells were cement grouted from the bentonite seal to grade and finished with locking plugs and either protective metal casings (in the case of onsite wells) or flush-mounted, bolt down manholes (in the case of off-site wells). Well construction logs are provided as **Appendix A**. The wells were developed by ADT by pumping until a silt-free condition was observed.

The horizontal locations and elevations of the monitoring wells, and all other boring locations, were surveyed by NYS Licensed Survey Firm McLaren Engineering Group. The survey coordinates are included on Figure 2.

Temporary Soil Vapor Implants

Six temporary soil vapor sampling implants were installed at the locations shown on Figure 2. ADT installed expendable 12-inch long stainless steel vapor sampling implants set at approximately six feet below grade. Dedicated Teflon tubing was attached to the implant to extend above ground surface for sample collection. The annular space around the implant screen was backfilled with sand to two feet above the implant. A bentonite seal was placed above the sand extending to ground surface. After the sample was collected, the implant was removed, the borehole was backfilled with clean sand, a bentonite seal, and in the case of off-site locations, grouted to grade.

2.4 Sample Collection and Analysis

2.4.1 Soil

Soil samples from the ten Geoprobe borings were continuously field screened from ground surface to the boring termination depth. The cores were collected in 5-foot long dedicated acetate liners. The soil was field screened with a freshly calibrated photo-ionization detector (PID) for indications of organic vapors, and for visual or odor evidence of contamination. Three soil samples were collected for laboratory analysis from each boring. A soil sample was collected from each boring for lab analysis from the 0 to 2-foot depth, a second soil sample was collected from each boring from the 2-foot

interval at the boring terminus, and a third sample was collected from a location with the greatest field evidence of contamination from between the top 2 feet of soil and the bottom of the boring.

Soil samples were prepared for the laboratory by placing the selected interval into a stainless steel mixing bowl, separating it into quarters, and placing an equal portion of each quarter into the proper laboratory provided containers. To minimize volatilization, soil samples collected for VOC analysis were not composited in this manner, but rather consisted of discreet samples collected in Encore Samplers from locations with the greatest PID readings or other evidence of VOC impacts. The initial 24 inches of soil were field screened for indications of VOCs at each boring. A discreet sample was collected for VOC analysis from each boring from the location with the greatest evidence of impact from the upper 24 inches of soil, or from the upper 6 inches if no evidence of impacts were observed. The soil samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds+10 TICs (VOCs by Method 8260); TCL Semi-Volatile Organic Compounds+20 TICs (TCL SVOCs by Method 8270); PCBs by Method 8082, Pesticides by Method 8081, and Target Analyte List (TAL) metals by methods 6010/7000. The samples were collected, stored, shipped, and analyzed according to the procedures detailed in EPM's May 21, 2015 *Sampling and Analysis Project Plan* [SAPP], *Proposed MTA Paratransit Facility* and EPM's May 21, 2015 *Quality Assurance Project Plan* [QAPP], *Proposed MTA Paratransit Facility*. The QAPP contained a summary of the types of samples, analytical methods, and quality assurance samples that were collected and analyzed.

2.4.2 Groundwater

After waiting a minimum of one week after well development, the eight new wells were measured for depth to water and free product with an electronic interface probe. After these measurements were recorded, the wells were purged and sampled with a low flow method bladder pump utilizing USEPA low-flow sampling procedures. Field measurements were recorded during purging for pH, temperature, specific conductance, turbidity, reduction-oxidation potential, and dissolved oxygen until these parameters stabilize indicating that the well contains a representative groundwater sample. The purge volumes and chemistry measurements are recorded on the Low Flow Purge and Sampling Logs provided as **Appendix B**.

All groundwater samples were laboratory analyzed for VOCs+10 (Method 8260), SVOCs+20 (Method 8270), PCBs (Method 8082), Pesticides (Method 8081), and total (unfiltered) TAL Metals (Methods 6020/7470).

2.4.3 Soil Vapor

A Geoprobe was used to advance 1.5-inch outer diameter rods with expendable vapor sampling points to a targeted sampling depth of six feet below grade.

The soil vapor samples were collected in 6-liter Summa® canisters with a sampling duration of at least 2 hours. A 12-inch long stainless steel vapor sampling implant was inserted through the rod such that it was positioned at the bottom of the borehole. Dedicated Teflon tubing was attached to the disposable implant. The annular space around the screen implant was backfilled with clean #1 sand to two feet above the implant screen. A bentonite seal was placed above the sand extending to ground surface. The sample tubing was then connected to a T connector 3-way valve apparatus with one end of the T connector attached to a vacuum pump and the other end attached to a batch certified summa canister with calibrated flow controller. The tubing was purged at least approximately two volumes with a Gillian vacuum pump set at a flow rate of 0.2 liters per minute.

A tracer gas (helium) was used to verify that ambient air does not dilute the soil gas sample being collected. The gas was used to enrich the atmosphere where the sample tubing meets the ground surface to test the borehole seal and confirm that ambient air is not entering the sample. A 5-gallon bucket was placed over the borehole and the tracer gas pumped into the bucket. A tedlar bag was connected to the Gillian pump and filled with the purge gas as the helium was added to the bucket. Both the purge gas from the sample tubing and the helium enriched air in the bucket were measured for helium with a Gas Check 3000 meter. If the tracer gas screening indicated the rate of helium detected in the sample tubing was greater than 20 percent of the helium detected in the bucket, the seals around the sampling apparatus were reset and purged again until the tracer gas was no longer present at levels greater than 20 percent of the enriched air within the bucket.

After the purge and tracer gas verification procedures, the valve leading to the pump was shut, the pump was shut off, and the soil vapor was then directed to the summa canister for collection of the sample. The flow controller on the summa canister was set to a flow rate of no greater than 0.2 liters per minute, and the soil vapor sample was collected for a duration of at least 120 minutes. After the sample was collected, sidewalk boreholes were backfilled with clean sand, a bentonite seal, and grouted to the land surface. The summa canisters were then shipped to the laboratory for analysis of VOCs by EPA Method TO-15. The purge data for each sample location was recorded on the Soil Vapor Sampling Field Data Logs, included in **Appendix B**.

2.5 Quality Assurance / Quality Control

All non-disposable sampling equipment such as down-hole drilling equipment, stainless steel mixing bowls, trowels, spoons, etc. were decontaminated prior to initial use, between sample locations, and prior to leaving the site according to the procedures listed in the Site Characterization Work Plan.

A New York State Department of Health Environmental Laboratory Approval Program (ELAP) Certified Laboratory was used for all laboratory analysis. The lab was instructed to provide the data in a NYSDEC ASP Category B Deliverable. The laboratory data report underwent independent third party data validation, which included preparation of a Data Usability Summary Report (DUSR). The quality control samples included trip blanks, field blanks, duplicates, and matrix spike / matrix spike duplicates. The method reporting limits (MRLs) are those included in NYSDEC ASP. The data was validated as usable with the following exceptions:

Due to matrix spike/matrix spike duplicate recovery issues, several undetected VOC results from sample SB6 (0-0.5') were rejected, and several undetected SVOC results from samples SB1 (0-2'), SB3 (0-2'), SB6 (0-2'), and SB7 (13-15') were rejected. Several undetected metals results were rejected in soil samples due to laboratory QC failures in soil sample SB7 (0-2') and samples collected from borings SB8, SSB9, SB10. Benzoic acid results were rejected in all groundwater samples and in one soil sampling equipment field blank due to laboratory QC failure.

The above qualified results are not considered to significantly alter the findings and conclusions of this investigation.

2.6 Investigative Derived Waste Disposal

Drill cuttings and well development water generated during installation of the offsite wells, along with all decontamination liquids/solids, and contaminated personal protective equipment was collected in USDOT-approved 55-gallon drums, temporarily stored onsite pending waste classification testing for transport to a permitted disposal facility. Excess drill cuttings from the onsite borings were returned to the borings they originated from unless gross signs of contamination were observed, in which case the cuttings were drummed for offsite disposal. Likewise, well development water from the onsite wells was discharged to the unpaved land surface of the site unless contamination was observed, in which case the liquids were drummed for offsite disposal.

3.0 FINDINGS

The following sections describe the field observations during installation of the borings, the analytical results for the soil, groundwater and soil vapor samples, and the results of the qualitative human exposure assessment.

3.1 Field Observations and Groundwater Elevations

The field observations are recorded on the boring logs provided as **Appendix C**. Urban fill was encountered in all of the soil borings. Based on test pits performed during the prior investigation, the fill includes construction and demolition debris as well as buried automobile parts. The fill is underlain by medium to fine grained sand with silt and gravel. Photoionization Detector (PID) readings on recovered soils ranged from non-detect to a maximum of 27.2 parts per million (ppm) at boring SB-7. Slight petroleum-like odors were observed at boring locations SB-5 and SB-10.

Groundwater Observations

EPM gauged the eight permanent groundwater monitoring wells for the presence of free-phase product and depths to water with an electronic interface probe. No measurable free product was recorded in any of the wells. A summary of the well gauging data is provided in the following Table 3.A – Monitoring Well Measurements.

Table 3.A - Monitoring Well Measurements							
Well ID	Measuring Point Elevation (ft amsl)*	Depth to Product on 07/10/15 (ft)	Depth to Water on 07/10/15 (ft)	Depth to Product on 07/17/15 (ft)	Depth to Water on 07/17/15 (ft)	Groundwater Elevation on 07/10/15 (ft amsl)	Groundwater Elevation on 7/17/05 (ft amsl)
MW-1	14.74	none detected	12.62	none detected	12.57	2.12	2.17
MW-2	15.49	none detected	13.32	none detected	13.32	2.17	2.17
MW-3	15.99	none detected	13.79	none detected	13.8	2.2	2.19
MW-4	16.15	none detected	13.96	none detected	13.97	2.19	2.18
MW-5	15.49	none detected	14.04	none detected	13.98	1.45	1.51
MW-6	13.60	none detected	10.13	none detected	10.13	3.47	3.47
MW-7	12.16	none detected	8.75	none detected	8.75	3.41	3.41
MW-8	10.74	none detected	7.34	none detected	7.34	3.4	3.4

*Elevations are in feet above mean sea level (amsl), BBD.

The surface elevation contours of the overburden aquifer are provided on Figure 2 and Figure 4. Groundwater beneath the project site flows in a southeasterly direction across the site towards Westchester Creek.

3.2 Analytical Laboratory Results

The following sections describe the findings of the laboratory analysis performed on the soil, groundwater, and soil vapor samples collected from the project site. The complete laboratory reports and chain-of-custody documentation are provided as **Appendix D** on Compact Disk.

3.2.1 Soil Analysis Results

Table 1 contains a summary of all parameters detected in the soil samples above Part 375 SCOs for Unrestricted Use, Restricted Residential Use, Commercial Use, and Protection of Groundwater. The parameters detected in soil above Restricted Residential and Commercial SCOs are indicated on **Figure 3**.

VOCs in Soil (Table 2)

No VOCs were detected in any of the soil samples collected from the project site at concentrations above their respective Commercial Use or Restricted Residential Use SCOs, with the majority of results below laboratory detection limits. The VOCs detected at concentrations above their respective Unrestricted Use SCOs or Protection of Groundwater SCOs are discussed below.

Benzene and ethylbenzene were detected in sample SB10 (13-15') at concentrations of 0.12 and 1.1, respectively, exceeding the Unrestricted Use and Protection of Groundwater SCOs of 0.06 ppm for benzene and 1.0 ppm for ethylbenzene.

Total xylene was detected in samples SB7 (1-1.5') and SB10 (13-15') at concentrations of 0.29 and 1.2 ppm, respectively, exceeding the total xylene Unrestricted SCO of 0.26 and below the total xylene Protection of Groundwater SCO of 1.6 ppm.

Acetone was detected in samples SB2 (0-0.5'), SB3 (0-0.5'), SB4 (13-15'), SB5 (13-15'), SB6 (13-15'), SB7 (1-1.5'), SB8 (0-0.5'), SB9 (0-0.5'), and SB9 (13-15') B11(10-15') at concentrations ranging from 0.054 to 0.33 ppm, exceeding the Unrestricted SCO and Protection of Groundwater SCO for acetone of 0.05 ppm, but below the Restricted Residential SCO for acetone of 100 ppm. It is possible that the acetone was a laboratory introduced contaminant since the compound was also detected in one of the quality control samples analyzed by the laboratory.

SVOCs in Soil (Table 3)

SVOCs were detected at concentrations above Commercial Use SCOs in the following samples: SB2 (5-9'), SB3 (13-15'), SB4 (5-8'), SB9 (9-12'), SB9 (13-15'), SB10 (0-0.5'), SB10 (6-8.5'), and SB10 (13-15'). The SVOCs detected above Commercial SCOs included benzo(a) anthracene, benzo(a) pyrene, benzo(b) fluoranthene, chrysene, dibenzo(a,h) anthracene, and indeno(1,2,3-cd) pyrene. The majority of samples exhibiting concentrations of SVOCs above Commercial Use SCOs were from immediately above or below the water table, with the exception of surface sample SB10 (0-2'). Sample SB4 (5-8') also exhibited a total concentration of polycyclic aromatic hydrocarbons (PAHs) of 801.80 ppm, exceeding the CP-51 Subsurface Soil Cleanup value for total PAHs of 500 ppm.

SVOCs were detected at concentrations above Protection of Groundwater SCOs in the following samples: SB2 (5-9'), SB3 (13-15'), SB4 (0-2'), SB4 (5-8'), SB6 (13-15'), SB9 (9-12'), SB9 (13-15'), SB10 (0-2'), SB10 (6-8.5'), and SB10 (13-15'). The SVOCs

detected above Protection of Groundwater SCOs included 3-methylphenol/4-methylphenol, benzo(a) anthracene, benzo(a) pyrene, benzo(b) fluoranthene, benzo(k) fluoranthene, chrysene, indeno(1,2,3-cd) pyrene, and naphthalene.

Of the remaining samples, SB1 (0-2'), SB3 (0-2'), SB3 (5-10'), SB5 (0-2'), SB7 (0-2'), SB7 (10-13'), and SB8 (0-2') exhibited concentrations of 2-methylnaphthalene and di-n-butylphthalate above Unrestricted Use SCOs but below Protection of Groundwater SCOs. Sample SB9 (0-2') exhibited a concentration of di-n-butylphthalate above its Unrestricted Use SCO and indeno(1,2,3-cd)pyrene above its Restricted Residential SCO. Both analytes were below their respective Protection of Groundwater SCOs.

Metals in Soil (Table 4)

Metals were detected at concentrations above Commercial Use SCOs in the following samples: SB1 (7-9'), SB2 (5-9'), SB2 (11-13'), SB3 (0-2'), SB3 (5-10'), SB4 (0-2'), SB4 (5-8'), SB5 (0-2'), SB5 (13-15'), SB6 (13-15'), SB7 (0-2'), SB7 (10-13'), SB7 (13-15'), SB8 (0-2'), SB8 (6-9'), SB9 (0-2'), SB9 (9-12'), SB9 (13-15'), SB10 (0-2'), SB10 (6-8.5'), and SB10 (13-15'). The metals detected above Commercial Use SCOs included arsenic, barium, cadmium, copper, lead, mercury, nickel, and zinc.

Every soil sample collected onsite exhibited concentration of between 4 and 10 metals above their Unrestricted and/or Restricted Residential Use SCOs, but below Commercial Use SCOs.

Metals were detected at concentrations above Protection of Groundwater SCOs in all soil samples collected onsite with the exception of SB6 (8.5-10'). The metals detected above Protection of Groundwater SCOs included arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, mercury, nickel, silver, vanadium, and zinc.

PCBs in Soil (Table 5)

PCBs were detected at concentrations exceeding their Commercial Use SCOs in samples SB8 (0-2') and SB9 (0-2') and above their Protection of Groundwater SCO in sample SB8 (0-2').

PCBs were also detected at concentrations above Unrestricted Use SCOs in samples SB1 (0-2'), SB2 (5-9'), SB3 (0-2'), SB3 (5-10'), SB3 (13-15'), SB4 (0-2'), SB4 (5-8'), SB4 (13-15'), SB5 (0-2'), SB5 (13-15'), SB6 (0-2'), SB6 (13-15'), SB7 (0-2'), SB8 (6-9'), SB9 (13-15'), SB10 (0-2'), SB10 (6-8.5'), and SB10 (13-15').

Pesticides (Table 6) in Soil

Pesticides were detected at concentrations above Unrestricted Use SCOs but below Restricted Residential and Protection of Groundwater SCOs in all soil samples collected onsite with the following exceptions: SB2 (11-13'), SB6 (0-2'), SB6 (13-15'), and SB7 (0-2'). The pesticides detected above Unrestricted Use SCOs included dieldrin, 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT.

3.2.2 Groundwater Results

The parameters detected above Class GA values in the groundwater samples from the permanent wells are summarized on **Figure 4**.

VOCs in Groundwater (Table 7)

P-isopropyltoluene was detected in offsite monitoring well MW-8 at a concentration of 6 micrograms per liter ($\mu\text{g/L}$), exceeding its Class GA value of 5 $\mu\text{g/L}$. No other VOCs were detected in groundwater samples collected, with the majority of results below laboratory detection limits.

SVOCs in Groundwater (Table 8)

No SVOCs were detected in groundwater samples collected, with the majority of results below laboratory detection limits.

Metals in Groundwater (Table 9)

All groundwater samples collected from permanent groundwater monitoring wells exhibited concentrations of metals above Class GA values. The metals detected above Class GA values were limited to iron, magnesium, manganese, and sodium.

PCBs (Table 10) and Pesticides (Table 11) in Groundwater

No PCBs or pesticides were detected in any of the groundwater samples collected.

3.2.3 Soil Vapor Results

The results of the soil vapor sampling are summarized in **Table 12** and on **Figure 5**.

PCE was detected in onsite soil vapor sample SSV2 at a concentration of 130 $\mu\text{g}/\text{m}^3$, above the NYSDOH guidance value of 100 $\mu\text{g}/\text{m}^3$. PCE was also detected in onsite sample SSV1 at a concentration of 92.9 $\mu\text{g}/\text{m}^3$. No other contaminant concentrations were detected above their respective NYSDOH guidance or screening values.

The lower reporting limits for TCE and carbon tetrachloride in offsite sample SSV6 were higher than their respective NYSDOH screening values; therefore, the potential for SSV6 to contain TCE and carbon tetrachloride above screening values cannot be ruled out. These reporting limits were elevated as a result of high concentrations of other target analytes within the sample, several of which were significantly elevated above the concurrently-collected ambient air sample. These VOCs included: chloromethane, 1,3-butadiene, acetone, trichlorofluoromethane, tertiary butyl alcohol, carbon disulfide, 2-butanone, n-hexane, benzene, cyclohexane, heptane, toluene, tetrachloroethene, xylenes, and 1,2,4-trimethylbenzene.

Various VOCs typically associated with petroleum were also detected in the majority of soil vapor samples. The compounds detected above ambient screening values included benzene, toluene, ethylbenzene, xylenes, 2-butanone (MEK), 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

3.3 Findings of the Qualitative Human Exposure Assessment

The following qualitative human exposure assessment was performed for the project site in consideration of the conditions identified during this investigation.

Environmental Media & Exposure Route	Human Exposure Assessment
Direct contact with surface soils and incidental ingestion	• People can currently come in contact with contaminated soil if they trespass on the site. A locked fence currently surrounds the site to limit trespassing. • People can come in contact with contaminated surface soils if left exposed after construction of the Paratransit Facility.
Direct contact with subsurface soils and incidental ingestion	• People can come in contact with contaminated subsurface soil if they perform ground intrusive work at the site.
Ingestion of groundwater	• The area is served by a public water supply. Groundwater is not used for potable purposes. • There are no known domestic water supply wells in the area.
Direct contact with groundwater	• People can come in contact with contaminated groundwater if they perform ground intrusive work at the site.
Inhalation of air, exposures related to soil vapor intrusion	• Future inhabitants of the proposed Paratransit Facility Building have the potential to come in contact with contaminated vapor intrusion.

There is a potential for direct human contact with contaminated surface soils at the site. This exposure pathway would be eliminated by construction and maintenance of the site cover system that is proposed as part of the new Paratransit Facility.

There is a potential for direct human contact with contaminated subsurface soils at the site during ground intrusive activities. This exposure pathway would be controlled by instituting a Site Management Plan.

There is a potential for vapor intrusion into the proposed new building for the Paratransit Facility. This exposure pathway would be eliminated by installation and operation of a sub-slab depressurization system (SSDS).

Although groundwater beneath the project site is impacted with secondary metals, and lead in one temporary well, there is no direct ingestion exposure pathway to the groundwater since the water is not used as a potable source. An institutional control in the form of an environmental easement would restrict the future use of groundwater as a source of potable or process water. There is a potential for direct human contact with contaminated groundwater during ground intrusive activities, and this exposure pathway would be controlled by instituting a Site Management Plan.

4.0 CONCLUSIONS AND RECOMMENDATIONS

EPM has completed an environmental investigation at the site proposed for construction of the new MTA Paratransit Bus Facility, located on Commerce Avenue, Bronx, New York (the site). The objectives of the investigation were to further characterize onsite soil, groundwater, and soil vapor conditions; to investigate soil vapor and groundwater conditions offsite along Commerce Avenue; and to determine overburden aquifer flow patterns. Soil, groundwater, and soil vapor samples were collected from the site for laboratory analysis in June 2015. The soil and groundwater samples were analyzed for TCL VOCs, TCL SVOCs, PCBs, pesticides, and TAL metals. The soil vapor samples were analyzed for VOCs.

SVOCs and metals were detected in soils across much of the site at concentrations above NYSDEC Part 375 Restricted Residential and Commercial SCOs. PCBs were detected in soil above Commercial SCOs at two boring locations. No VOCs were detected in soil samples above Restricted Residential SCOs, with results for PCE and TCE in soil at or near non-detectable levels.

No significant contaminants were detected in the permanent onsite or offsite monitoring wells above Class GA values. The data collected from the upgradient offsite wells does not indicate the potential for an upgradient contaminant source. The data collected from the onsite permanent wells does not indicate that the site is a source of groundwater impacts, and does not indicate that contamination is migrating offsite.

The results for soil vapor samples collected from the upgradient offsite locations along Commerce Avenue do not provide evidence of an offsite source of vapor impacts to the site. There appears to be a localized area onsite with soil vapor impacted with PCE and TCE in the area of vapor samples SV-1, SV-2, and SS-V2.

A Geophysical Survey with ground penetrating radar (GPR) was performed at the site in June 2013 to investigate for buried tanks across the area proposed for construction of the new Paratransit Facility Building, and to clear proposed soil boring locations of utilities and obstructions. The remainder of the site was inaccessible due to heavy vegetation. No anomalies indicative of buried tanks were observed over the areas investigated. However, there was interference to the instrumentation due to scattered buried debris at the site.

There is a potential for direct human contact with contaminated soils at the site. This exposure pathway would be eliminated by construction and maintenance of the pavement cap proposed as part of the new Paratransit Facility. The data indicates that existing

contamination in site soils are not significantly impacting groundwater, and groundwater beneath the site is not used as a potable source. Installation of the pavement cap would further eliminate the potential for soil contaminants to leach to groundwater. There is a potential for vapor intrusion into the proposed new building for the Paratransit Facility. This exposure pathway would be eliminated by installation and operation of a sub-slab depressurization system (SSDS) as part of the proposed IRM Work Plan.

The project site is also associated with NYSDEC open Spill No. 1405821, which was issued on August 13, 2014 due to the discovery of an approximate 6-foot diameter area of surficial soil impacted with an apparent petroleum material. The spill location is noted on Figure 2. A Spill Closure Work Plan is being incorporated into the proposed IRM Work Plan to describe procedures for removing the impacted soil and closing the spill case. It is likely that the spill closure activities would be performed by the Contractor during the early stages of construction of the Paratransit Facility.

An Interim Remedial Measures (IRM) Work Plan will be prepared for submission to NYSDEC to describe the required mitigation measures. Per comments received from NYSDEC on the August 7, 2015 Draft Site Characterization Report, the IRM will also need to include the removal of lead impacted soils from the northwestern corner of the site.

TABLES

		TABLE 1 (Page 1 of 3) Soil Results Above Cleanup Objectives Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY													
Sample ID:	SB1 (0-0.5')	Blind Dup (S) 1 from SB1 (0-0.5')	SB1 (7-9')	SB1 (13-15')	SB2 (0-0.5')	SB2 (5-9')	SB2 (11-13')	SB3 (0-0.5')	SB3 (5-10')	SB3 (13-15')	SB4 (0-0.5')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	0-0.5	0-0.5	7-9	13-15	0-0.5	5-9	11-13	0-0.5	5-10	13-15	0-0.5				
COMPOUND	RESULTS (ppm)											(ppm)			
Volatile Organic Compounds (VOCs)															
Acetone					0.13			0.054				0.05	100	500	0.05
Sample ID:	SB1 (0-2')	Blind Dup (S) 1 from SB1 (0-2')	SB1 (7-9')	SB1 (13-15')	SB2 (0-2')	SB2 (5-9')	SB2 (11-13')	SB3 (0-2')	SB3 (5-10')	SB3 (13-15')	SB4 (0-2')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	0-2	0-2	7-9	13-15	0-2	5-9	11-13	0-2	5-10	13-15	0-2				
COMPOUND	RESULTS (ppm)											(ppm)			
Semi Volatile Organic Compounds (SVOCs)															
Benzo(a)anthracene						2.6				3.0		1.0	1.0	5.6	1.0
Benzo(a)pyrene						3.3				2.6		1.0	1.0	1.0	22
Benzo(b)fluoranthene						4.2				3.9	1.7	1.0	1.0	5.6	1.7
Benzo(k)fluoranthene						1.6				1.3		0.8	3.9	56	1.7
Chrysene						3.0				3.5	1.2	1.0	3.9	56	1.0
Dibenzo(a,h)anthracene						0.61				0.44		0.33	0.33	0.56	1,000
Di-n-butylphthalate	0.21							0.17 J	0.083 J			0.014 *	NA	NA	NA
Indeno(1,2,3-cd)Pyrene						2.6				1.7	0.88	0.5	0.5	5.6	8.2
Metals															
Aluminum, Total			11,000			16,000			11,000			10,000 *	NA	NA	NA
Antimony, Total						17		28			19	12 *	NA	NA	NA
Arsenic, Total						27						13	16	16	16
Barium, Total			630			680			380		1,500	350	400	400	820
Cadmium, Total	4.1	3.6	2.8		2.7	2.8		5.7			6.7	2.5	4.3	9.3	7.5
Calcium, Total	46,000	42,000	30,000	21,000	20,000	29,000	36,000	35,000	20,000	41,000	39,000	10,000 *	NA	NA	NA
Chromium, Total	59	42	38	70	30	83	20	49	39	37	70	30 **	180 **	1,500 **	19 **
Copper, Total	260	270	200	78	93	290		320	120	100	640	50	270	270	1,720
Iron, Total	36,000	24,000	43,000	33,000	32,000	53,000	16,000	43,000	22,000	65,000	47,000	2,000 *	NA	NA	NA
Lead, Total	950	810	670	720	290	2,760	1,400	6200	320	480	4,300	63	400	1,000	450
Mercury, Total	1.0	0.92	0.25	0.47	0.27	0.28	0.42	0.54	10	0.71	0.44	0.18	0.81	2.8	0.73
Nickel, Total	45	39		40		45		170	80	56	76	30	310	310	130
Silver, Total						2.6						2.0	180	1,500	8.3
Vanadium, Total	55				41	150			570	140	120	39 *	NA	NA	NA
Zinc, Total	770	660	560	3,200	860	2,200	550	1,300	400	750	3,300	109	10,000	10,000	2,480
Polychlorinated Biphenyls (PCBs)															
Aroclor 1248									0.21			0.1	1.0	1.0	3.2
Aroclor 1254	0.268 P	0.147 P				0.23		0.134 P	0.204			0.1	1.0	1.0	3.2
Aroclor 1260	0.199	0.139						0.129 P				0.1	1.0	1.0	3.2
Total PCBs	0.47	0.35				0.31		0.33	0.46	0.16	0.13	0.1	1.0	1.0	3.2
Pesticides															
Dieldrin	0.0146										0.00653	0.005	0.2	1.4	0.1
4,4'-DDE					0.0268	0.0434			0.0128	0.00596	0.00512	0.0033	8.9	62	17
4,4'-DDD	0.0115	0.00973		0.0115		0.00948			0.00513	0.00498	0.00364	0.0033	13	92	14
4,4'-DDT	0.0125 JPI	0.00887 PI	0.013		0.0596	0.0743		0.0107 PI	0.0432	0.0112	0.0228	0.0033	7.9	47	136
Notes:															
*	Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO														
<	Analyte value is less than the laboratory detection limit for the listed compound														
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use														
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use														
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use														
Bold Italic	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater														
BGS	Below ground surface														
I	Pesticide analysis produces two values. If they vary significantly, EPA protocols dictate reporting the lower amount. The higher amount is assumed to be matrix interference.														
J	Analyte concentration is an estimate due to detection below the laboratory reporting limit.														
NA	No regulatory guidance value established														
ND	Not detected above the indicated laboratory reporting limit														
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.														
PPM	Parts per million														
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006														

	Table 4 (Page 1 of 3) Metals in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY															
Sample ID:	SB1 (0-2')	Blind Dup (S) 1 from SB1 (0-2')	SB1 (7-9')	SB1 (13-15')	SB2 (0-2')	SB2 (5-9')	SB2 (11-13')	SB3 (0-2')	SB3 (5-10')	SB3 (13-15')	SB4 (0-2')	SB4 (5-8')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	0-2	0-2	7-9	13-15	0-2	5-9	11-13	0-2	5-10	13-15	0-2	5-8				
COMPOUND	RESULTS (ppm)												(ppm)			
Aluminum, Total	7,200	6,500	11,000	10,000	9,700	16,000	7,100	8,200	11,000	8,800	8,600	12,000	10,000 *	NA	NA	NA
Antimony, Total	4.6 J	4.2 J	5.6	2.9 J	1.3 J	17	< 5.0	28	3.6 J	< 7.7	19	19	12 *	NA	NA	NA
Arsenic, Total	8.1	4.9	12	2.2	1.6	23	2.7	4.1	5.0	0.7 J	7.4	6.4	13	16	16	16
Barium, Total	270	200	630	150	300	680	330	250	380	240	1,500	300	350	400	400	820
Beryllium, Total	0.27 J	0.16 J	0.3 J	0.27 J	0.38 J	0.1 J	0.18 J	0.9	< 0.43	< 0.77	0.12 J	< 0.47	7.2	72	590	47
Cadmium, Total	4.1	3.6	2.8	1.1	2.7	2.8	0.4 J	5.7	0.63 J	1.5	6.7	8.2	2.5	4.3	9.3	7.5
Calcium, Total	46,000	42,000	30,000	21,000	20,000	29,000	36,000	35,000	20,000	41,000	39,000	64,000	10,000 *	NA	NA	NA
Chromium, Total	59	42	38	70	30	83	20	49	39	37	70	100	30 **	180 **	1,500 **	19 **
Cobalt, Total	7.0	5.5	8.7	12	8.5	12	5.8	9.9	10	11	14	14	20 *	NA	NA	NA
Copper, Total	260	270	200	78	93	290	18	320	120	100	640	960	50	270	270	1,720
Iron, Total	36,000	24,000	43,000	33,000	32,000	53,000	16,000	43,000	22,000	65,000	47,000	57,000	2,000 *	NA	NA	NA
Lead, Total	950	810	670	720	290	2,700	1,400	6,200	320	480	4,500	5,000	63	400	1,000	450
Magnesium, Total	14,000	4,300	5,900	8,200	8,300	5,800	4,400	4,500	8,900	6,000	11,000	11,000	NA	NA	NA	NA
Manganese, Total	310	240	450	340	410	590	220	400	290	400	560	660	1,600	2000	10,000	2,000
Mercury, Total	1.0	0.92	0.25	0.47	0.27	0.28	0.42	0.54	10	0.71	0.44	0.61	0.18	0.81	2.8	0.73
Nickel, Total	45	39	28	40	23	45	13	170	80	56	76	140	30	310	310	130
Potassium, Total	1,100	790	3,100	5,700	2,100	3,200	2,000	1,300	6,400	1,900	1,600	2,600	NA	NA	NA	NA
Selenium, Total	< 1.9	< 1.8	0.44 J	< 2.0	< 1.7	1.2 J	0.6 J	< 1.8	0.95 J	0.95 J	0.62 J	0.83 J	3.9	180	1,500	4.0
Silver, Total	0.4 J	0.21 J	0.97	< 1.0	0.18 J	2.6	< 0.99	0.23 J	< 0.85	< 1.5	1.4	7.4	2.0	180	1,500	8.3
Sodium, Total	210	190	420	760	220	700	280	240	240	640	370	730	NA	NA	NA	NA
Thallium, Total	< 1.9	< 1.8	< 1.8	< 2.0	< 1.7	< 1.8	< 2.0	< 1.8	< 1.7	< 3.1	< 1.9	< 1.9	5 *	NA	NA	NA
Vanadium, Total	55	36	39	38	41	150	20	31	570	140	120	130	39 *	NA	NA	NA
Zinc, Total	770	660	560	3,200	860	2,200	550	1,300	400	750	3,300	6,200	109	10,000	10,000	2,480
Notes:																
*	Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO															
**	SCOs are for Trivalent Chromium. The reported results are for Total Chromium.															
<	Analyte value is less than the laboratory detection limit for the listed compound															
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use															
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use															
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use															
Bold Italic	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater															
BGS	Below ground surface															
J	Analyte concentration is an estimate due to detection below the laboratory reporting limit.															
NA	No regulatory guidance value established															
PPM	Parts per million															
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006															

		Table 4 (Page 2 of 3) Metals in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY														
Sample ID:	SB4 (13-15')	SB5 (0-2')	SB5 (7-9')	SB5 (13-15')	SB6 (0-2')	Blind Dup (S) 2 from SB6 (0-2')	SB6 (8.5-10')	SB6 (13-15')	SB7 (0-2')	SB7 (10-13')	SB7 (13-15')	SB8 (0-2')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	13-15	0-2	7-9	13-15	0-2	0-2	8.5-10	13-15	0-2	10-13	13-15	0-2				
COMPOUND	RESULTS (ppm)												(ppm)			
Aluminum, Total	11,000	7,400	10,000	15,000	6,400	4,800	5,900	18,000	7,000	13,000	5,900	12,000	10,000 *	NA	NA	NA
Antimony, Total	1.4 J	5.3	0.68 J	4.7 J	3.6 J	3.4 J	< 4.1	< 7.9	1.4 J	2.7 J	< 4.7	6.0	12 *	NA	NA	NA
Arsenic, Total	3.5	3.9	< 0.83	15	5	5.3	2.8	20	5.3	0.71 J	3.8	6.0 J	13	16	16	16
Barium, Total	210	270	140	190	150	170	84	210	450	520	230	1,500	350	400	400	820
Beryllium, Total	< 0.46	0.3 J	0.21 J	0.53 J	0.22 J	0.19 J	0.1 J	0.33	0.12 J	0.28 J	0.19 J	12	7.2	72	590	47
Cadmium, Total	0.14 J	7.2	< 0.83	14	2.0	2.0	< 0.82	< 1.6	1.4	0.46 J	0.24 J	7.3	2.5	4.3	9.3	7.5
Calcium, Total	5,600	48,000	4,400	8,100	43,000	55,000	20,000	9,200	29,000	15,000	66,000	20,000	10,000 *	NA	NA	NA
Chromium, Total	53	71	19	73	30	27	11	76	30	31	10	140	30 **	180 **	1,500 **	19 **
Cobalt, Total	9.8	8.8	10	15	6.0	5.2	5.4	9.6	8.4	11	3.4	65	20 *	NA	NA	NA
Copper, Total	120	670	38	580	200	240	18	180	110	88	14	1,000	50	270	270	1,720
Iron, Total	31,000	50,000	22,000	55,000	21,000	24,000	12,000	37,000	30,000	29,000	13,000	82,000	2,000 *	NA	NA	NA
Lead, Total	280	970	64	520	660	720	100	250	710	200	1,300	1,500	63	400	1,000	450
Magnesium, Total	6300	12,000	5,600	6,200	16,000	21,000	3,000	7,300	4,000	6,900	3,000	4,600	NA	NA	NA	NA
Manganese, Total	200	440	220	480	220	270	160	320	290	300	270	640	1,600	2000	10,000	2,000
Mercury, Total	0.7	0.73	0.067 J	1.7	0.85	0.42	0.28	2.4	0.28	0.19	0.05 J	0.46	0.18	0.81	2.8	0.73
Nickel, Total	27	1,400	33	51	33	37	12	27	35	34	9.3	200	30	310	310	130
Potassium, Total	5,800	1,200	6,100	3,400	850	800	3,300	6,600	2,400	7,100	710	1,500	NA	NA	NA	NA
Selenium, Total	1.3 J	< 1.7	< 1.7	1.1 J	< 1.8	0.26 J	0.25 J	1.6	0.46 J	< 1.7	< 1.9	1.0 J	3.9	180	1,500	4.0
Silver, Total	0.31 J	0.64 J	< 0.83	8.2	0.29	0.43 J	< 0.82	3.5	0.17 J	< 0.86	< 0.94	1.0	2.0	180	1,500	8.3
Sodium, Total	840	310	140 J	3,300	200	200	180	3,400	290	320	510	890	NA	NA	NA	NA
Thallium, Total	< 1.8	< 1.7	< 1.7	< 2.9	< 1.8	< 1.6	< 1.6	< 3.2	< 1.6	< 1.7	< 1.9	< 1.8	5 *	NA	NA	NA
Vanadium, Total	54	97	29	37	42	34	18	68	190	49	34	180	39 *	NA	NA	NA
Zinc, Total	900	3,800	130	1,300	600	570	76	270	580	300	450	9,500	109	10,000	10,000	2,480

Notes:
*
Where Part 375 SCO is unavailable

		Table 4 (Page 3 of 3) Metals in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY										
Sample ID:	SB8 (6-9')	SB8 (13-15')	SB9 (0-2')	SB9 (9-12')	SB9 (13-15')	SB10 (0-2')	SB10 (6-8.5')	SB10 (13-15')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	6-9	13-15	0-2	9-12	13-15	0-2	6-8.5	13-15				
COMPOUND	RESULTS (ppm)								(ppm)			
Aluminum, Total	13,000	18,000	9,300	5,900	18,000	8,400	16,000	18,000	10,000 *	NA	NA	NA
Antimony, Total	2.3 J	< 7.4	5.5	0.85 J	1.1 J	4.6	3.1 J	< 7.0	12 *	NA	NA	NA
Arsenic, Total	5.2 J	4.8	2.4	5.9	13	4.7	5.1 J	7.5	13	16	16	16
Barium, Total	400	37	250	460	150	200	450	150	350	400	400	820
Beryllium, Total	16	0.94	0.59	< 0.45	1.0	2.2	13	2.8	7.2	72	590	47
Cadmium, Total	0.27 J	< 1.5	5.1	0.68 J	3.4	3.2	1.1 J	0.14 J	2.5	4.3	9.3	7.5
Calcium, Total	22,000	1,900	80,000	37,000	2,300	59,000	28,000	5,700	10,000 *	NA	NA	NA
Chromium, Total	56	38	42	26	79	42	140	72	30 **	180 **	1,500 **	19 **
Cobalt, Total	51	12.0	8.7	8.7	16	16	85	25	20 *	NA	NA	NA
Copper, Total	1,200	14	1,200	62	270	430	1,700	420	50	270	270	1,720
Iron, Total	48,000	34,000	34,000	15,000	32,000	31,000	94,000	41,000	2,000 *	NA	NA	NA
Lead, Total	2,700	14	800	650	210	1,100	2,100	340	63	400	1,000	450
Magnesium, Total	6,700	8,600	21,000	4,600	6,800	12,000	11,000	7,700	NA	NA	NA	NA
Manganese, Total	580	550	390	330	430	460	740	440	1,600	2000	10,000	2,000
Mercury, Total	0.26	< 0.13	0.67	0.48	2.0	0.59	0.45	1.2	0.18	0.81	2.8	0.73
Nickel, Total	170	26	73	33	54	63	180	61	30	310	310	130
Potassium, Total	2,100	4,400	1,100	1,700	4,000	1,100	5,400	4,200	NA	NA	NA	NA
Selenium, Total	0.79 J	< 3.0	< 1.9	0.28 J	1.6 J	< 1.7	0.44 J	0.67 J	3.9	180	1,500	4.0
Silver, Total	0.2 J	< 1.5	0.4 J	< 0.89	4.4	0.4 J	0.58 J	1.2 J	2.0	180	1,500	8.3
Sodium, Total	910	7,800	420	280	4,900	460	1,100	4,000	NA	NA	NA	NA
Thallium, Total	< 1.9	< 3.0	< 1.9	< 1.8	< 2.8	< 1.7	< 2.9	< 2.8	5 *	NA	NA	NA
Vanadium, Total	37	52	50	160	46	42	44	54	39 *	NA	NA	NA
Zinc, Total	10,000	81	2,800	420	530	1,700	13,000	2,200	109	10,000	10,000	2,480

Notes:

*
Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO

**
SCOs are for Trivalent Chromium. The reported results are for Total Chromium.

<
Analyte value is less than the laboratory detection limit for the listed compound

Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use

Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use

Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use

Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater

BGS
Below ground surface

J
Analyte concentration is an estimate due to detection below the laboratory reporting limit.

NA
No regulatory guidance value established

PPM
Parts per million

SCO
NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006

		Table 5 (Page 1 of 3) Polychlorinated Biphenyls (PCBs) in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY															
Sample ID:	SB1 (0-2')	Blind Dup (S) 1 from SB1 (0-2')	SB1 (7-9')	SB1 (13-15')	SB2 (0-2')	SB2 (5-9')	SB2 (11-13')	SB3 (0-2')	SB3 (5-10')	SB3 (13-15')	SB4 (0-2')	SB4 (5-8')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO	
Sample Depth (feet bgs):	0-2	0-2	7-9	13-15	0-2	5-9	11-13	0-2	5-10	13-15	0-2	5-8					
COMPOUND	RESULTS (ppm)												(ppm)				
Aroclor 1016	< 0.0415	< 0.0385	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1221	< 0.0415	< 0.0385	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1232	< 0.0415	< 0.0385	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1242	< 0.0415	0.0596	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1248	< 0.0415	< 0.0385	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	0.0702	0.21	0.0584 J	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1254	0.268 P	0.147 P	0.0135 J	0.0331 J	0.023 J	0.23	< 0.0402	0.134 P	0.204	0.0711	0.069 P	0.0418	0.1	1.0	1.0	3.2	
Aroclor 1260	0.199	0.139	0.018 J	0.0388 J	0.0399	0.081	< 0.0402	0.129 P	0.0453 P	0.0281 J	0.0583	0.0451	0.1	1.0	1.0	3.2	
Aroclor 1262	< 0.0415	< 0.0385	< 0.0368	< 0.0413	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	< 0.0405	0.1	1.0	1.0	3.2	
Aroclor 1268	< 0.0415	< 0.0385	< 0.0368	0.0216 J	< 0.0362	< 0.0387	< 0.0402	< 0.0378	< 0.036	< 0.0675	< 0.0394	0.0324 J	0.1	1.0	1.0	3.2	
Total PCBs	0.47	0.35	0.03	0.09	0.06	0.31	ND	0.33	0.46	0.16	0.13	0.12	0.1	1.0	1.0	3.2	
Notes:																	
<	Analyte value is less than the laboratory detection limit for the listed compound																
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use																
<i>Bold Italic</i>	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater																
BGS	Below ground surface																
J	Analyte concentration is an estimate due to detection below the laboratory reporting limit.																
ND	Not detected above the indicated laboratory reporting limit																
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.																
PPM	Parts per million																
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006																

		Table 5 (Page 2 of 3) Polychlorinated Biphenyls (PCBs) in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY															
Sample ID:	SB4 (13-15')	SB5 (0-2')	SB5 (7-9')	SB5 (13-15')	SB6 (0-2')	Blind Dup (S) 2 from SB6 (0-2')	SB6 (8.5-10')	SB6 (13-15')	SB7 (0-2')	SB7 (10-13')	SB7 (13-15')	SB8 (0-2')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO	
Sample Depth (feet bgs):	13-15	0-2	7-9	13-15	0-2	0-2	8.5-10	13-15	0-2	10-13	13-15	0-2					
COMPOUND	RESULTS (ppm)												(ppm)				
Aroclor 1016	< 0.0396	< 0.0389	< 0.0331	< 0.0592	< 0.0381	< 0.0358	< 0.0343	< 0.0674	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1221	< 0.0396	< 0.0389	< 0.0331	< 0.0592	< 0.0381	< 0.0358	< 0.0343	< 0.0674	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1232	< 0.0396	< 0.0389	< 0.0331	< 0.0592	< 0.0381	< 0.0358	< 0.0343	< 0.0674	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1242	< 0.0396	< 0.0389	< 0.0331	< 0.0592	0.0347 J	0.0357 J	< 0.0343	< 0.0674	0.337	0.0286 J	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1248	< 0.0396	0.0659	< 0.0331	< 0.0592	< 0.0381	< 0.0358	< 0.0343	0.0648 J	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1254	0.0546	0.0512	< 0.0331	0.0775	0.0742	0.0465	< 0.0343	0.0775	0.107	0.021 J	< 0.041	3.0	0.1	1.0	1.0	3.2	
Aroclor 1260	0.0426	0.09	< 0.0331	0.0935	0.072	0.0475	< 0.0343	< 0.0674	0.172	0.0625	< 0.041	0.798	0.1	1.0	1.0	3.2	
Aroclor 1262	< 0.0396	< 0.0389	< 0.0331	< 0.0592	< 0.0381	< 0.0358	< 0.0343	< 0.0674	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Aroclor 1268	0.0283 J	< 0.0389	< 0.0331	0.0487 J	< 0.0381	< 0.0358	< 0.0343	0.142 J	< 0.0327	< 0.0373	< 0.041	< 0.373	0.1	1.0	1.0	3.2	
Total PCBs	0.13	0.21	ND	0.22	0.18	0.13	ND	0.28	0.62	0.11	ND	3.80	0.1	1.0	1.0	3.2	
Notes:																	
<	Analyte value is less than the laboratory detection limit for the listed compound																
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use																
<i>Bold Italic</i>	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater																
BGS	Below ground surface																
J	Analyte concentration is an estimate due to detection below the laboratory reporting limit.																
ND	Not detected above the indicated laboratory reporting limit																
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.																
PPM	Parts per million																
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006																

		Table 5 (Page 3 of 3) Polychlorinated Biphenyls (PCBs) in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY										
Sample ID:	SB8 (6-9')	SB8 (13-15')	SB9 (0-2')	SB9 (9-12')	SB9 (13-15')	SB10 (0-2')	SB10 (6-8.5')	SB10 (13-15')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	6-9	13-15	0-2	9-12	13-15	0-2	6-8.5	13-15				
COMPOUND	RESULTS (ppm)								(ppm)			
Aroclor 1016	< 0.0386	< 0.0621	< 0.039	< 0.0362	< 0.0586	< 0.037	< 0.0598	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1221	< 0.0386	< 0.0621	< 0.039	< 0.0362	< 0.0586	< 0.037	< 0.0598	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1232	< 0.0386	< 0.0621	< 0.039	< 0.0362	< 0.0586	< 0.037	< 0.0598	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1242	< 0.0386	< 0.0621	< 0.039	< 0.0362	< 0.0586	0.113	0.0363 J	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1248	< 0.0386	< 0.0621	0.41	0.0342 J	< 0.0586	< 0.037	< 0.0598	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1254	0.174	< 0.0621	0.388	0.0279 J	0.0673 P	0.195	0.103	0.0707 P	0.1	1.0	1.0	3.2
Aroclor 1260	0.0541	< 0.0621	0.444	0.0361 J	0.0665	0.202	0.0922	0.0735	0.1	1.0	1.0	3.2
Aroclor 1262	< 0.0386	< 0.0621	< 0.039	< 0.0362	< 0.0586	< 0.037	< 0.0598	< 0.0593	0.1	1.0	1.0	3.2
Aroclor 1268	< 0.0386	< 0.0621	< 0.039	< 0.0362	0.0558 J	< 0.037	0.0499 J	0.0588 J	0.1	1.0	1.0	3.2
Total PCBs	0.23	ND	1.24	0.10	0.19	0.51	0.28	0.20	0.1	1.0	1.0	3.2

Notes:

< Analyte value is less than the laboratory detection limit for the listed compound

Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use

Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use

Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use

Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater

BGS Below ground surface

J Analyte concentration is an estimate due to detection below the laboratory reporting limit.

ND Not detected above the indicated laboratory reporting limit

P The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.

PPM Parts per million

SCO NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006

Table 6 (Page 1 of 3) Pesticides in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY																
Sample ID:	SB1 (0-2')	Blind Dup (S) 1 from SB1 (0-2')	SB1 (7-9')	SB1 (13-15')	SB2 (0-2')	SB2 (5-9')	SB2 (11-13')	SB3 (0-2')	SB3 (5-10')	SB3 (13-15')	SB4 (0-2')	SB4 (5-8')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	0-2	0-2	7-9	13-15	0-2	5-9	11-13	0-2	5-10	13-15	0-2	5-8				
COMPOUND	RESULTS (ppm)												(ppm)			
Delta-BHC	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	0.04	100	500	0.25
Lindane	< 0.0041	< 0.000757	< 0.000741	< 0.00085	< 0.00071	< 0.000762	< 0.000814	< 0.000726	< 0.000696	< 0.00128	< 0.000758	< 0.000794	0.1	1.3	9.2	0.1
Alpha-BHC	< 0.0041	< 0.000757	< 0.000741	< 0.00085	< 0.00071	< 0.000762	< 0.000814	< 0.000726	< 0.000696	< 0.00128	< 0.000758	< 0.000794	0.02	0.48	3.4	0.02
Beta-BHC	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	0.036	0.36	3.0	0.09
Heptachlor	< 0.00493	< 0.000908	< 0.000889	< 0.00102	< 0.000851	< 0.000915	< 0.000977	< 0.000872	< 0.000835	< 0.00154	< 0.000909	< 0.000953	0.042	2.1	15	0.38
Aldrin	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	0.005	0.097	0.68	0.19
Heptachlor epoxide	< 0.0185	< 0.0034	< 0.00333	< 0.00382	< 0.00319	< 0.00343	< 0.00366	< 0.00327	< 0.00313	< 0.00576	< 0.00341	< 0.00357	0.02 *	NA	NA	NA
Endrin	< 0.0041	< 0.000757	< 0.000741	< 0.00085	< 0.00071	< 0.000762	< 0.000814	< 0.000726	< 0.000696	< 0.00128	< 0.000758	< 0.000794	0.014	11	89	0.06
Endrin ketone	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	NA	NA	NA	NA
Dieldrin	0.0146	< 0.00114	< 0.00111	< 0.00127	0.00313	< 0.00114	< 0.00122	< 0.00109	< 0.00104	< 0.00192	0.00653	< 0.00119	0.005	0.2	1.4	0.1
4,4'-DDE	< 0.00985	< 0.00182	0.0033 PI	< 0.00204	0.0268	0.0434	< 0.00195	0.00327	0.0128	0.00596	0.00512	0.0214	0.0033	8.9	62	17
4,4'-DDD	0.0115	0.00973	0.00109 J	0.0115	0.00273	0.00948	0.00246	0.00201	0.00513	0.00498	0.00364	0.00393	0.0033	13	92	14
4,4'-DDT	0.0125 JPI	0.00887 PI	0.013	< 0.00382	0.0596	0.0743	0.00217 J	0.0107 PI	0.0432	0.0112	0.0228	0.0313	0.0033	7.9	47	136
Endosulfan I	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	2.4	24	200	102
Endosulfan II	< 0.00985	< 0.00182	< 0.00178	< 0.00204	< 0.0017	< 0.00183	< 0.00195	< 0.00174	< 0.00167	< 0.00307	< 0.00182	< 0.0019	2.4	24	200	102
Endosulfan sulfate	< 0.0041	< 0.000757	< 0.000741	< 0.00085	< 0.00071	< 0.000762	< 0.000814	< 0.000726	< 0.000696	< 0.00128	< 0.000758	< 0.000794	2.4	24	200	1,000
Methoxychlor	< 0.0185	< 0.0034	< 0.00333	< 0.00382	< 0.00319	< 0.00343	< 0.00366	< 0.00327	< 0.00313	< 0.00576	< 0.00341	< 0.00357	1.2 *	NA	NA	NA
Toxaphene	< 0.185	< 0.034	< 0.0333	< 0.0382	< 0.0319	< 0.0343	< 0.0366	< 0.0327	< 0.0313	< 0.0576	< 0.0341	< 0.0357	NA	NA	NA	NA
cis-Chlordane	0.0204	0.0174	< 0.00222	< 0.00255	0.00745	0.00416	< 0.00244	0.00967	0.00504 PI	< 0.00384	0.00925	0.00414 PI	0.094	4.2	24	2.9
trans-Chlordane	0.0195 PI	0.0109 PI	< 0.00222	< 0.00255	0.00304 PI	< 0.00296 PI	< 0.00244	0.00552 PI	0.00483 PI	0.00411 PI	0.00542 PI	0.00382 PI	0.54 *	NA	NA	NA
Chlordane	0.148 PI	0.32 PI	< 0.0144	< 0.0166	< 0.0138	< 0.0149	< 0.0159	< 0.0142	< 0.0136	< 0.025	< 0.0148	< 0.0155	NA	NA	NA	NA
Notes:																
*	Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO															
<	Analyte value is less than the laboratory detection limit for the listed compound															
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use															
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use															
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use															
<i>Bold Italic</i>	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater															
BGS	Below ground surface															
I	Pesticide analysis produces two values. If they vary significantly, EPA protocols dictate reporting the lower amount. The higher amount is assumed to be matrix interference.															
NA	No regulatory guidance value established															
PPM	Parts per million															
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.															
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006															

Table 6 (Page 2 of 3) Pesticides in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY																	
Sample ID:	SB4 (13-15')	SB5 (0-2')	SB5 (7-9')	SB5 (13-15')	SB6 (0-2')	Blind Dup (S) 2 from SB6 (0-2')	SB6 (8.5-10')	SB6 (13-15')	SB7 (0-2')	SB7 (10-13')	SB7 (13-15')	SB8 (0-2')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO	
Sample Depth (feet bgs):	13-15	0-2	7-9	13-15	0-2	0-2	8.5-10	13-15	0-2	10-13	13-15	0-2					
COMPOUND	RESULTS (ppm)												(ppm)				
Delta-BHC	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	0.04	100	500	0.25	
Lindane	< 0.000759	< 0.00376	< 0.000674	< 0.00121	< 0.00747	< 0.00727	< 0.000698	< 0.00137	< 0.00664	< 0.000746	< 0.000829	< 0.000764	0.1	1.3	9.2	0.1	
Alpha-BHC	< 0.000759	< 0.00376	< 0.000674	< 0.00121	< 0.00747	< 0.00727	< 0.000698	< 0.00137	< 0.00664	< 0.000746	< 0.000829	< 0.000764	0.02	0.48	3.4	0.02	
Beta-BHC	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	0.036	0.36	3.0	0.09	
Heptachlor	< 0.000911	< 0.00451	< 0.000809	< 0.00145	< 0.00897	< 0.00872	< 0.000838	< 0.00165	< 0.00797	< 0.000895	< 0.000995	< 0.000916	0.042	2.1	15	0.38	
Aldrin	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	0.005	0.097	0.68	0.19	
Heptachlor epoxide	< 0.00342	< 0.0169	< 0.00303	< 0.00544	< 0.0336	< 0.0327	< 0.00314	< 0.00617	< 0.0299	< 0.00336	< 0.00373	< 0.00344	0.02 *	NA	NA	NA	
Endrin	< 0.000759	< 0.00376	< 0.000674	< 0.00121	< 0.00747	< 0.00727	< 0.000698	< 0.00137	< 0.00664	< 0.000746	< 0.000829	< 0.000764	0.014	11	89	0.06	
Endrin ketone	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	NA	NA	NA	NA	
Dieldrin	< 0.00114	0.0115	< 0.00101	< 0.00181	< 0.0112	< 0.0109	< 0.00105	< 0.00206	< 0.00996	< 0.00112	< 0.00124	< 0.00114	0.005	0.2	1.4	0.1	
4,4'-DDE	< 0.00182	< 0.00902	0.00737 P	< 0.0029	< 0.0179	< 0.0174	0.00308 P	< 0.00329	< 0.0159	0.00514	0.00728	< 0.00183	0.0033	8.9	62	17	
4,4'-DDD	0.00937	0.0191	0.00189	0.00518	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	0.00428	0.0519	0.0121	0.0033	13	92	14	
4,4'-DDT	0.00275 J	< 0.0169	0.0234	0.00728	< 0.0336	< 0.0327	0.00355	< 0.00617	< 0.0299	0.0127	0.00825	< 0.00344	0.0033	7.9	47	136	
Endosulfan I	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	2.4	24	200	102	
Endosulfan II	< 0.00182	< 0.00902	< 0.00162	< 0.0029	< 0.0179	< 0.0174	< 0.00168	< 0.00329	< 0.0159	< 0.00179	< 0.00199	< 0.00183	2.4	24	200	102	
Endosulfan sulfate	< 0.000759	< 0.00376	< 0.000674	< 0.00121	< 0.00747	< 0.00727	< 0.000698	< 0.00137	< 0.00664	< 0.000746	< 0.000829	< 0.000764	2.4	24	200	1,000	
Methoxychlor	< 0.00342	< 0.0169	< 0.00303	< 0.00544	< 0.0336	< 0.0327	< 0.00314	< 0.00617	< 0.0299	< 0.00336	< 0.00373	< 0.00344	1.2 *	NA	NA	NA	
Toxaphene	< 0.0342	< 0.169	< 0.0303	< 0.0544	< 0.336	< 0.327	< 0.0314	< 0.0617	< 0.299	< 0.0336	< 0.0373	< 0.0344	NA	NA	NA	NA	
cis-Chlordane	< 0.00228	0.00668 J	< 0.00202	< 0.00363	< 0.0224	< 0.0218	0.000752 J	< 0.00412	< 0.0199	< 0.00224	0.00346 PI	< 0.00229	0.094	4.2	24	2.9	
trans-Chlordane	< 0.00228	0.00596 JPI	< 0.00202	0.00139 JPI	< 0.0224	< 0.0218	< 0.00209	< 0.00412	< 0.0199	< 0.00224	0.00809 PI	< 0.00229	0.54 *	NA	NA	NA	
Chlordane	< 0.0148	< 0.0733	< 0.0131	< 0.0236	< 0.146	< 0.142	< 0.0136	< 0.0268	< 0.129	< 0.0145	< 0.0162	< 0.0149	NA	NA	NA	NA	
Notes:																	
*	Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO																
<	Analyte value is less than the laboratory detection limit for the listed compound																
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use																
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use																
<i>Bold Italic</i>	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater																
BGS	Below ground surface																
I	Pesticide analysis produces two values. If they vary significantly, EPA protocols dictate reporting the lower amount. The higher amount is assumed to be matrix interference.																
NA	No regulatory guidance value established																
PPM	Parts per million																
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.																
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006																

		Table 6 (Page 3 of 3) Pesticides in Soil Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY										
Sample ID:	SB8 (6-9')	SB8 (13-15')	SB9 (0-2')	SB9 (9-12')	SB9 (13-15')	SB10 (0-2')	SB10 (6-8.5')	SB10 (13-15')	Part 375 Unrestricted Use SCO	Part 375 Restricted Residential Use SCO	Part 375 Commercial Use SCO	Part 375 Protection of Groundwater SCO
Sample Depth (feet bgs):	6-9	13-15	0-2	9-12	13-15	0-2	6-8.5	13-15				
COMPOUND	RESULTS (ppm)								(ppm)			
Delta-BHC	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	0.04	100	500	0.25
Lindane	< 0.000786	< 0.00126	< 0.00401	< 0.00371	< 0.00118	< 0.00383	< 0.00599	< 0.00619	0.1	1.3	9.2	0.1
Alpha-BHC	< 0.000786	< 0.00126	< 0.00401	< 0.00371	< 0.00118	< 0.00383	< 0.00599	< 0.00619	0.02	0.48	3.4	0.02
Beta-BHC	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	0.036	0.36	3.0	0.09
Heptachlor	< 0.000944	< 0.00151	< 0.00481	< 0.00446	< 0.00141	< 0.0046	< 0.00719	< 0.00743	0.042	2.1	15	0.38
Aldrin	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	0.005	0.097	0.68	0.19
Heptachlor epoxide	< 0.00354	< 0.00567	< 0.018	< 0.0167	< 0.0053	< 0.0172	< 0.027	< 0.0279	0.02 *	NA	NA	NA
Endrin	< 0.000786	< 0.00126	< 0.00401	< 0.00371	< 0.00118	< 0.00383	< 0.00599	< 0.00619	0.014	11	89	0.06
Endrin ketone	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	NA	NA	NA	NA
Dieldrin	< 0.00118	< 0.00189	< 0.00601	< 0.00557	< 0.00176	< 0.00574	< 0.00898	< 0.00929	0.005	0.2	1.4	0.1
4,4'-DDE	0.0324	< 0.00303	< 0.00962	0.00996 P	0.0047	< 0.00919	< 0.0144	< 0.0148	0.0033	8.9	62	17
4,4'-DDD	0.0254	0.0575	< 0.00962	< 0.00891	0.0173	0.00794 J	0.0118 J	0.017	0.0033	13	92	14
4,4'-DDT	0.0641	0.0118	0.0356 P	0.0398	< 0.0053	0.00777 JPI	0.0289	0.027 J	0.0033	7.9	47	136
Endosulfan I	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	2.4	24	200	102
Endosulfan II	< 0.00189	< 0.00303	< 0.00962	< 0.00891	< 0.00282	< 0.00919	< 0.0144	< 0.0148	2.4	24	200	102
Endosulfan sulfate	< 0.000786	< 0.00126	< 0.00401	< 0.00371	< 0.00118	< 0.00383	< 0.00599	< 0.00619	2.4	24	200	1,000
Methoxychlor	< 0.00354	< 0.00567	< 0.018	< 0.0167	< 0.0053	< 0.0172	< 0.027	< 0.0279	1.2 *	NA	NA	NA
Toxaphene	< 0.0354	< 0.0567	< 0.18	< 0.167	< 0.053	< 0.172	< 0.27	< 0.279	NA	NA	NA	NA
cis-Chlordane	< 0.00236	< 0.00378	0.0206	< 0.0111	< 0.00353	0.0187	< 0.018	< 0.0186	0.094	4.2	24	2.9
trans-Chlordane	< 0.00236	< 0.00378	0.0122 PI	< 0.0111	< 0.00353	0.00993 JPI	< 0.018	< 0.0186	0.54 *	NA	NA	NA
Chlordane	< 0.0153	< 0.0246	0.111 PI	< 0.0724	< 0.023	< 0.0747	< 0.117	< 0.121	NA	NA	NA	NA
Notes:												
*	Where Part 375 SCO is unavailable, the lowest available NYSDEC Commissioner Policy 51 (CP-51) SCO											
<	Analyte value is less than the laboratory detection limit for the listed compound											
	Concentration above the indicated NYSDEC Part 375 SCO for Unrestricted Use											
	Concentration above the indicated NYSDEC Part 375 SCO for Restricted Residential Use											
	Concentration above the indicated NYSDEC Part 375 SCO for Commercial Use											
<i>Bold Italic</i>	Concentration above the indicated NYSDEC Part 375 SCO for Protection of Groundwater											
BGS	Below ground surface											
I	Pesticide analysis produces two values. If they vary significantly, EPA protocols dictate reporting the lower amount. The higher amount is assumed to be maximum											
NA	No regulatory guidance value established											
PPM	Parts per million											
P	The relative percent difference between the matrix spike and matrix spike duplicate exceed the method-specified criteria.											
SCO	NYSDEC Remedial Program Soil Cleanup Objective; Subpart 375-6(a,b), December, 2006											

TABLE 8 (Page 2 of 2) SVOCs in Groundwater Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY				
Sample ID:	Field Blank 1	Field Blank 2	Field Blank 3	NYSDEC Class GA Standards / Guidance Values*
COMPOUND	µg/L			µg/L
Acenaphthene	< 2.0	< 2.0	< 0.2	20
1,2,4-Trichlorobenzene	< 5.0	< 5.0	< 5.0	5.0
Hexachlorobenzene	< 2.0	< 2.0	< 0.8	0.04
Bis(2-chloroethyl)ether	< 2.0	< 2.0	< 2.0	1.0
2-Chloronaphthalene	< 2.0	< 2.0	< 0.2	10
1,2-Dichlorobenzene	< 2.0	< 2.0	< 2.0	3.0
1,3-Dichlorobenzene	< 2.0	< 2.0	< 2.0	3.0
1,4-Dichlorobenzene	< 2.0	< 2.0	< 2.0	3.0
3,3'-Dichlorobenzidine	< 5.0	< 5.0	< 5.0	5.0
2,4-Dinitrotoluene	< 5.0	< 5.0	< 5.0	5.0
2,6-Dinitrotoluene	< 5.0	< 5.0	< 5.0	5.0
Fluoranthene	< 2.0	< 2.0	< 0.2	50
4-Chlorophenyl phenyl ether	< 2.0	< 2.0	< 2.0	NA
4-Bromophenyl phenyl ether	< 2.0	< 2.0	< 2.0	NA
Bis(2-chloroisopropyl)ether	< 2.0	< 2.0	< 2.0	5.0
Bis(2-chloroethoxy)methane	< 5.0	< 5.0	< 5.0	5.0
Hexachlorobutadiene	< 2.0	< 2.0	< 0.5	0.5
Hexachlorocyclopentadiene	< 20	< 20	< 20	5.0
Hexachloroethane	< 2.0	< 2.0	< 0.8	5.0
Isophorone	< 5.0	< 5.0	< 5.0	50
Naphthalene	< 2.0	< 2.0	0.12 J	10
Nitrobenzene	< 2.0	< 2.0	< 2.0	0.4
NitrosoDiPhenylAmine(NDPA)/DPA	< 2.0	< 2.0	< 2.0	50
n-Nitrosodi-n-propylamine	< 5.0	< 5.0	< 5.0	NA
Bis(2-Ethylhexyl)phthalate	< 3.0	< 3.0	< 3.0	5.0
Butyl benzyl phthalate	< 5.0	< 5.0	< 5.0	50
Di-n-butylphthalate	< 5.0	< 5.0	< 5.0	50
Di-n-octylphthalate	< 5.0	< 5.0	< 5.0	50
Diethyl phthalate	< 5.0	< 5.0	< 5.0	50
Dimethyl phthalate	< 5.0	< 5.0	< 5.0	50
Benzo(a)anthracene	< 2.0	< 2.0	< 0.2	0.002
Benzo(a)pyrene	< 2.0	< 2.0	< 0.2	ND
Benzo(b)fluoranthene	< 2.0	< 2.0	< 0.2	0.002
Benzo(k)fluoranthene	< 2.0	< 2.0	< 0.2	0.002
Chrysene	< 2.0	< 2.0	< 0.2	0.002
Acenaphthylene	< 2.0	< 2.0	< 0.2	NA
Anthracene	< 2.0	< 2.0	< 0.2	50
Benzo(ghi)perylene	< 2.0	< 2.0	< 0.2	NA
Fluorene	< 2.0	< 2.0	< 0.2	50
Phenanthrene	< 2.0	< 2.0	< 0.2	50
Dibenzo(a,h)anthracene	< 2.0	< 2.0	< 0.2	NA
Indeno(1,2,3-cd)Pyrene	< 2.0	< 2.0	< 0.2	0.002
Pyrene	< 2.0	< 2.0	< 0.2	50
Biphenyl	< 2.0	< 2.0	< 2.0	5.0
4-Chloroaniline	< 5.0	< 5.0	< 5.0	5.0
2-Nitroaniline	< 5.0	< 5.0	< 5.0	5.0
3-Nitroaniline	< 5.0	< 5.0	< 5.0	5.0
4-Nitroaniline	< 5.0	< 5.0	< 5.0	5.0
Dibenzofuran	< 2.0	< 2.0	< 2.0	NA
2-Methylnaphthalene	< 2.0	< 2.0	< 0.2	NA
1,2,4,5-Tetrachlorobenzene	< 10	< 10	< 10	5.0
Acetophenone	< 5.0	< 5.0	< 5.0	NA
2,4,6-Trichlorophenol	< 5.0	< 5.0	< 5.0	NA
p-Chloro-M-Cresol	< 2.0	< 2.0	< 2.0	NA
2-Chlorophenol	< 2.0	< 2.0	< 2.0	NA
2,4-Dichlorophenol	< 5.0	< 5.0	< 5.0	5.0
2,4-Dimethylphenol	< 5.0	< 5.0	< 5.0	50
2-Nitrophenol	< 10	< 10	< 10	NA
4-Nitrophenol	< 10	< 10	< 10	NA
2,4-Dinitrophenol	< 20	< 20	< 20	10
4,6-Dinitro-o-cresol	< 10	< 10	< 10	NA
Pentachlorophenol	< 10	< 10	< 0.8	1.0
Phenol	< 5.0	< 5.0	< 5.0	1.0
2-Methylphenol	< 5.0	< 5.0	< 5.0	NA
3-Methylphenol/4-Methylphenol	< 5.0	< 5.0	< 5.0	NA
2,4,5-Trichlorophenol	< 5.0	< 5.0	< 5.0	NA
Benzoic Acid	< 50	< 50	< 50	NA
Benzyl Alcohol	< 2.0	< 2.0	< 2.0	NA
Carbazole	< 2.0	< 2.0	< 2.0	NA
Total TICs	5.0 J	5.2 J	6.0 J	NA
Notes: * NYSDEC Technical & Operational Guidance Series 1.1.1 Ambient Water Quality Standards And Guidance Values < Analyte value is less than the laboratory detection limit for the listed compound Concentration above the indicated Class GA Value J Analyte concentration is estimated due to detection below laboratory reporting limit. µg/L Micrograms per liter NA No regulatory guidance value established ND Not detected NJ Presumptive evidence of a TIC TIC Tentatively identified compound				

TABLE 9
Metals in Groundwater
Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY

Sample ID:	MW1-201506	MW2-201506	MW3-201506	MW4-201506	MW5-201507	MW6-201506	MW7-201507	Blind Duplicate from MW7	MW8-201507	Field Blank 1	Field Blank 2	Field Blank 3	NYSDEC Class GA Standards / Guidance Values*
COMPOUND (Total)	µg/L												µg/L
Aluminum, Total	91	101	65	88	8.0 J	88	120	117	50	< 100	< 100	5.0 J	NA
Antimony, Total	1.4 J	0.3 J	0.3 J	0.4 J	1.5 J	0.2 J	0.3 J	0.2 J	0.2 J	< 50	26 J	0.1 J	3.0
Arsenic, Total	2.4	1.4	2	0.3 J	1.6	1.0	1.0	1.5	0.7	< 5.0	< 5.0	< 0.5	25
Barium, Total	331	542.3	393.3	189.2	76.3	348.2	208	203.3	925.3	< 10	< 10	0.1 J	1,000
Beryllium, Total	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	3.0
Cadmium, Total	0.1 J	< 0.2	< 0.2	< 0.2	0.199 J	< 0.2	< 0.2	< 0.2	0.1 J	< 5.0	< 5.0	< 0.2	5.0
Calcium, Total	225,000	262,000	229,000	221,000	146,000	178,000	327,000	321,000	285,000	< 100	80 J	< 100	NA
Chromium, Total	1.0 J	1.5 J	1.0 J	1.7 J	0.5 J	0.7 J	1.1 J	1.1 J	0.7 J	< 10	6.0 J	0.5 J	50
Cobalt, Total	0.7	0.5	1	0.3 J	1.6	0.6	0.3 J	0.3 J	0.7	< 20	< 20	< 0.5	NA
Copper, Total	2.9	2.7	1.1	1.1	25.8	0.9 J	0.6 J	0.7 J	0.8 J	< 10	< 10	< 1.0	200
Iron, Total	13,500	1,430	6,090	183	681	832	906	918	3,780	76	580	< 50	300
Lead, Total	5.5	10.9	10.7	1.0 J	6.4	5.4	6.7	6.3	1.8	< 10	2.1 J	< 1.0	25
Magnesium, Total	52,300	68,700	59,400	262,000	23,600	36,200	22,900	22,400	45,100	< 100	< 100	< 70	35,000
Manganese, Total	286.1	723.4	1133	105.2	175.4	415.3	262.6	276.4	851	10.4	7.1 J	< 2.0	300
Mercury, Total	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.7
Nickel, Total	5.6	2.7	9	1.5 J	10.8	1.8 J	2.2	2.3	1.3 J	< 25	< 25	0.2 J	100
Potassium, Total	27,500	28,200	27,700	88,200	16,300	20,100	17,200	18,300	30,100	< 2,500	< 2,500	20 J	NA
Selenium, Total	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	10
Silver, Total	< 0.4	< 0.4	< 0.4	0.1 J	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 7.0	< 7.0	< 0.4	50
Sodium, Total	325,000	468,000	417,000	2,260,000	150,000	186,000	567,000	542,000	717,000	< 2,000	< 2,000	61 J	20,000
Thallium, Total	< 0.5	< 0.5	< 0.5	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 20	< 20	< 0.5	0.5
Vanadium, Total	5.4	4.2 J	12.9	3.6 J	2.3 J	1.3 J	10.9	12	1.2 J	< 10	< 10	< 5.0	NA
Zinc, Total	43.2	46.1	68	3.8 J	64.4	10.5	5.2 J	5.7 J	5.7 J	< 50	< 50	< 10	2,000

Notes:		
*		NYSDEC Technical & Operational Guidance Series 1.1.1 Ambient Water Quality Standards And Guidance Values
<		Analyte value is less than the laboratory detection limit for the listed compound
		Concentration above the indicated Class GA Value
J		Analyte concentration is estimated due to detection below laboratory reporting limit.
µg/L		Micrograms per liter
NA		No regulatory guidance value established

TABLE 10
PCBs in Groundwater
Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY

Sample ID:	MW1-201506	MW2-201506	MW3-201506	MW4-201506	MW5-201507	MW6-201506	MW7-201507	Blind Duplicate from MW7	MW8-201507	Field Blank 1	Field Blank 2	Field Blank 3	NYSDEC Class GA Standards / Guidance Values*
COMPOUND	µg/L												µg/L
Aroclor 1016	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1221	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1232	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1242	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1248	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1254	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1260	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1262	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09
Aroclor 1268	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	< 0.083	0.09

<u>Notes:</u>		
*		NYSDEC Technical & Operational Guidance Series 1.1.1 Ambient Water Quality Standards And Guidance Values
<		Analyte value is less than the laboratory detection limit for the listed compound
		Concentration above the indicated Class GA Value
µg/L		Micrograms per liter
NA		No regulatory guidance value established

	TABLE 11 Pesticides in Groundwater Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY												
Sample ID:	MW1-201506	MW2-201506	MW3-201506	MW4-201506	MW5-201507	MW6-201506	MW7-201507	Blind Duplicate from MW7	MW8-201507	Field Blank 1	Field Blank 2	Field Blank 3	NYSDEC Class GA Standards / Guidance Values*
COMPOUND	µg/L												µg/L
Delta-BHC	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.04
Lindane	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05
Alpha-BHC	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.01
Beta-BHC	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.04
Heptachlor	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.04
Aldrin	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	ND
Heptachlor epoxide	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03
Endrin	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	ND
Endrin ketone	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	5.0
Dieldrin	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.004
4,4'-DDE	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.2
4,4'-DDD	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.3
4,4'-DDT	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.2
Endosulfan I	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA
Endosulfan II	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	NA
Endosulfan sulfate	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	NA
Methoxychlor	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	35
Toxaphene	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.06
cis-Chlordane	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA
trans-Chlordane	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA
Chlordane	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.05
Notes:													
*	NYSDEC Technical & Operational Guidance Series 1.1.1 Ambient Water Quality Standards And Guidance Values												
<	Analyte value is less than the laboratory detection limit for the listed compound												
	Concentration above the indicated Class GA Value												
µg/L	Micrograms per liter												
NA	No regulatory guidance value established												

TABLE 12 (Page 1 of 2)
VOCs in Soil Vapor
Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY

Sample ID:	SSV1	SSV2	SV Duplicate (from SSV2)	SSV3	Onsite Ambient Gas 2	SSV4	SSV5	SSV6	Onsite Ambient Gas 1	NYSDOH Value*
COMPOUND	RESULTS µg/m3				RESULTS µg/m3				µg/m3	
Dichlorodifluoromethane	71.7	6.63	14	3.33	1.21	2.43	3.15	< 4.94	1.69	NA
Chloromethane	< 0.413	0.888	1.06	0.549	1.25	1.98	< 0.413	2.64	1.0	NA
Freon-114	4.31	4.7	5.0	< 1.4	< 1.4	5.09	1.96	< 6.99	< 1.4	NA
Vinyl chloride	< 0.511	< 0.511	< 0.511	< 0.511	< 0.511	< 0.511	< 0.511	< 2.56	< 0.511	NA
1,3-Butadiene	5.31	3.25	3.36	< 0.442	< 0.442	18.3	< 0.442	29.2	< 0.442	NA
Bromomethane	< 0.777	< 0.777	< 0.777	< 0.777	< 0.777	< 0.777	< 0.777	< 3.88	< 0.777	NA
Chloroethane	< 0.528	< 0.528	< 0.528	< 0.528	< 0.528	< 0.528	< 0.528	< 2.64	< 0.528	NA
Ethanol	< 4.71	6.92	6.2	11.5	9.95	37.7	56	< 23.6	13.4	NA
Vinyl bromide	< 0.874	< 0.874	< 0.874	< 0.874	< 0.874	< 0.874	< 0.874	< 4.37	< 0.874	NA
Acetone	356	646	461	466	21	86.5	200	217	11.6	NA
Trichlorofluoromethane	460	257	274	31.4	1.44	32.8	20.1	12.7	1.13	NA
Isopropanol	2.24	2.83	2.58	1.42	1.26	2.32	4.5	< 6.15	2.56	NA
1,1-Dichloroethene	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 3.96	< 0.793	NA
Tertiary butyl Alcohol	4.46	8.55	6.12	4.97	< 1.52	6.52	12.9	8.22	< 1.52	NA
Methylene chloride	< 1.74	10	36.5	< 1.74	6.88	< 1.74	9.35	< 8.69	< 1.74	NA
3-Chloropropene	< 0.626	< 0.626	< 0.626	< 0.626	< 0.626	< 0.626	< 0.626	< 3.13	< 0.626	NA
Carbon disulfide	9.34	8.41	9.09	14.4	< 0.623	20.5	7.04	13.1	< 0.623	NA
Freon-113	< 1.53	< 1.53	< 1.53	< 1.53	< 1.53	< 1.53	< 1.53	< 7.66	< 1.53	NA
trans-1,2-Dichloroethene	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 3.96	< 0.793	NA
1,1-Dichloroethane	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 4.05	< 0.809	NA
Methyl tert butyl ether	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 3.61	< 0.721	NA
2-Butanone	7.7	10	10.5	3.95	1.72	52.8	105	125	< 1.47	NA
cis-1,2-Dichloroethene	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 0.793	< 3.96	< 0.793	NA
Ethyl Acetate	< 1.8	< 1.8	< 1.8	2.67	< 1.8	5.01	5.37	< 9.01	< 1.8	NA
Chloroform	4.08	1.05	1.02	< 0.977	< 0.977	3.42	1.62	< 4.88	< 0.977	NA
Tetrahydrofuran	< 1.47	< 1.47	< 1.47	< 1.47	< 1.47	< 1.47	< 1.47	< 7.37	< 1.47	NA
1,2-Dichloroethane	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 0.809	< 4.05	< 0.809	NA
n-Hexane	4.23	10.4	10.2	< 0.705	0.74	24	0.987	370	0.796	NA
1,1,1-Trichloroethane	3.03	1.21	1.42	< 1.09	< 1.09	< 1.09	< 1.09	< 5.46	< 1.09	100
Benzene	2.98	12.8	13.1	< 0.639	< 0.639	12.5	6.55	73.8	0.885	NA
Carbon tetrachloride	< 1.26	1.44	1.5	< 1.26	< 1.26	< 1.26	< 1.26	< 6.29	< 1.26	5.0
Cyclohexane	1.06	2.91	6.2	< 0.688	3.58	8.19	< 0.688	892	< 0.688	NA
1,2-Dichloropropane	< 0.924	< 0.924	< 0.924	< 0.924	< 0.924	< 0.924	< 0.924	< 4.62	< 0.924	NA
Bromodichloromethane	< 1.34	< 1.34	< 1.34	< 1.34	< 1.34	< 1.34	< 1.34	< 6.7	< 1.34	NA
1,4-Dioxane	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 0.721	< 3.6	< 0.721	NA
Trichloroethene	< 1.07	< 1.07	< 1.07	< 1.07	< 1.07	< 1.07	< 1.07	< 5.37	< 1.07	5.0
2,2,4-Trimethylpentane	< 0.934	1.65	1.57	< 0.934	0.962	< 0.934	< 0.934	< 4.67	1.2	NA
Heptane	2.2	5.37	5.41	< 0.82	< 0.82	50.8	< 0.82	484	0.824	NA
cis-1,3-Dichloropropene	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 4.54	< 0.908	NA
4-Methyl-2-pentanone	< 2.05	< 2.05	< 2.05	< 2.05	< 2.05	8.44	9.34	< 10.2	< 2.05	NA
trans-1,3-Dichloropropene	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 0.908	< 4.54	< 0.908	NA
1,1,2-Trichloroethane	< 1.09	< 1.09	< 1.09	< 1.09	< 1.09	< 1.09	< 1.09	< 5.46	< 1.09	NA
Toluene	3.35	11	11.3	1.91	7.31	13	5.65	43.7	3.2	NA
2-Hexanone	< 0.82	1.5	1.25	< 0.82	< 0.82	3.39	8.93	< 4.1	< 0.82	NA
Dibromochloromethane	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 8.52	< 1.7	NA
1,2-Dibromoethane	< 1.54	< 1.54	< 1.54	< 1.54	< 1.54	< 1.54	< 1.54	< 7.69	< 1.54	NA
Tetrachloroethene	92.9	130	142	8.41	5.15	19.8	37.8	10.1	< 1.36	30
Chlorobenzene	< 0.921	< 0.921	< 0.921	< 0.921	< 0.921	< 0.921	< 0.921	< 4.61	< 0.921	NA
Ethylbenzene	0.925	2.19	2.06	< 0.869	< 0.869	2.69	1.07	7.25	< 0.869	NA

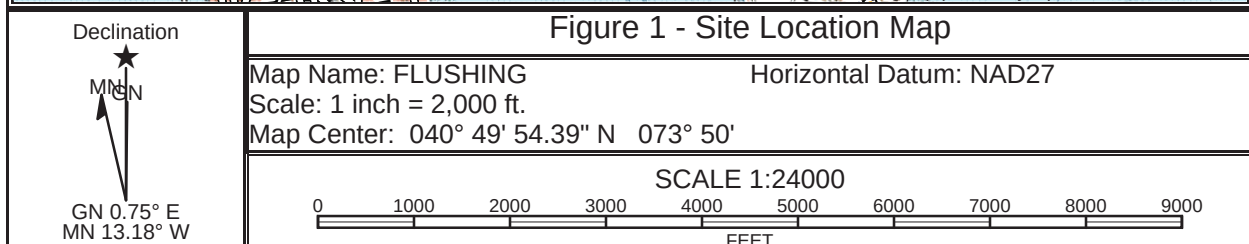
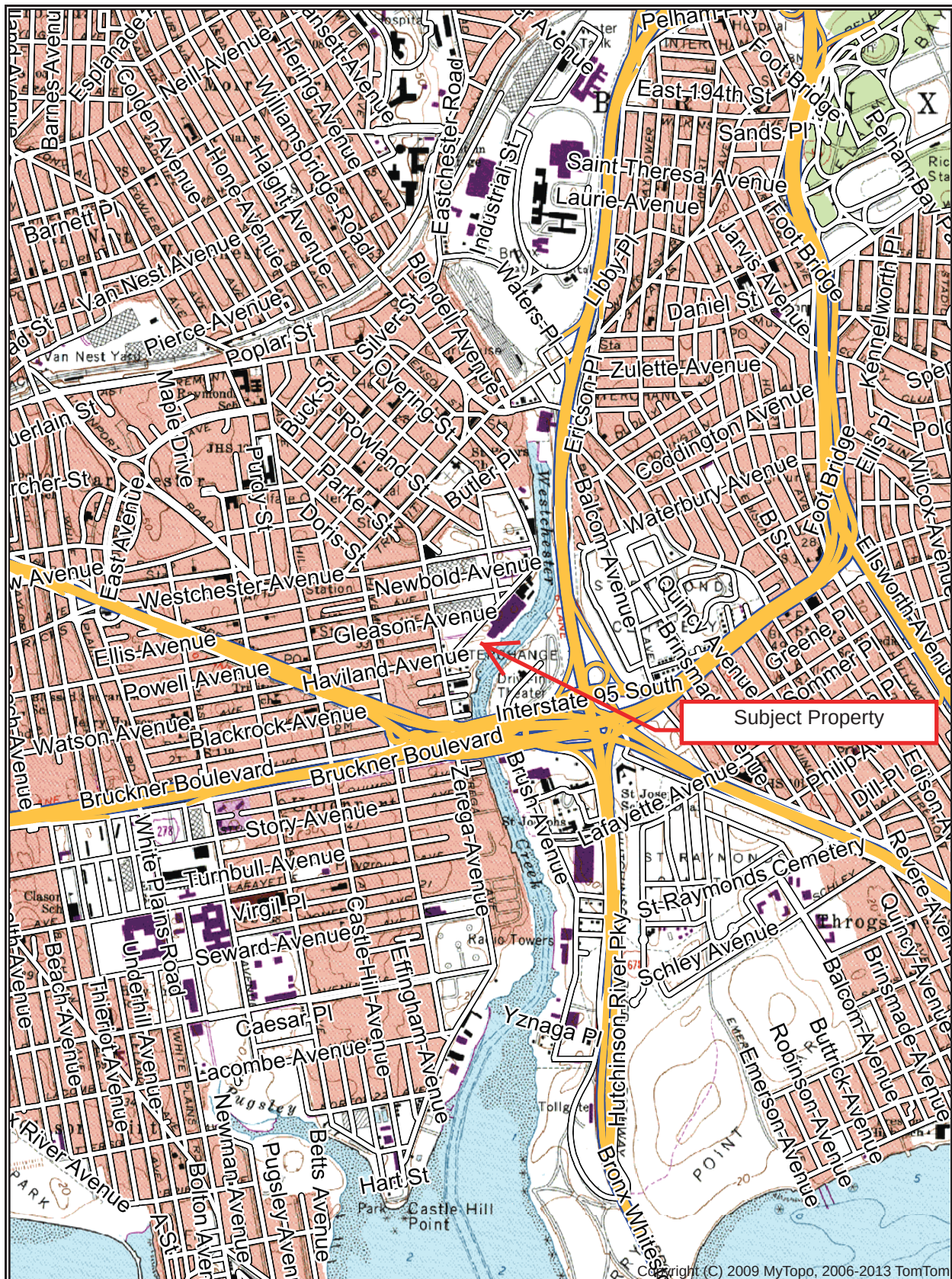
TABLE 12 (Page 2 of 2)
VOCs in Soil Vapor
Proposed MTA Paratransit Facility, Commerce Avenue, Bronx, NY

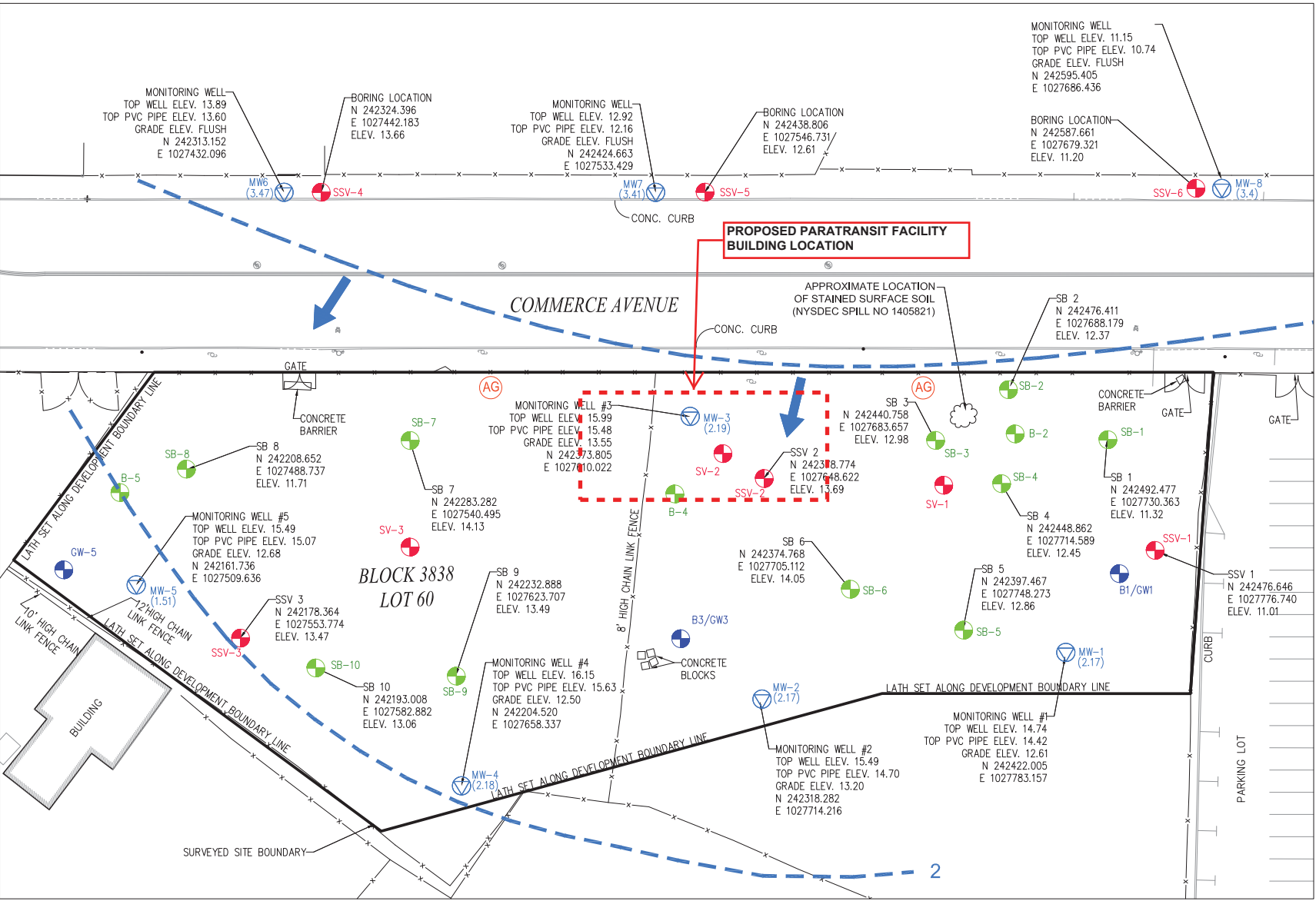
Sample ID:	SSV1	SSV2	SV Duplicate (from SSV2)	SSV3	Onsite Ambient Gas 2	SSV4	SSV5	SSV6	Onsite Ambient Gas 1	NYSDOH Value*
COMPOUND	RESULTS µg/m3				RESULTS µg/m3				µg/m3	
p/m-Xylene	2.94	5.82	5.47	2.18	< 1.74	8.9	4.25	17.1	< 1.74	NA
Bromoform	< 2.07	< 2.07	< 2.07	< 2.07	< 2.07	< 2.07	< 2.07	< 10.3	< 2.07	NA
Styrene	< 0.852	< 0.852	< 0.852	< 0.852	< 0.852	0.898	< 0.852	< 4.26	< 0.852	NA
1,1,2,2-Tetrachloroethane	< 1.37	< 1.37	< 1.37	< 1.37	< 1.37	< 1.37	< 1.37	< 6.87	< 1.37	NA
o-Xylene	1.27	2.57	2.49	0.916	< 0.869	3.7	1.97	8.12	< 0.869	NA
4-Ethyltoluene	1.03	1.58	1.31	< 0.983	< 0.983	1.95	1.7	< 4.92	< 0.983	NA
1,3,5-Trimethylbenzene	1.24	1.75	1.53	1.09	< 0.983	2.89	2.11	< 4.92	< 0.983	NA
1,2,4-Trimethylbenzene	3.81	5.31	4.44	3.34	< 0.983	6.15	6.64	6.69	< 0.983	NA
Benzyl chloride	< 1.04	< 1.04	< 1.04	< 1.04	< 1.04	< 1.04	< 1.04	< 5.18	< 1.04	NA
1,3-Dichlorobenzene	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	1.67	< 6.01	< 1.2	NA
1,4-Dichlorobenzene	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 6.01	< 1.2	NA
1,2-Dichlorobenzene	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 6.01	< 1.2	NA
1,2,4-Trichlorobenzene	< 1.48	< 1.48	< 1.48	< 1.48	< 1.48	< 1.48	< 1.48	< 7.42	< 1.48	NA
Hexachlorobutadiene	< 2.13	< 2.13	< 2.13	< 2.13	< 2.13	< 2.13	< 2.13	< 10.7	< 2.13	NA

Notes:

<	Analyte value is less than the laboratory detection limit for the listed compound
*	Value for sub-slab vapor concentrations contained in NYS Department of Health Guidance For Evaluating Soil Vapor Intrusion in the State of New York, October 2006, Decision Matrix 1/Matrix 2
	Values which have exceeded their concurrent ambient air sample concentrations (SSV1 through SSV3 to be compared to Ambient 2, SSV4 through SSV6 to be compared to Ambient 1)
	Result exceeds respective NYSDOH value.
µg/m3	Micrograms per cubic meter
NA	No regulatory guidance value established

FIGURES





LEGEND

B-1

SOIL BORING (JUNE, 2013)

SB-1

SUPPLEMENTAL SOIL BORING (JUNE, 2015)

B-1(GW)

SOIL BORING WITH GRAB (JUNE, 2013)
GROUNDWATER SAMPLE

MW
(1.36)

PERMANENT MONITORING WELL
(GROUNDWATER ELEVATION)

SV-1

SOIL VAPOR SAMPLE (JUNE 2013)

SSV-1

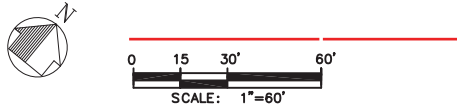
SUPPLEMENTAL SOIL VAPOR SAMPLE
(JUNE, 2015)

AG

AMBIENT AIR SAMPLE

GROUNDWATER ELEVATION
CONTOUR (FT AMSL)

GROUNDWATER FLOW DIRECTION



CLIENT:

NYCEDC

NEW YORK CITY. MAKE IT HERE.

CONSULTANT:

P
E
M

ENVIRONMENTAL
PLANNING &
MANAGEMENT
1983 MARCUS AVE, SUITE 109
LAKE SUCCESS, NEW YORK 11042

PROJECT:

PROPOSED PARATRANSIT FACILITY
COMMERCE AVENUE
BRONX, NY 10462

SHEET NAME:

FIGURE 2
SAMPLE LOCATION PLAN

PROJECT NO. 14099	SCALE AS NOTED	DATE AUGUST 2015
DRAWN BY: AMR/MBH	DRAWING NO: FIGURE 2	
CHECKED BY: RH	2 OF 5	

Parameter	B4		RRSCO	RCSCO
	B4 (0-4')	B4 (6-10')		
	ppm			
Benzo(a)anthracene	2.3	2.4	1.0	5.6
Benzo(a)pyrene	1.8	1.8	1.0	1.0
Benzo(b)fluoranthene	2.5	2.3	1.0	5.6
Dibenzo(a,h)anthracene	0.34		0.33	0.56
Indeno(1,2,3-cd)Pyrene	1.3	1.1	0.5	5.6
Lead, Total	490		400	1,000

Parameter	SB7			RRSCO	RCSCO
	SB7 (0-2')	SB7 (10-13')	SB7 (13-15')		
	ppm				
Barium, Total	450	520		400	400
Lead, Total	710		1,300	400	1,000

Parameter	SB8		RRSCO	RCSCO
	SB8 (0-2')	SB8 (6-9')		
	ppm			
Barium, Total	1,600		400	400
Cadmium, Total	7.3		4.3	9.3
Copper, Total	1,800	1,200	270	270
Lead, Total	1,500	2,700	400	1,000
Aroclor 1254	3.0		1.0	1.0
Total PCBs	3.80		1.0	1.0

Parameter	B5		RRSCO	RCSCO
	B5 (0-4')			
	ppm			
Indeno(1,2,3-cd)Pyrene	0.7 J	0.5	5.6	
Cadmium, Total	5.4	4.3	9.3	
Copper, Total	2,600	270	270	
Lead, Total	2,400	400	1,000	
Zinc, Total	18,000	10,000	10,000	

Parameter	SB9			RRSCO	RCSCO
	SB9 (0-2')	SB9 (9-12')	SB9 (13-15')		
	ppm				
Benzo(a)anthracene		1.7	2.0	1.0	5.6
Benzo(a)pyrene		1.5	1.8	1.0	1.0
Benzo(b)fluoranthene		1.8	2.5	1.0	5.6
Dibenzo(a,h)anthracene			0.34	0.33	0.56
Indeno(1,2,3-cd)Pyrene	0.52	1.1	1.3	0.5	5.6
Arsenic, Total			18	16	16
Barium, Total		460		400	400
Cadmium, Total	5.1			4.3	9.3
Copper, Total	1,200			270	270
Lead, Total	800	650		400	1,000
Mercury, Total			2.0	0.81	2.8
Total PCBs	1.24			1.0	1.0

Parameter	SB10			RRSCO	RCSCO
	SB10 (0-2')	SB10 (6-8.5')	SB10 (13-15')		
	ppm				
Benzo(a)anthracene	2.6	1.1	9.7	1.0	5.6
Benzo(a)pyrene	2.6	1.1	8.2	1.0	1.0
Benzo(b)fluoranthene	3.3	1.3	6	1.0	5.6
Chrysene			9.6	3.9	56
Dibenzo(a,h)anthracene	0.43		0.99	0.33	0.56
Indeno(1,2,3-cd)Pyrene	1.9	0.79	3.2	0.5	5.6
Barium, Total		450		400	400
Copper, Total	430	1,700	420	270	270
Lead, Total	1,100	2,100		400	1,000
Mercury, Total			1.2	0.81	2.8
Zinc, Total		13,000		10,000	10,000

Parameter	SB3			RRSCO	RCSCO
	SB3 (0-2')	SB3 (5-10')	SB3 (13-15')		
	ppm				
Benzo(a)anthracene			3.0	1.0	5.6
Benzo(a)pyrene			2.6	1.0	1.0
Benzo(b)fluoranthene			3.9	1.0	5.6
Dibenzo(a,h)anthracene			0.44	0.33	0.56
Indeno(1,2,3-cd)Pyrene			1.7	0.5	5.6
Cadmium, Total	5.7			4.3	9.3
Copper, Total	320			270	270
Lead, Total	6,200		480	400	1,000
Mercury, Total		10		0.81	2.8

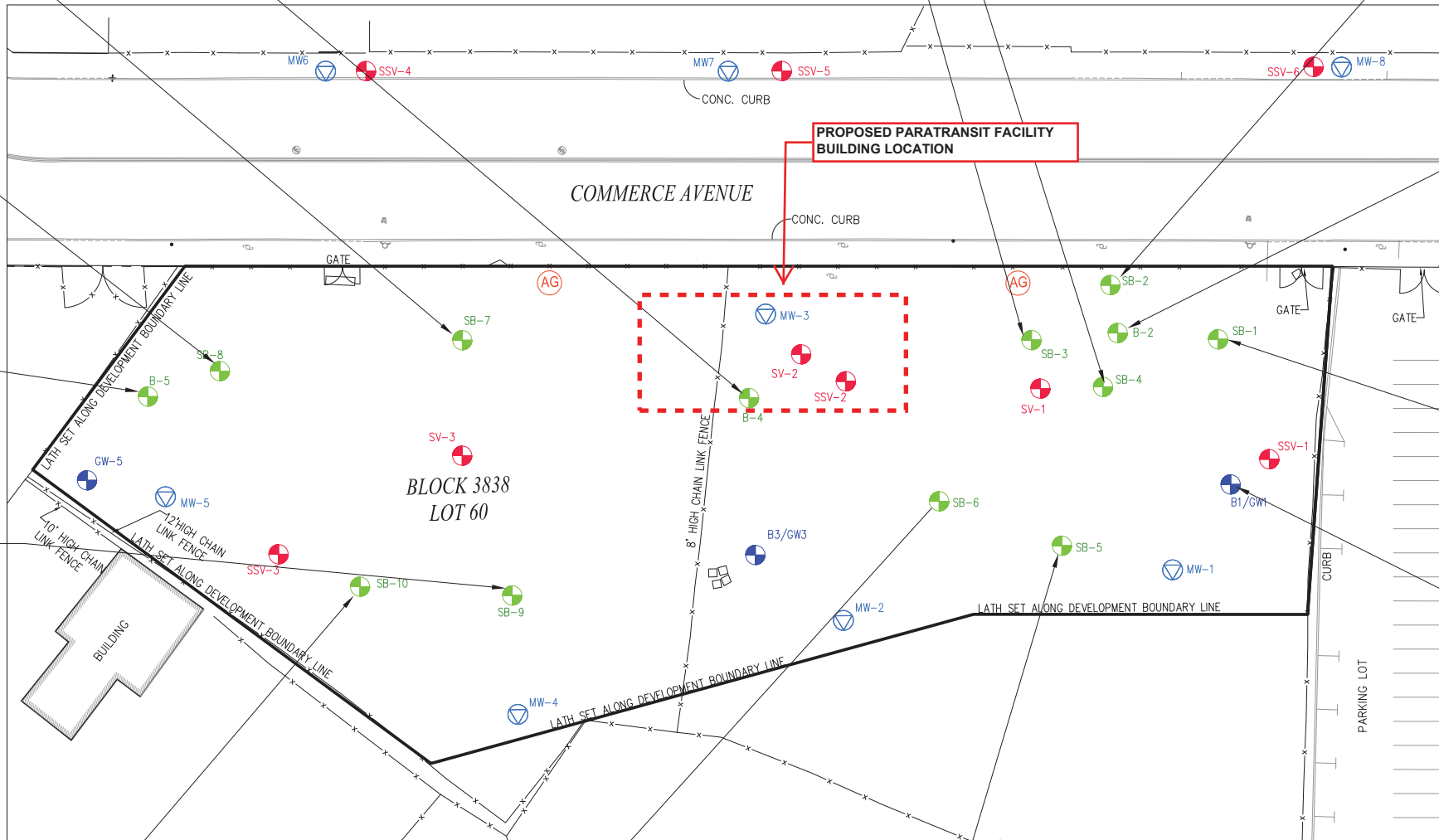
Parameter	SB4		RRSCO	RCSCO
	SB4 (0-2')	SB4 (5-8')		
	ppm			
Benzo(a)anthracene		68	1.0	5.6
Benzo(a)pyrene		58	1.0	1.0
Benzo(b)fluoranthene	1.7	75	1.0	5.6
Benzo(k)fluoranthene		34	3.9	56
Chrysene		67	3.9	56
Dibenzo(a,h)anthracene		8.8	0.33	0.56
Fluoranthene		170	100	500
Indeno(1,2,3-cd)Pyrene	0.88	39	0.5	5.6
Phenanthrene		150	100	500

Parameter	SB2		RRSCO	RCSCO
	SB2 (5-9')	SB2 (11-13')		
	ppm			
Benzo(a)anthracene	2.6		1.0	5.6
Benzo(a)pyrene	3.3		1.0	1.0
Benzo(b)fluoranthene	4.2		1.0	5.6
Dibenzo(a,h)anthracene	0.61		0.33	0.56
Indeno(1,2,3-cd)Pyrene	2.6		0.5	5.6
Arsenic, Total	23		16	16
Barium, Total	680		400	400
Copper, Total	290		270	270
Lead, Total	2,700	1,400	400	1,000

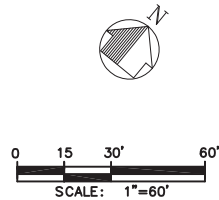
Parameter	B2		RRSCO	RCSCO
	B2 (0-4')	B2 (5-9')		
	ppm			
Benzo(a)anthracene		1.1	1.0	5.6
Benzo(a)pyrene		1.2	1.0	1.0
Benzo(b)fluoranthene		1.3	1.0	5.6
Dibenzo(a,h)anthracene	0.42 J		0.33	0.56
Indeno(1,2,3-cd)Pyrene	0.69 J	0.85	0.5	5.6
Barium, Total		410	400	400
Cadmium, Total			4.3	9.3
Copper, Total	360	930	270	270
Lead, Total	590	9,100	400	1,000

Parameter	SB1			RRSCO	RCSCO
	SB1 (0-2')	SB1 (7-9')	SB1 (13-15')		
	ppm				
Barium, Total		630		400	400
Lead, Total	950	670	720	400	1,000
Mercury, Total	1.0			0.81	2.8

Parameter	B1		RRSCO	RCSCO
	B1 (0-4')	B1 (5-9')		
	ppm			
Indeno(1,2,3-cd)Pyrene		0.51 J	0.5	5.6
Barium, Total		480	400	400
Lead, Total	520		400	1,000



LEGEND	
	B-1 SOIL BORING (JUNE, 2013)
	SB-1 SUPPLEMENTAL SOIL BORING (JUNE, 2015)
	B-1(GW) SOIL BORING WITH GRAB (JUNE, 2013) GROUNDWATER SAMPLE
	MW) PERMANENT MONITORING WELL
	SV-1 SOIL VAPOR SAMPLE (JUNE 2013)
	SSV-1 SUPPLEMENTAL SOIL VAPOR SAMPLE (JUNE, 2015)
	AG) AMBIENT AIR SAMPLE



* ALL VALUES REPORTED AS PARTS PER MILLION (ppm)

CLIENT: NYCEDC NEW YORK CITY. MAKE IT HERE.		
CONSULTANT: ENVIRONMENTAL PLANNING & MANAGEMENT 1983 MARCUS AVE, SUITE 109 LAKE SUCCESS, NEW YORK 11042		
PROJECT: PROPOSED PARATRANSIT FACILITY COMMERCE AVENUE BRONX, NY 10462		
SHEET NAME: FIGURE 3 SOIL BORING RESULTS		
PROJECT NO. 14099	SCALE AS NOTED	DATE AUGUST 2015
DRAWN BY: AMR/MBH	DRAWING NO: FIGURE 3	
CHECKED BY: RH		

GW3		
Parameter	Result	Class GA Value
ppb		
Acenaphthene	40	20
Naphthalene	45	10
Benzo(a)anthracene	3.9	0.002
Benzo(a)pyrene	3.0	ND
Benzo(b)fluoranthene	4.6	0.002
Benzo(k)fluoranthene	1.8	0.002
Chrysene	3.4	0.002
Indeno(1,2,3-cd)Pyrene	2.5	0.002
Aluminum, Total	2,600	100
Iron, Total	6,380	300
Lead, Total	265.1	25
Manganese, Total	451.8	300
Sodium, Total	199,000	20,000
Vanadium, Total	65.33	14
Aluminum, Dissolved	458	100
Iron, Dissolved	1,060	300
Lead, Dissolved	50.04	25
Manganese, Dissolved	359.9	300
Sodium, Dissolved	200,000	20,000
Vanadium, Dissolved	25.08	14

GW5		
Parameter	Result	Class GA Value
ppb		
Benzo(a)anthracene	0.07 J	0.002
Chrysene	0.06 J	0.002
Aluminum, Total	2,590	100
Cobalt, Total	5.72	5.0
Iron, Total	4,880	300
Lead, Total	34.7	25
Magnesium, Total	221,000	35,000
Sodium, Total	1,810,000	20,000
Vanadium, Total	78.61	14
Magnesium, Dissolved	204,000	35,000
Sodium, Dissolved	1,740,000	20,000
Vanadium, Dissolved	32 J	14

MW5		
Parameter	Result	Class GA Value
ppb		
Iron, Total	681	300
Sodium, Total	150,000	20,000

MW4		
Parameter	Result	Class GA Value
ppb		
Magnesium, Total	262,000	35,000
Sodium, Total	2,260,000	20,000

MW3		
Parameter	Result	Class GA Value
ppb		
Iron, Total	6,090	300
Magnesium, Total	59,400	35,000
Manganese, Total	1,133	300
Sodium, Total	417,000	20,000

MW2		
Parameter	Result	Class GA Value
ppb		
Iron, Total	1,430	300
Magnesium, Total	68,700	35,000
Manganese, Total	723.4	300
Sodium, Total	468,000	20,000

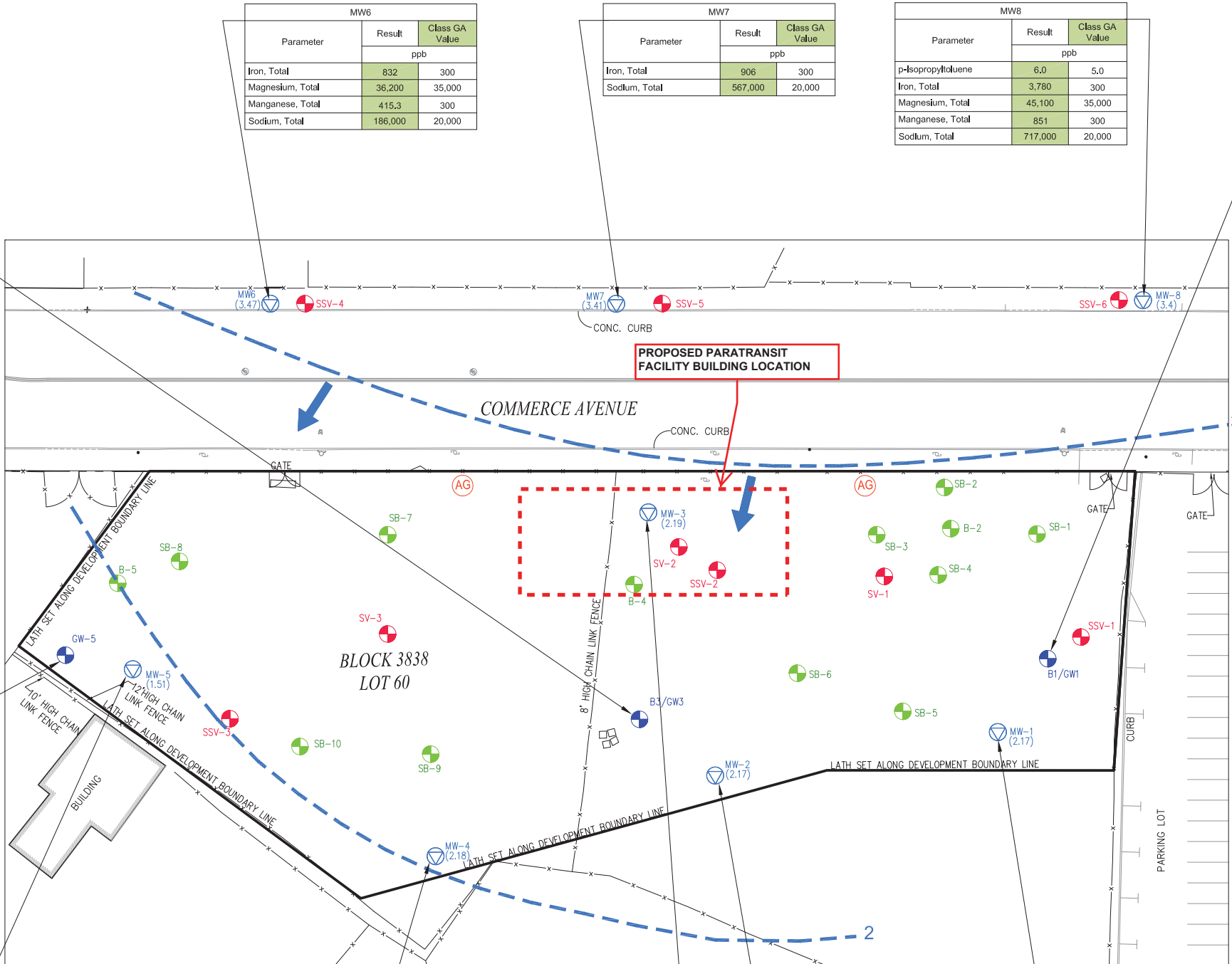
MW1		
Parameter	Result	Class GA Value
ppb		
Iron, Total	13,500	300
Magnesium, Total	52,300	35,000
Sodium, Total	325,000	20,000

MW6		
Parameter	Result	Class GA Value
ppb		
Iron, Total	832	300
Magnesium, Total	36,200	35,000
Manganese, Total	415.3	300
Sodium, Total	186,000	20,000

MW7		
Parameter	Result	Class GA Value
ppb		
Iron, Total	906	300
Sodium, Total	567,000	20,000

MW8		
Parameter	Result	Class GA Value
ppb		
p-Isopropyltoluene	6.0	5.0
Iron, Total	3,780	300
Magnesium, Total	45,100	35,000
Manganese, Total	851	300
Sodium, Total	717,000	20,000

GW1		
Parameter	Result	Class GA Value
ppb		
Benzo(a)anthracene	0.7	0.002
Benzo(a)pyrene	0.66	ND
Benzo(b)fluoranthene	0.83	0.002
Benzo(k)fluoranthene	0.55	0.002
Chrysene	0.89	0.002
Indeno(1,2,3-cd)Pyrene	0.45	0.002
Aluminum, Total	1,440	100
Antimony, Total	3.2	3.0
Iron, Total	7,490	300
Lead, Total	577.7	25
Magnesium, Total	44,700	35,000
Mercury, Total	1.81	0.7
Sodium, Total	234,000	20,000
Vanadium, Total	70.93	14
Aluminum, Dissolved	410	100
Antimony, Dissolved	4.88	3.0
Iron, Dissolved	1,380	300
Lead, Dissolved	255.9	25
Magnesium, Dissolved	42,700	35,000
Sodium, Dissolved	230,000	20,000
Vanadium, Dissolved	43	14



LEGEND

B-1 SOIL BORING (JUNE, 2013)

SB-1 SUPPLEMENTAL SOIL BORING (JUNE, 2015)

B-1(GW) SOIL BORING WITH GRAB (JUNE, 2013) GROUNDWATER SAMPLE

MW (1.36) PERMANENT MONITORING WELL (GROUNDWATER ELEVATION)

SV-1 SOIL VAPOR SAMPLE (JUNE 2013)

SSV-1 SUPPLEMENTAL SOIL VAPOR SAMPLE (JUNE, 2015)

AG AMBIENT AIR SAMPLE

GROUNDWATER ELEVATION CONTOUR (FT AMSL)

GROUNDWATER FLOW DIRECTION

* ALL VALUES REPORTED AS PARTS PER BILLION (ppb)

CLIENT:

NEW YORK CITY. MAKE IT HERE.

CONSULTANT:

ENVIRONMENTAL PLANNING & MANAGEMENT
1983 MARCUS AVE, SUITE 105
LAKE SUCCESS, NEW YORK 11042

PROJECT:

PROPOSED PARATRANSIT FACILITY
COMMERCE AVENUE
BRONX, NY 10462

SHEET NAME:

FIGURE 4
GROUNDWATER RESULTS
ABOVE CLASS GA VALUES

PROJECT NO. 14099

SCALE AS NOTED

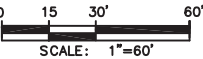
DATE AUGUST 2015

DRAWN BY: AMR/MBH

CHECKED BY: RH

DRAWING NO: FIGURE 4

4 OF 5



SSV4			
Parameter	Result	Ambient Background	NYSDOH Value
Dichlorodifluoromethane	2.43	1.69	NA
Chloromethane	1.98	1.0	NA
Freon-114	5.09	< 1.4	NA
1,3-Butadiene	18.3	< 0.442	NA
Ethanol	37.7	13.4	NA
Acetone	86.5	11.6	NA
Trichlorofluoromethane	32.8	1.13	NA
Tertiary butyl Alcohol	6.52	< 1.52	NA
Carbon disulfide	20.5	< 0.623	NA
2-Butanone	52.8	< 1.47	NA
Ethyl Acetate	5.01	< 1.8	NA
Chloroform	3.42	< 0.977	NA
n-Hexane	24	0.796	NA
Benzene	12.5	0.885	NA
Cyclohexane	8.19	< 0.688	NA
Heptane	50.8	0.824	NA
4-Methyl-2-pentanone	8.44	< 2.05	NA
Toluene	13	3.2	NA
2-Hexanone	3.39	< 0.82	NA
Tetrachloroethene	19.8	< 1.36	30
Ethylbenzene	2.69	< 0.869	NA
p/m-Xylene	8.9	< 1.74	NA
Styrene	0.898	< 0.852	NA
o-Xylene	3.7	< 0.869	NA
4-Ethyltoluene	1.95	< 0.983	NA
1,3,5-Trimethylbenzene	2.89	< 0.983	NA
1,2,4-Trimethylbenzene	6.15	< 0.983	NA

SSV2			
Parameter	Result	Ambient Background	NYSDOH Value
	µg/m3		
Dichlorodifluoromethane	6.63	1.21	NA
Freon-114	4.7	< 1.4	NA
1,3-Butadiene	3.25	< 0.442	NA
Acetone	646	21	NA
Trichlorofluoromethane	257	1.44	NA
Isopropanol	2.83	1.26	NA
Tertiary butyl Alcohol	8.55	< 1.52	NA
Methylene chloride	10	6.88	NA
Carbon disulfide	8.41	< 0.623	NA
2-Butanone	10	1.72	NA
Chloroform	1.05	< 0.977	NA
n-Hexane	10.4	0.74	NA
1,1,1-Trichloroethane	1.21	< 1.09	100
Benzene	12.8	< 0.639	NA
Carbon tetrachloride	1.44	< 1.26	5.0
2,2,4-Trimethylpentane	1.65	0.962	NA
Heptane	5.37	< 0.82	NA
Toluene	11	7.31	NA
2-Hexanone	1.5	< 0.82	NA
Tetrachloroethene	130	5.15	30
Ethylbenzene	2.19	< 0.869	NA
p/m-Xylene	5.82	< 1.74	NA
o-Xylene	2.57	< 0.869	NA
4-Ethyltoluene	1.58	< 0.983	NA
1,3,5-Trimethylbenzene	1.75	< 0.983	NA
1,2,4-Trimethylbenzene	5.31	< 0.983	NA

SSV5			
Parameter	Result	Ambient Background	NYSDOH Value
	µg/m3		
Dichlorodifluoromethane	3.15	1.69	NA
Freon-114	1.96	< 1.4	NA
Ethanol	56	13.4	NA
Acetone	200	11.6	NA
Trichlorofluoromethane	20.1	1.13	NA
Isopropanol	4.5	2.56	NA
Tertiary butyl Alcohol	12.9	< 1.52	NA
Methylene chloride	9.35	< 1.74	NA
Carbon disulfide	7.04	< 0.623	NA
2-Butanone	105	< 1.47	NA
Ethyl Acetate	5.37	< 1.8	NA
Chloroform	1.62	< 0.977	NA
n-Hexane	0.987	0.796	NA
Benzene	6.55	0.885	NA
4-Methyl-2-pentanone	9.34	< 2.05	NA
Toluene	5.65	3.2	NA
2-Hexanone	8.93	< 0.82	NA
Tetrachloroethene	37.8	< 1.36	30
Ethylbenzene	1.07	< 0.869	NA
p/m-Xylene	4.25	< 1.74	NA
o-Xylene	1.97	< 0.869	NA
4-Ethyltoluene	1.7	< 0.983	NA
1,3,5-Trimethylbenzene	2.11	< 0.983	NA
1,2,4-Trimethylbenzene	6.64	< 0.983	NA
1,3-Dichlorobenzene	1.67	< 1.2	NA

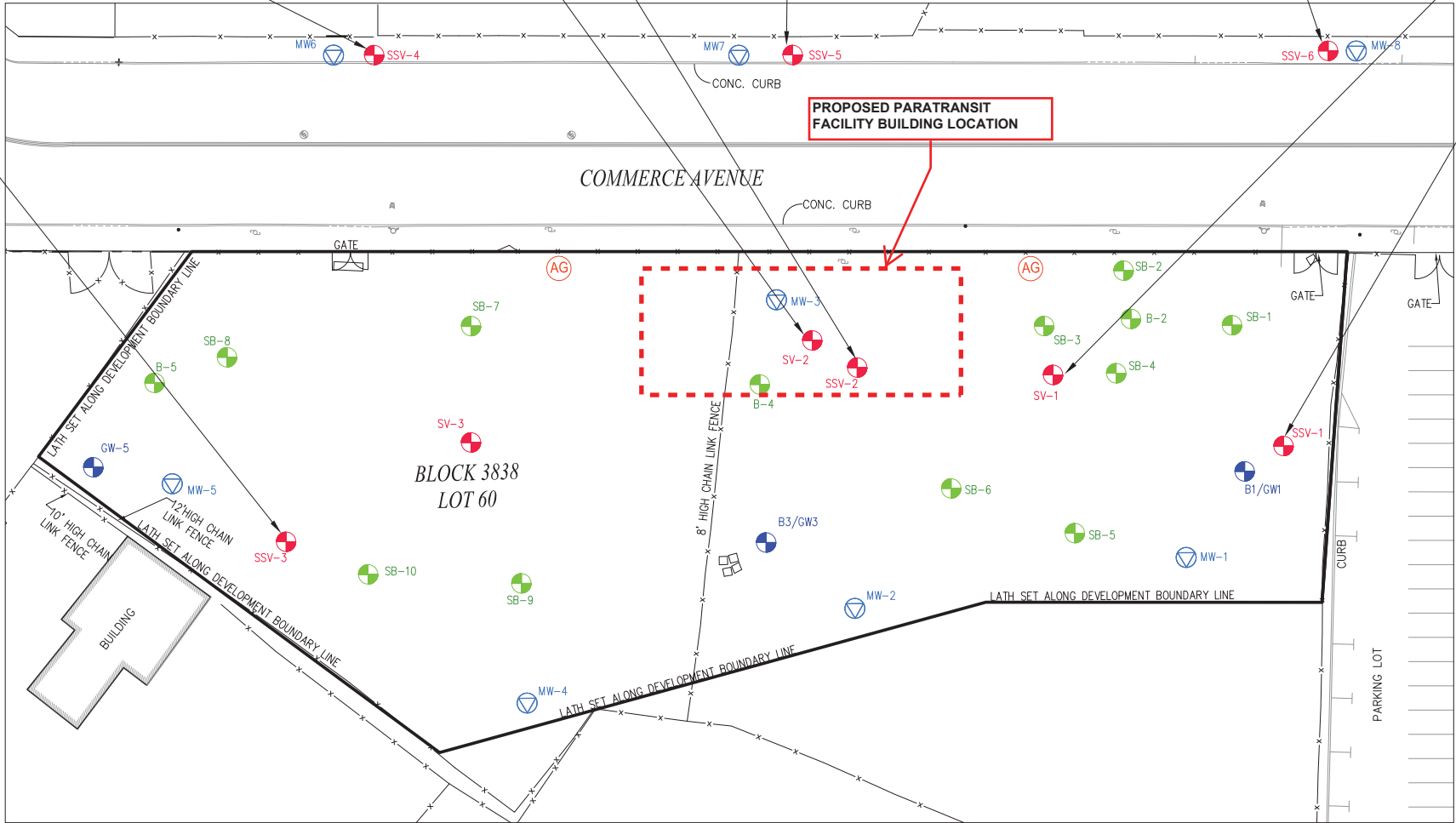
SSV6			
Parameter	Result	Ambient Background	NYSDOH Value
Chloromethane	2.64	1.0	NA
1,3-Butadiene	29.2	< 0.442	NA
Acetone	217	11.6	NA
Trichlorofluoromethane	12.7	1.13	NA
Tertiary butyl Alcohol	8.22	< 1.52	NA
Carbon disulfide	13.1	< 0.623	NA
2-Butanone	125	< 1.47	NA
n-Hexane	370	0.796	NA
Benzene	73.8	0.885	NA
Cyclohexane	892	< 0.688	NA
Heptane	484	0.824	NA
Toluene	43.7	3.2	NA
2-Hexanone	< 4.1	< 0.82	NA
Tetrachloroethene	10.1	< 1.36	30
Ethylbenzene	7.25	< 0.869	NA
p/m-Xylene	17.1	< 1.74	NA
o-Xylene	8.12	< 0.869	NA
1,2,4-Trimethylbenzene	6.69	< 0.983	NA

SSV1			
Parameter	Result	Ambient Background	NYSDOH Value
	µg/m3		
Dichlorodifluoromethane	71.7	1.21	NA
Freon-114	4.31	< 1.4	NA
1,3-Butadiene	5.31	< 0.442	NA
Acetone	356	21	NA
Trichlorofluoromethane	460	1.44	NA
Isopropanol	2.24	1.26	NA
Tertiary butyl Alcohol	4.46	< 1.52	NA
Carbon disulfide	9.34	< 0.623	NA
2-Butanone	7.7	1.72	NA
Chloroform	4.08	< 0.977	NA
n-Hexane	4.23	0.74	NA
1,1,1-Trichloroethane	3.03	< 1.09	100
Benzene	2.98	< 0.639	NA
Heptane	2.2	< 0.82	NA
Tetrachloroethene	92.9	5.15	30
Ethylbenzene	0.925	< 0.869	NA
p/m-Xylene	2.94	< 1.74	NA
o-Xylene	1.27	< 0.869	NA
4-Ethyltoluene	1.03	< 0.983	NA
1,3,5-Trimethylbenzene	1.24	< 0.983	NA
1,2,4-Trimethylbenzene	3.81	< 0.983	NA

SV1		
Parameter	Result	NYSDOH Value
	µg/m3	
Tetrachloroethene	239	30

SV2		
Parameter	Result	NYSDOH Value
	µg/m3	
Trichloroethene	240	5.0
Tetrachloroethene	28,000	30

SSV3			
Parameter	Result	Ambient Background	NYSDOH Value
	µg/m3		
Dichlorodifluoromethane	3.33	1.21	NA
Ethanol	11.5	9.95	NA
Acetone	466	21	NA
Trichlorofluoromethane	31.4	1.44	NA
Isopropanol	1.42	1.26	NA
Tertiary butyl Alcohol	4.97	< 1.52	NA
Carbon disulfide	14.4	< 0.623	NA
2-Butanone	3.95	1.72	NA
Ethyl Acetate	2.67	< 1.8	NA
Tetrachloroethene	8.41	5.15	30
p/m-Xylene	2.18	< 1.74	NA
o-Xylene	0.916	< 0.869	NA
1,3,5-Trimethylbenzene	1.09	< 0.983	NA
1,2,4-Trimethylbenzene	3.34	< 0.983	NA



LEGEND

B-1 SOIL BORING (JUNE, 2013)

SB-1 SUPPLEMENTAL SOIL BORING (JUNE, 2015)

B-1(GW) SOIL BORING WITH GRAB (JUNE, 2013) GROUNDWATER SAMPLE

MW) PERMANENT MONITORING WELL

SV-1 SOIL VAPOR SAMPLE (JUNE 2013)

SSV-1 SUPPLEMENTAL SOIL VAPOR SAMPLE (JUNE, 2015)

AG AMBIENT AIR SAMPLE

* ALL VALUES REPORTED AS MICROGRAMS PER CUBIC METER (µg/m³)

CLIENT:

NYCEDC
NEW YORK CITY. MAKE IT HERE.

CONSULTANT:

ENVIRONMENTAL
PLANNING &
MANAGEMENT
1983 MARCUS AVE, SUITE 109
LAKE SUCCESS, NEW YORK 11042

PROJECT:

PROPOSED PARATRANSIT FACILITY
COMMERCE AVENUE
BRONX, NY 10462

SHEET NAME:

FIGURE 5
SUMMARY OF
SOIL VAPOR RESULTS

PROJECT NO.
14099

SCALE
AS NOTED

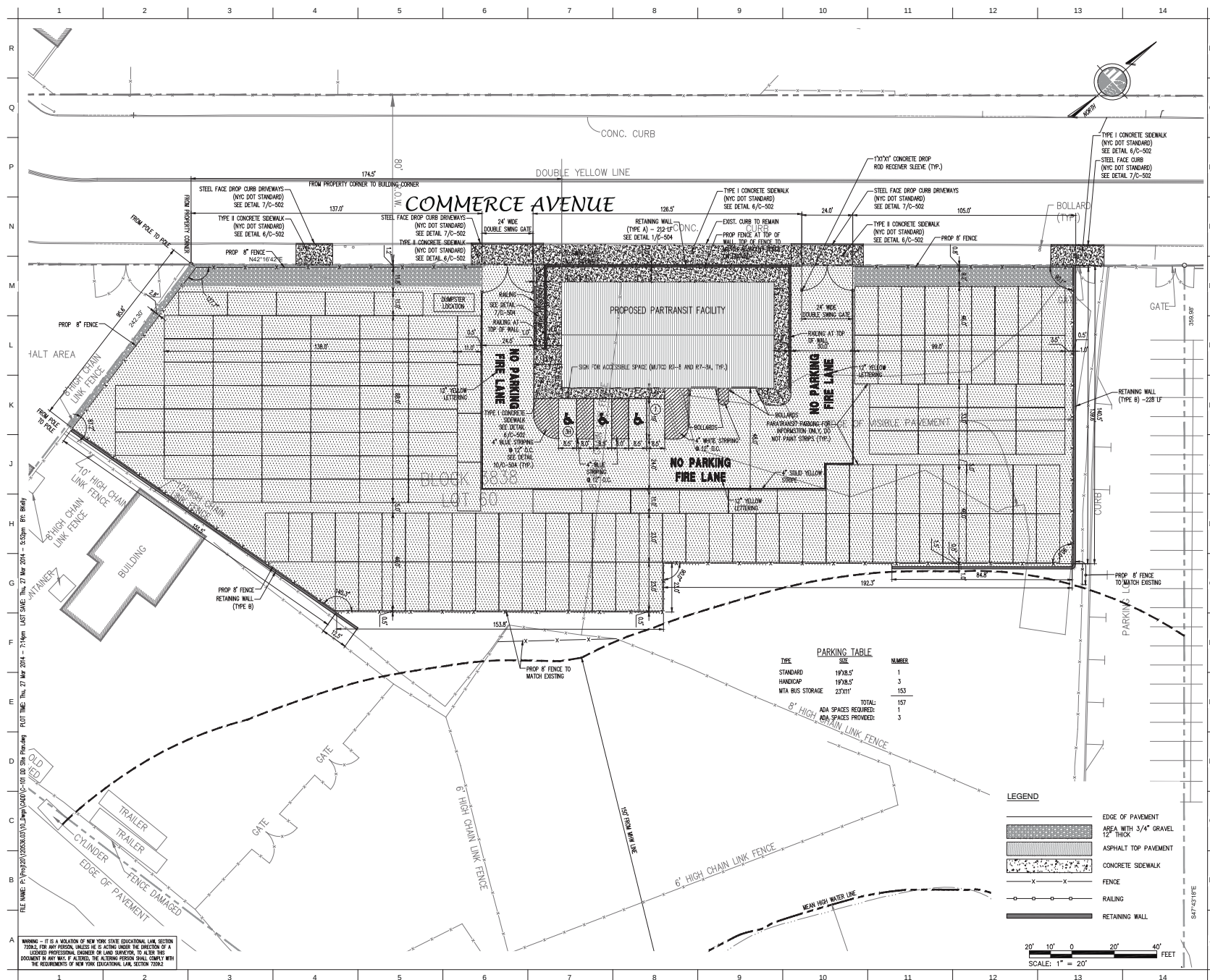
DATE
AUGUST 2015

DRAWN BY:
AMR/MBH

CHECKED BY:
RH

DRAWING NO:
FIGURE 5

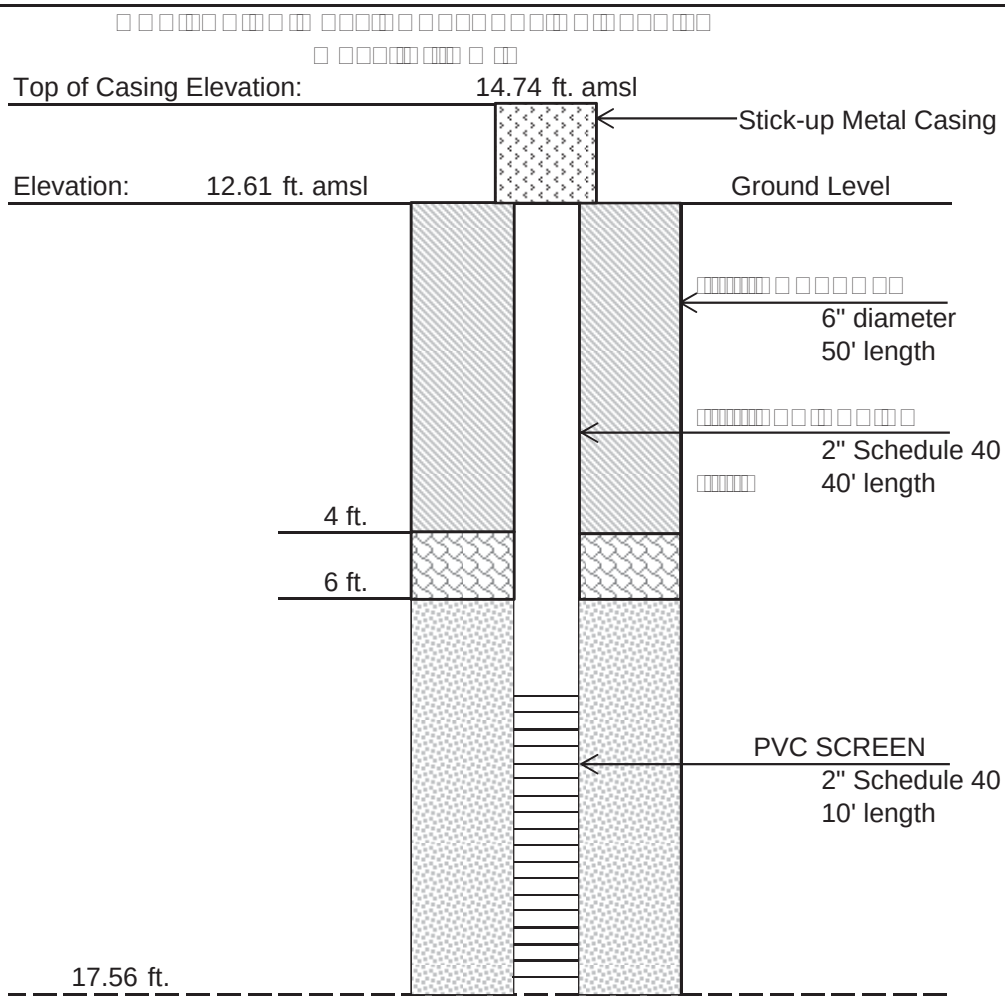
5 OF 5



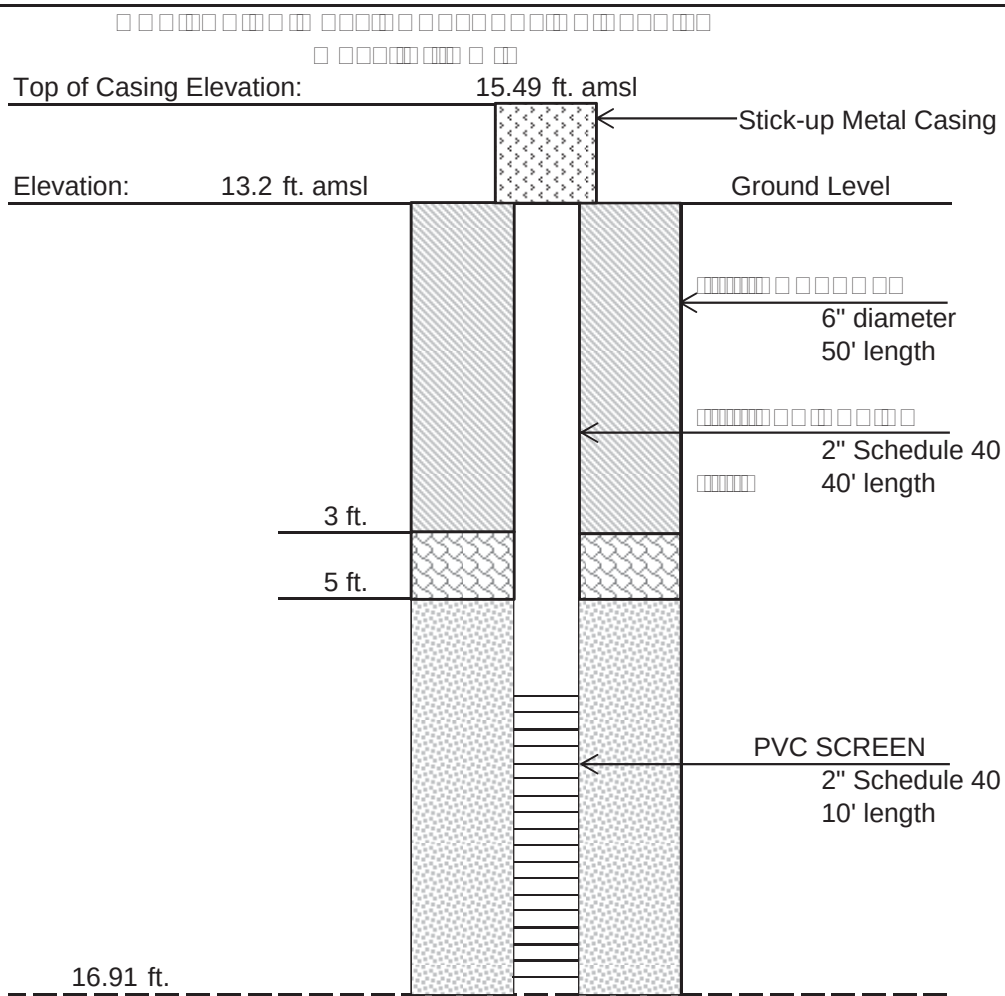
APPENDICES

APPENDIX A

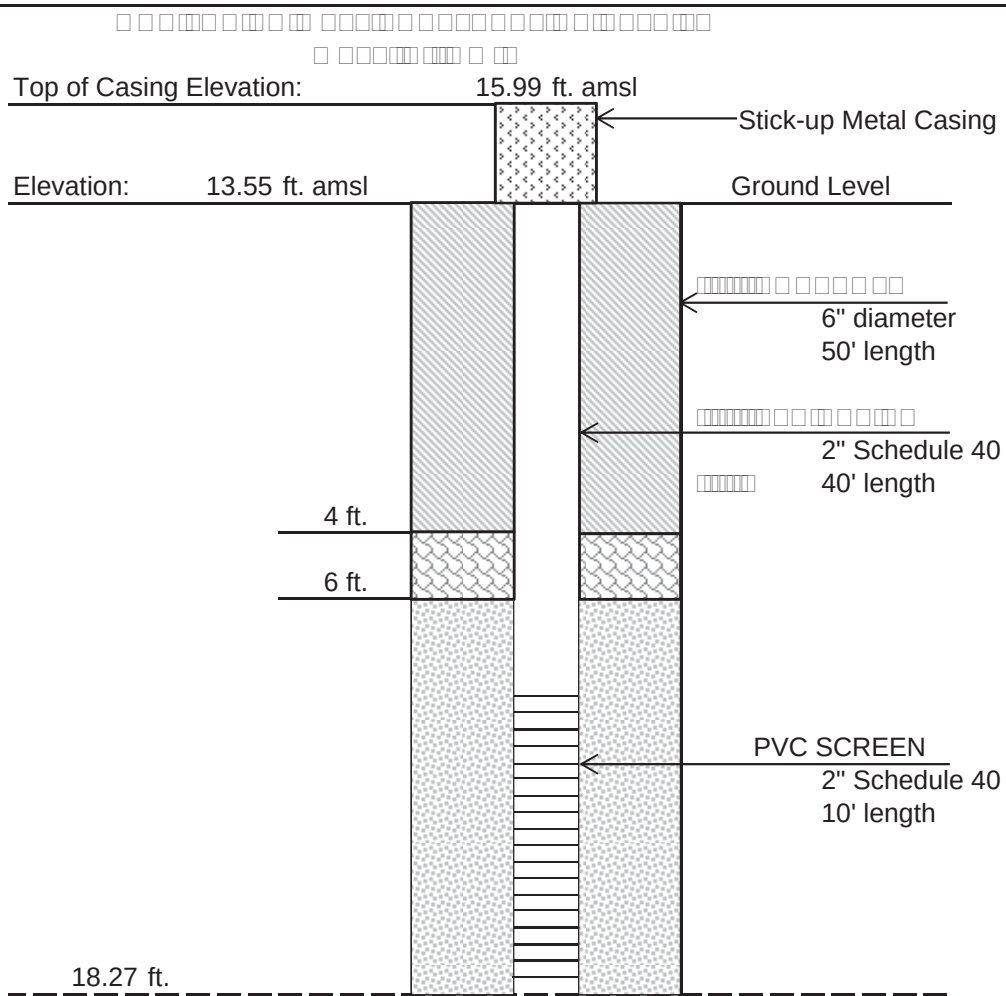
GROUNDWATER MONITORING WELL CONSTRUCTION LOGS



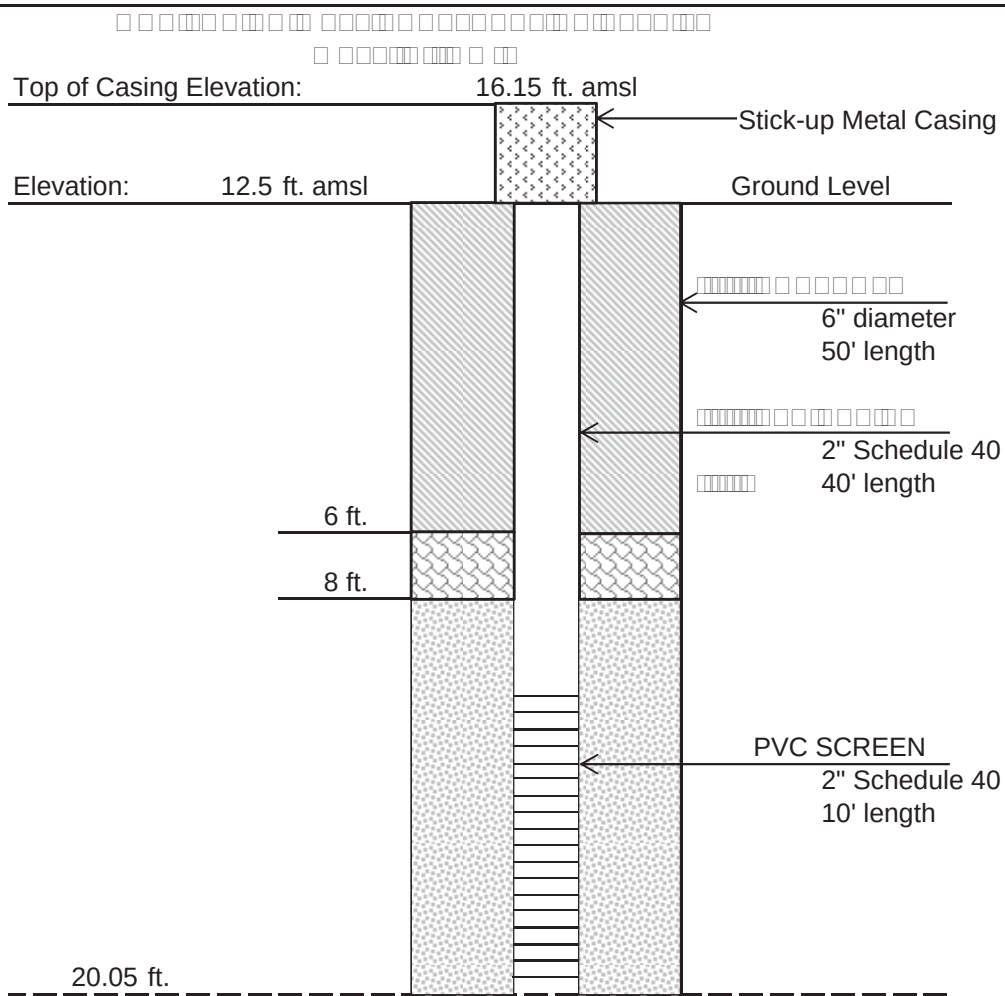
Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/16/2015 Refer to Boring Log for Description of Lithology.



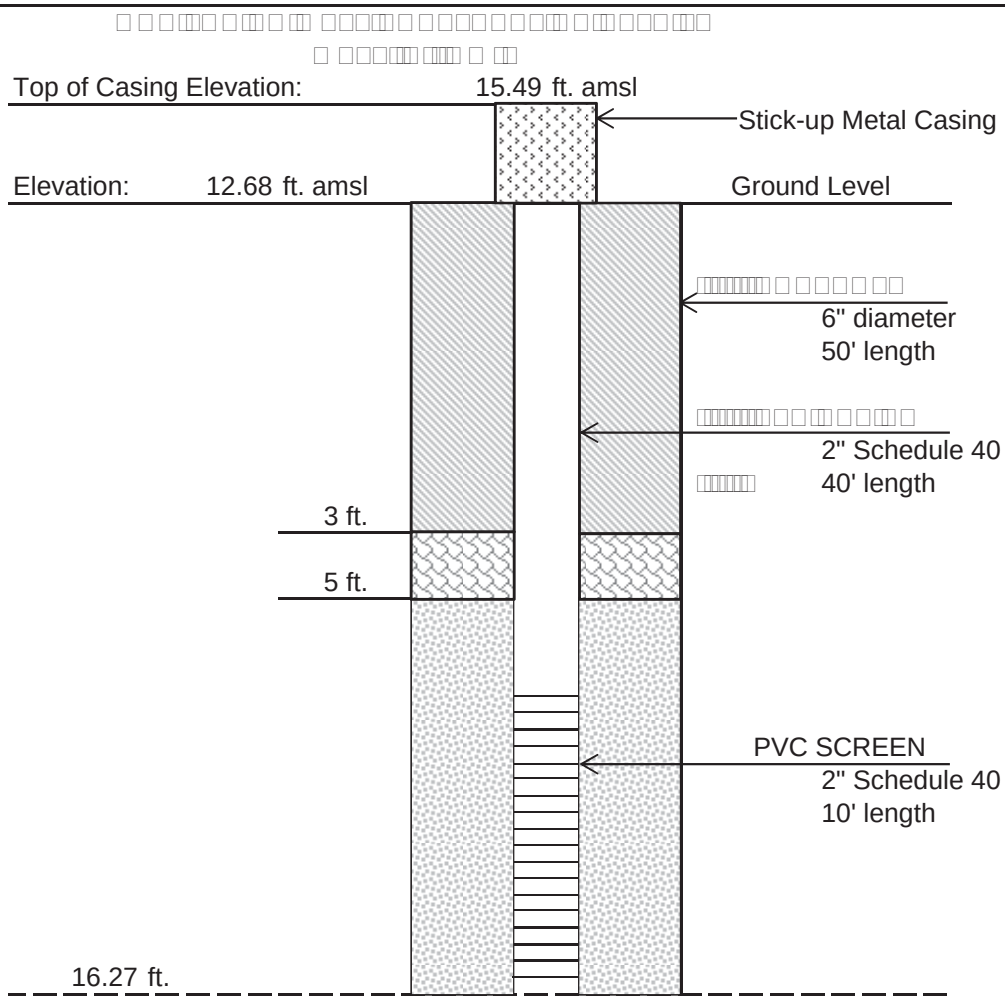
Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/16/2015 Refer to Boring Log for Description of Lithology.



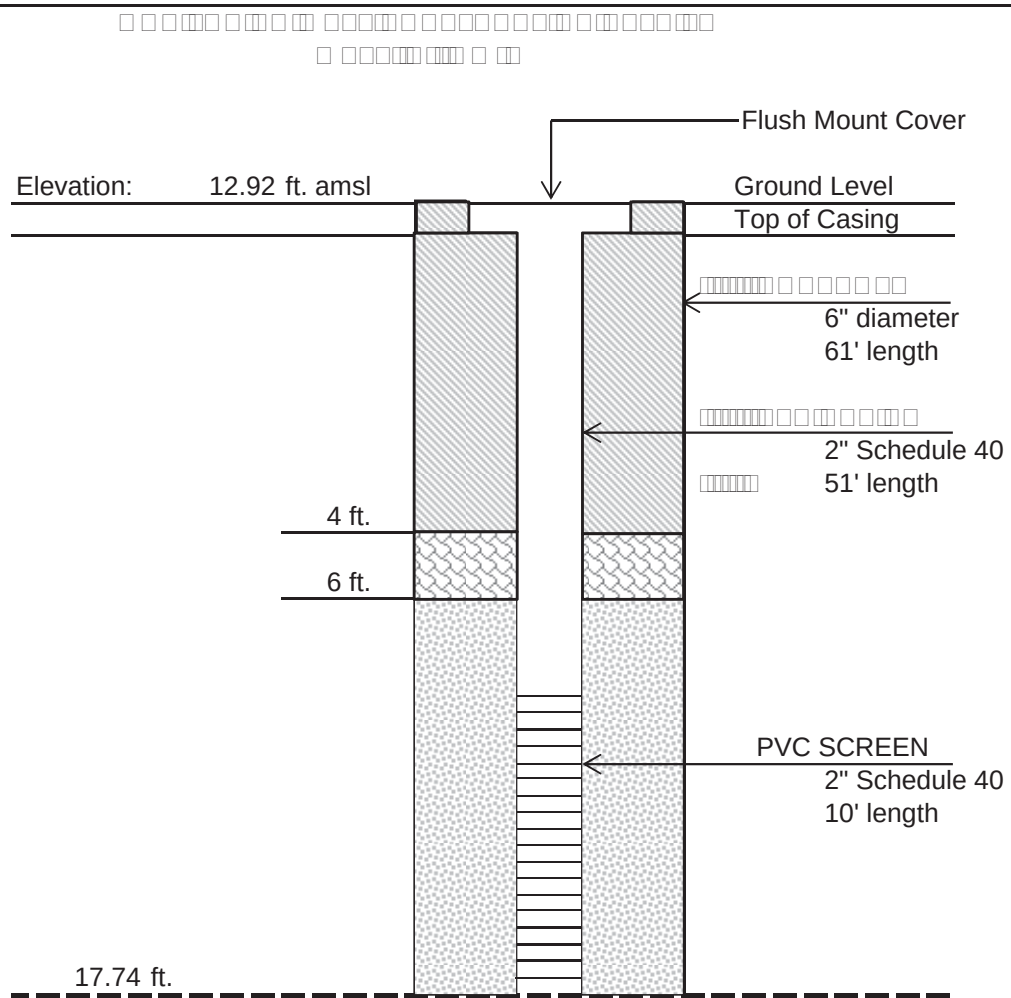
Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/16/2015 Refer to Boring Log for Description of Lithology.



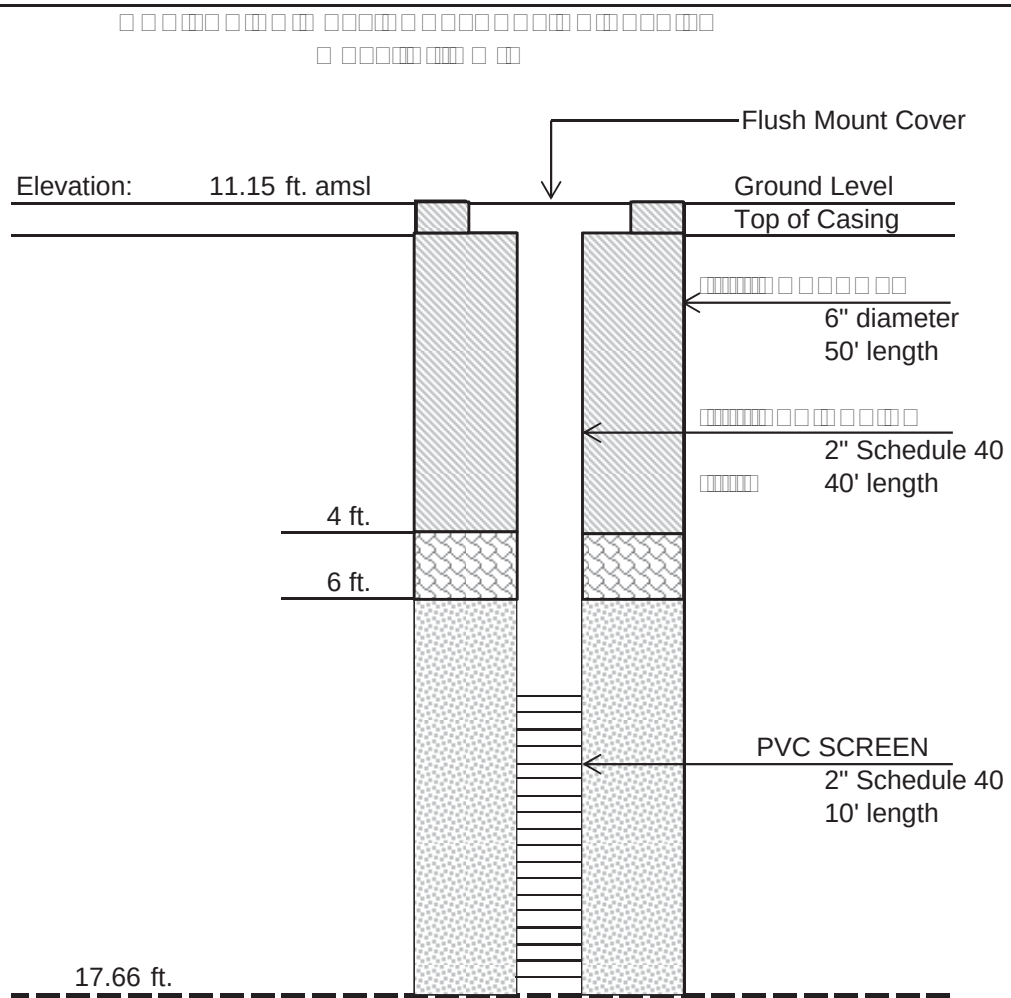
Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Driller: Rig Types: Date Complete: Aquifer Drilling and Testing, Inc. R. Allegrezza Hollow Stem Auger 6/16/2015 Refer to Boring Log for Description of Lithology.



Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/20/2015 Refer to Boring Log for Description of Lithology.



Cement Grout Bentonite Chips Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/18/2015 Refer to Boring Log for Description of Lithology.



□□□□□	□□□□□□□□□□□□□□□□
 Cement Grout  Bentonite Chips  Silica Sand Pack	Drilling Firm: Aquifer Drilling and Testing, Inc. Driller: R. Allegrezza Rig Types: Hollow Stem Auger Date Complete: 6/18/2015 Refer to Boring Log for Description of Lithology.

APPENDIX B

GROUNDWATER AND SOIL VAPOR FIELD SAMPLING LOGS

Low Flow Well Purging and Sampling Log

Date: 6/29/2015 Project Name: Proposed Paratransit Facility
 Site Location: Commerce Ave, Bronx, NY EPM Project Number: 14099
 Well ID: MW1 Sampling Personnel: J. Lebow, D. Kardashian
 Weather Conditions: Partly cloudy

Purging/ Pump
 Sampling Device: Bladder Pump Tubing Type: Teflon lined Inlet Location: Screen Midpoint

Measuring Initial Depth Depth to Well
 Point: TOC To Water (ft): 12.49 Well bottom (ft): 19.69 Diameter: 2-inch
 Screen Casing Volume in 1 Purge start time: 0735
 Length: 10' Type: PVC Well Casing (L): 4.46 Final Purge Vol. (L): 12.75

Sample ID: MW1-201506 Sample Time: 0900 QA/QC: None

Sample parameters: VOCs+10, SVOCs+20, PCBs, Pesticides, and TAL Metals (total unfiltered)

<i>Time</i>	<i>Flow Rate</i>	<i>Depth to Water</i>	<i>Temperature</i>	<i>pH</i>	<i>Eh/ORP</i>	<i>Conductivity</i>	<i>Turbidity</i>	<i>DO</i>
Stabilization Criteria	----	- 0.33	+/- 3%	+/- 0.1	+/- 10	+/- 3%	+/- 10%	+/- 0.3
Units	mL/min	Feet	°C	SU	mV	mS/cm	NTU	mg/L
0745	150	12.5	16.22	6.55	-86	3.54	92.7	9.31
0750	150	12.5	15.98	6.57	-99	3.47	71.1	8.73
0755	150	12.5	15.76	6.61	-106	3.26	42.0	8.34
0800	150	12.5	15.65	6.62	-108	3.21	32.9	8.05
0805	150	12.5	15.60	6.65	-110	3.15	27.3	7.62
0810	150	12.5	15.73	6.68	-117	3.05	19.6	7.59
0815	150	12.5	15.83	6.73	-127	2.93	12.4	7.67
0820	150	12.5	15.69	6.75	-132	2.90	21.0	7.43
0825	150	12.5	15.65	6.77	-131	2.89	22.7	7.26
0830	150	12.5	15.90	6.77	-134	2.82	18.3	7.05
0835	150	12.5	16.11	6.82	-138	2.73	10.9	7.01
0840	150	12.5	16.00	6.86	-141	2.77	13.8	6.80
0845	150	12.5	15.94	6.83	-139	2.80	16.6	6.61
0850	150	12.5	15.94	6.83	-139	2.80	14.5	6.49
0855	150	12.5	15.89	6.86	-140	2.85	13.4	6.39
0900	150	12.5	15.88	6.88	-141	2.86	12.9	6.37

Low Flow Well Purging and Sampling Log

Date: 6/29/2015 Project Name: Proposed Paratransit Facility
 Site Location: Commerce Ave, Bronx, NY EPM Project Number: 14099
 Well ID: MW-2 Sampling Personnel: J. Lebow, D. Kardashian

Weather Conditions: Cloudy

Purging/
 Sampling Device: Bladder Pump Pump
 Tubing Type: Teflon lined Inlet Location: Screen Midpoint

Measuring Initial Depth Depth to Well
 Point: TOC To Water (ft): 13.32 Well bottom (ft): 19.20 Diameter: 2-inch
 Screen Casing Volume in 1 Purge start time: 1010
 Length: 10 Type: PVC Well Casing (L): 3.65 Final Purge
 Vol. (L): 12.25

Sample ID: MW2-201506 Sample Time: 1125 QA/QC: None

Sample parameters: VOCs+10, SVOCs+20, PCBs, Pesticides, and TAL Metals (total unfiltered)

<i>Time</i>	<i>Flow Rate</i>	<i>Depth to Water</i>	<i>Temperature</i>	<i>pH</i>	<i>Eh/ORP</i>	<i>Conductivity</i>	<i>Turbidity</i>	<i>DO</i>
Stabilization Criteria	----	- 0.33	+/- 3%	+/- 0.1	+/- 10	+/- 3%	+/- 10%	+/- 0.3
Units	mL/min	Feet	°C	SU	mV	mS/cm	NTU	mg/L
1020	175	13.32	17.36	7.36	-148	3.44	22.1	9.89
1025	175	13.32	15.32	7.34	-188	3.51	12.8	9.77
1030	175	13.32	15.19	7.32	-207	3.48	10.1	9.69
1035	175	13.32	15.14	7.29	-232	3.48	6.9	9.88
1040	175	13.31	15.12	7.31	-249	3.48	5.7	10.28
1045	175	13.32	15.11	7.27	-265	3.49	4.7	11.21
1050	175	13.31	15.25	7.27	-273	3.50	4.4	12.33
1055	175	13.31	15.06	7.27	-282	3.52	4.0	15.48
1100	175	13.32	15.20	7.27	-287	3.52	3.1	17.08
1105	175	13.31	15.20	7.27	-289	3.53	2.5	17.89
1110	175	13.32	15.25	7.28	-292	3.53	2.3	18.65
1115	175	13.32	15.27	7.29	-295	3.54	2.3	18.88
1120	175	13.32	15.39	7.29	-297	3.54	2.26	18.81

Low Flow Well Purging and Sampling Log

Date: 7/1/2015 Project Name: Proposed Paratransit Facility
 Site Location: Commerce Ave, Bronx, NY EPM Project Number: 14099
 Well ID: MW-7 Sampling Personnel: K. Goddard, J. Lebow
 Weather Conditions: Drizzle

Purging/
 Sampling Device: Bladder Pump Pump
 Tubing Type: Teflon lined Inlet Location: Screen Midpoint

Measuring Initial Depth Depth to Well
 Point: TOC To Water (ft): 8.67 Well bottom (ft): 16.98 Diameter: 2-inch
 Screen Casing Volume in 1 Purge start time: 0725
 Length: 10 Type: PVC Well Casing (L): 5.15 Final Purge
 Vol. (L): 23.0

Sample ID: MW7-201507 Sample Time: 0920 QA/QC: Blind Dup (GW)

Sample parameters: VOCs+10, SVOCs+20, PCBs, Pesticides, and TAL Metals (total unfiltered)

<i>Time</i>	<i>Flow Rate</i>	<i>Depth to Water</i>	<i>Temperature</i>	<i>pH</i>	<i>Eh/ORP</i>	<i>Conductivity</i>	<i>Turbidity</i>	<i>DO</i>
Stabilization Criteria	----	- 0.33	+/- 3%	+/- 0.1	+/- 10	+/- 3%	+/- 10%	+/- 0.3
Units	mL/min	Feet	°C	SU	mV	mS/cm	NTU	mg/L
0810	200	8.67	17.16	7.93	-204	3.60	35.8	7.53
0815	200	8.67	17.01	7.92	-210	3.61	26.4	6.82
0820	200	8.67	17.02	7.91	-213	3.62	20.0	6.25
0825	200	8.67	17.01	7.92	-215	3.63	16.6	6.09
0830	200	8.67	17.02	7.91	-216	3.63	14.5	6.02
0835	200	8.67	16.96	7.91	-218	3.65	11.1	5.87
0840	200	8.67	17.09	7.91	-220	3.65	8.8	5.69
0845	200	8.67	16.88	7.91	-222	3.67	6.8	5.37
0850	200	8.67	16.96	7.91	-222	3.67	6.6	5.47
0855	200	8.67	16.85	7.90	-223	3.66	6.3	5.25
0900	200	8.67	16.85	7.90	-223	3.66	5.7	5.28
0905	200	8.67	16.73	7.90	-224	3.66	5.2	5.08
0910	200	8.67	16.81	7.90	-225	3.66	4.7	4.99
0915	200	8.67	16.90	7.90	-227	3.66	4.3	4.97
0920	200	8.67	17.10	7.90	-228	3.66	3.9	4.95

SUMMA CANISTER FIELD SAMPLING LOG

Site Name / Location:	Proposed Paratransit Facility, Commerce Avenue, Bronx, NY
Name of Sampler:	Phillip Lorica, Judah Lebow, and Kevin Goddard
Company:	EPM

Sample ID:	SSV1	SSV2	Blind Dup (SSV2)	SSV3	SSV4	SSV5	SSV6	Ambient 1	Ambient 2
Summa Canister ID:	1539	758	1518	1579	2059	1573	1779	1869	1706
Flow Controller ID:	0372	0288	0466	0593	0576	0637	0273	0404	0591
Summa Canister Vol.(L):	6	6	6	6	6	6	6	6	6
Sampling Date	6/23/2015	6/23/2015	6/23/2015	6/23/2015	6/19/2015	6/19/2015	6/19/2015	6/19/2015	6/23/2015
Pre-Sampling Tracer Gas Results (in shroud, ppm):	285,000	326,000	326,000	369,000	305,000	354,000	270,000	N/A	N/A
Purge Start Time:	1025	1007	1007	1030	0745	0821	0839	N/A	N/A
Purge Stop time:	1040	1022	1022	1045	0800	0836	0854	N/A	N/A
Purge Duration (min.):	15	15	15	15	15	15	15	N/A	N/A
Purge Volume (Liters):	3	3	3	3	3	3	3	N/A	N/A
Pre-Sampling Tracer Gas Results (from implant, ppm):	0	0	0	0	0	0	0	N/A	N/A
Initial Pressure Gauge ("Hg)	-30.88	-30.64	-29.64	-30.23	-29.85	-29.89	-30.21	-29.67	-29.82
Sample Start Time:	1052	1055	1055	1057	0903	0901	0858	0905	1054
Sample Stop time:	1252	1255	1255	1315	1103	1101	1058	1115	1254
Total Sample Time (min):	120	120	120	138	120	120	120	130	120
Final Pressure Gauge ("Hg)	-8.11	-20.64	-9.08	-7.60	-9.90	-11.09	-14.38	-2.19	-11.34

Comments:

APPENDIX C
SOIL BORING LOGS

LOG OF BORING
SB1

Client:		Hunter Roberts	Date/Time Started:		6/22/2015	9:40	Drilling Co.:		Aquifer Drilling & Testing, Inc.	
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	10:35	Rig Type:		Geoprobe	
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:		Direct Push	
Project Location:		Bronx, NY 10462	Completion Depth:		15 Feet Below Grade (ft. bg)		Sample Device:		Acetate Liner	
Project Number:		14099	Depth to Water:		9 ft.		Logged by:		JL	
Boring Location:			Refer to Figure 2							
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)			
SB1 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	32	1.0	9:40	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0			
SB1 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis MS/MSD and Blind Duplicate-1 also collected from this interval	1.0			
							1.5			
							2.5			
							3.0			
						3.5				
						4.0				
						4.5				
						5.0				
						5.5				
						6.0				
						6.5				
SB1 (7.0'-9.0')	7.0-9.0 ft. bgs		48	1.4	10:25	Interval 7.0-9.0 ft. bgs submitted for laboratory analysis	7.0			
							7.5			
							8.0			
							8.5			
		Wet brown fine to medium sand and silt with some fine gravel		2.5			9.0			
							9.5			
		Wet dark grey coarse sand and silt	29	1.3	10:35		10.0			
						10.5				
						11.0				
						11.5				
						12.0				
						12.5				
						13.0				
						13.5				
						14.0				
						14.5				
SB1 (13.0'-15.0')	13.0-15.0 ft. bgs					Interval 13.0-15.0 collected for laboratory analysis	15.0			
Boring completed at depth of 15 ft. ba										

1983 Marcus Avenue, Suite 109
Lake Success, New York 11042
(516) 328-1194 Fax (516) 328-1381

LOG OF BORING
SB2

Client:		Hunter Roberts	Date/Time Started:		6/22/2015	11:01	Drilling Co.:		Aquifer Drilling & Testing, Inc.	
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	12:07	Rig Type:		Geoprobe	
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:		Direct Push	
Project Location:		Bronx, NY 10462	Completion Depth:		13 Feet Below Grade (ft. bg)		Sample Device:		Acetate Liner	
Project Number:		14099	Depth to Water:		9 ft.		Logged by:		JL	
Boring Location:		Refer to Figure 2								
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)			
SB2 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	53	1.5	11:01	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0			
SB2 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5			
						1.0				
						1.5				
						2.0				
					2.5					
					3.0					
					3.5					
					4.0					
					4.5					
SB2 (5.0'-9.0')	5.0-9.0 ft. bgs		31	<1	11:10	Interval 5.0-9.0 ft. bgs submitted for laboratory analysis	5.0			
							5.5			
							6.0			
							6.5			
							7.0			
				7.5						
				8.0						
				8.5						
				9.0						
				9.5						
				10.0						
				10.5						
SB2 (11.0'-13.0')	11.0-13.0 ft. bgs	Wet light brown fine to medium sand with some silt	24	<1	12:07	Interval 11.0-13.0 ft. bgs submitted for laboratory analysis. Refusals at 13 ft. bgs	11.0			
		Wet brown fine to coarse sand and fine gravel with some silt (some dry backfill observed at top of interval)					11.5			
							12.0			
							12.5			
							13.0			
Boring completed at depth of 13 ft. bg										

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LOG OF BORING
SB3

Client:		Hunter Roberts	Date/Time Started:		6/22/2015	12:45	Drilling Co.:	Aquifer Drilling & Testing, Inc.	
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	13:00	Rig Type:	Geoprobe	
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:	Direct Push	
Project Location:		Bronx, NY 10462	Completion Depth:		15 Feet Below Grade (ft. bg)		Sample Device:	Acetate Liner	
Project Number:		14099	Depth to Water:		10 ft.		Logged by:	JL	
Boring Location:		Refer to Figure 2							
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)		
SB3 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	48	1.5	12:45	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0		
SB3 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5		
							1.0		
							1.5		
							2.0		
				2.5					
				3.0					
				3.5					
				4.0					
				4.5					
SB3 (5.0'-10.0')	5.0-10.0 ft. bgs	Wet brown medium to coarse sand with pulverized brick and wood	12	< 1.0	12:54	Interval 5.0-10.0 ft. bgs submitted for laboratory analysis	5.0		
							5.5		
							6.0		
							6.5		
							7.0		
			7.5						
			8.0						
			8.5						
			9.0						
			9.5						
			10.0						
			10.5						
			11.0						
			11.5						
			12.0						
		12.5							
SB3 (13.0'-15.0')	13.0-15.0 ft. bgs					Interval 13.0-15.0 collected for laboratory analysis	13.0		
							13.5		
							14.0		
							14.5		
							15.0		
Boring completed at depth of 15 ft. bg									

E P M

**Environmental
Planning &
Management, Inc.**

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Lake Success, New York 11042
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LOG OF BORING
SB4

Client:	Hunter Roberts	Date/Time Started:	6/22/2015 13:24	Drilling Co.:	Aquifer Drilling & Testing, Inc.
Project Name:	Proposed MTA Paratrasit Facility	Date/Time Completed:	6/22/2015 13:45	Rig Type:	Geoprobe
Project Location:	1160 Commerce Avenue	Elevation & Datum:	N/A	Drill Method:	Direct Push
Project Location:	Bronx, NY 10462	Completion Depth:	15 Feet Below Grade (ft. bg)	Sample Device:	Acetate Liner
Project Number:	14099	Depth to Water:	8 ft. bgs	Logged by:	JL

Boring Location: Refer to Figure 2

Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)
SB4 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel. More moisture at bottom of interval.	24	1.9	13:24	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0
SB4 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5
							1.0
							1.5
							2.0
							2.5
							3.0
							3.5
							4.0
							4.5
SB4 (5.0'-8.0')	5.0-8.0 ft. bgs	Wet dark grey fine sand and silt with fine gravel	16	<1.0	13:35	Interval 5.0-8.0 ft. bgs submitted for laboratory analysis	5.0
							5.5
							6.0
							6.5
							7.0
							7.5
			29	<1.0	13:45		8.0
							8.5
							9.0
							9.5
							10.0
							10.5
							11.0
							11.5
							12.0
							12.5
SB4 (13.0'-15.0')	13.0-15.0 ft. bgs					Interval 13.0-15.0 collected for laboratory analysis	13.0
							13.5
							14.0
							14.5
							15.0

Boring completed at depth of 15 ft. bg

LOG OF BORING
SB5

Client:		Hunter Roberts	Date/Time Started:		6/22/2015	14:27	Drilling Co.:		Aquifer Drilling & Testing, Inc.
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	14:44	Rig Type:		Geoprobe
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:		Direct Push
Project Location:		Bronx, NY 10462	Completion Depth:		15 Feet Below Grade (ft. bg)		Sample Device:		Acetate Liner
Project Number:		14099	Depth to Water:		9 ft.		Logged by:		JL
Boring Location: Refer to Figure 2									
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)		
SB5 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	43	3.8	14:27	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0		
SB5 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5 1.0 1.5		
							2.0 3.0 3.5 4.0 4.5		
							5.0 5.5 6.0		
SB5 (7.0'-9.0')	7.0-9.0 ft. bgs		42	1.2	14:35	Interval 7.0-9.0 ft. bgs submitted for laboratory analysis	7.0 7.5 8.5		
							1.9	9.0 9.5 10.0 10.5 11.0 11.5 12.0	
			Wet brown fine to medium sand and silt with some fine gravel	40	1.3	14:44	Interval 13.0-15.0 collected for laboratory analysis	13.0 13.5 14.0 14.5	
			Wet dark grey coarse sand and silt with fine gravel						
SB5 (13.0'-15.0')	13.0-15.0 ft. bgs		Wet dark grey coarse sand and silt with fine gravel. Interval was stained, with a sheen and slight petrol odor						
Boring completed at depth of 15 ft. ba							15.0		

LOG OF BORING
SB6

[illegible]

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LOG OF BORING
SB7

Client:		Hunter Roberts	Date/Time Started:		6/19/2015	14:25	Drilling Co.:	Aquifer Drilling & Testing, Inc.		
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	8:15	Rig Type:	Geoprobe		
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:	Direct Push		
Project Location:		Bronx, NY 10462	Completion Depth:		15 Feet Below Grade (ft. bg)		Sample Device:	Acetate Liner		
Project Number:		14099	Depth to Water:		13 ft. bgs		Logged by:	JL		
Boring Location: Refer to Figure 2										
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)			
SB7 (0.0'-2.0')	0.0-2.0 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel (petrol odor and staining from 1.0 to 1.5 feet bgs)	20	27.2	6/19 14:25	Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.0			
SB7 (1.0'-1.5')	1.0-1.5 ft. bgs					Interval 1.0-1.5 ft. bgs submitted for VOC analysis	1.0			
							1.5			
							2.0			
							2.5			
				39	19.5	6/22 8:02		3.0		
								3.5		
								4.0		
								4.5		
								5.0		
			48	1.4	8:08		5.5			
								6.0		
								6.5		
								7.0		
								7.5		
							8.0			
							8.5			
				2.5			9.0			
							9.5			
SB7 (10.0'-13.0')	10.0-13.0 ft. bgs		43	2.0	8:15	Interval 10.0-13.0 collected for laboratory analysis	10.0			
								10.5		
								11.0		
								11.5		
								12.0		
							12.5			
SB7 (13.0'-15.0')	13.0-15.0 ft. bgs	Wet moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel		1.0		Interval 13.0-15.0 collected for laboratory analysis	13.0			
							13.5			
							14.0			
							14.5			
							15.0			
Boring completed at depth of 15 ft. ba								15.5		

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LOG OF BORING
SB8

Client:		Hunter Roberts	Date/Time Started:		6/19/2015	11:37	Drilling Co.:		Aquifer Drilling & Testing, Inc.	
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:		6/22/2015	12:10	Rig Type:		Geoprobe	
Project Location:		1160 Commerce Avenue	Elevation & Datum:		N/A		Drill Method:		Direct Push	
Project Location:		Bronx, NY 10462	Completion Depth:		15 Feet Below Grade (ft. bg)		Sample Device:		Acetate Liner	
Project Number:		14099	Depth to Water:		9 ft.		Logged by:		JL	
Boring Location: Refer to Figure 2										
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)			
SB8 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	25	<1	11:37	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0			
SB8 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5 1.0 1.5			
							2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5			
			20	<1	11:44		6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 10.5 11.0 11.5 12.0 12.5			
SB8 (6.0'-9.0')	6.0-9.0 ft. bgs					15	<1	11:47	Interval 6.0-9.0 ft. bgs submitted for laboratory analysis	13.0 13.5 14.0 14.5 15.0
			Wet brown and dark brown fine to medium sand and silt, organic peaty odor	27	<1	12:04		15.5 16.0 16.5 17.0 17.5 18.0 18.5 19.0 19.5 20.0 20.5 21.0 21.5 22.0 22.5		
							Wet fine to medium sand and fine gravel			
SB8 (13.0'-15.0')	13.0-15.0 ft. bgs		Slightly moist dark grey silt	60	14.7	12:10	Interval 13.0-15.0 collected for laboratory analysis	23.0 23.5 24.0 24.5 25.0		
Boring completed at depth of 15 ft. ba								25.5		

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LOG OF BORING
SB9

Client:	Hunter Roberts	Date/Time Started:	6/19/2015	13:30	Drilling Co.:	Aquifer Drilling & Testing, Inc.		
Project Name:	Proposed MTA Paratrasit Facility	Date/Time Completed:	6/19/2015	14:10	Rig Type:	Geoprobe		
Project Location:	1160 Commerce Avenue	Elevation & Datum:	N/A		Drill Method:	Direct Push		
Project Location:	Bronx, NY 10462	Completion Depth:	15 Feet Below Grade (ft. bg)		Sample Device:	Acetate Liner		
Project Number:	14099	Depth to Water:	9 ft.		Logged by:	JL		
Boring Location:	Refer to Figure 2							
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)	
SB9 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	23	<1	13:30	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0	
SB9 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5	
							1.0	
			19	2.8	13:40		1.5	
							2.0	
							2.5	
								3.0
								3.5
								4.0
								4.5
								5.0
								5.5
								6.0
								6.5
								7.0
					7.5			
					8.0			
					8.5			
SB9 (9.0'-12.0')	9.0-12.0 ft. bgs	18	<1	13:58	Interval 9.0-12.0 ft. bgs submitted for laboratory analysis	9.0		
						9.5		
		Wet brown fine gravel w/ fine to medium sand	60	<1	14:10	Interval 13.0-15.0 collected for laboratory analysis	10.0	
							10.5	
		11.0						
		11.5						
		12.0						
		12.5						
SB9 (13.0'-15.0')	13.0-15.0 ft. bgs	Moist dark grey silt					13.0	
							13.5	
							14.0	
							14.5	
							15.0	
Boring completed at depth of 15 ft. bg								

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LOG OF BORING
SB10

Client:		Hunter Roberts	Date/Time Started:	6/19/2015	12:28	Drilling Co.:	Aquifer Drilling & Testing, Inc.	
Project Name:		Proposed MTA Paratrasit Facility	Date/Time Completed:	6/19/2015	13:10	Rig Type:	Geoprobe	
Project Location:		1160 Commerce Avenue	Elevation & Datum:	N/A		Drill Method:	Direct Push	
Project Location:		Bronx, NY 10462	Completion Depth:	15 Feet Below Grade (ft. bg)		Sample Device:	Acetate Liner	
Project Number:		14099	Depth to Water:	8.5 ft.		Logged by:	JL	
Boring Location:		Refer to Figure 2						
Sample No.	Sample Interval	Description	Recovery (inches)	PID (ppm)	Time	Comments	Depth (ft. b.g.)	
SB10 (0.0'-0.5')	0.0-0.5 ft. bgs	Slightly moist brown fine to medium sand w/ some silt, urban fill (brick, garbage) and fine gravel	29	<1	12:28	Interval 0.0-0.5 ft. bgs submitted for VOC analysis	0.0	
SB10 (0.0'-2.0')	0.0-2.0 ft. bgs					Interval 0.0-2.0 ft. bgs submitted for SVOC, PCB, pesticide and metal analysis	0.5	
							1.5	
			26	4.2	12:34		2.0	
							2.5	
							3.0	
							3.5	
							4.0	
				4.5				
				5.0				
			5.5					
			6.0					
SB10 (6.0'-8.5')	6.0-8.5 ft. bgs		20	1.3	12:45	Interval 6.0-8.5 ft. bgs submitted for laboratory analysis	6.5	
							7.0	
							7.5	
							8.0	
		Moist dark grey silt, sulfur/organic odor	60	1.4	12:55		8.5	
		Moist dark grey silt, camphor or naptha odor					9.0	
							9.5	
							10.0	
							10.5	
							11.0	
							11.5	
			12.0					
			12.5					
SB10 (13.0'-15.0')	13.0-15.0 ft. bgs	Moist dark grey silt, strong camphor or naptha odor	29	13.6	13:10	Interval 13.0-15.0 collected for laboratory analysis	13.0	
							13.5	
							14.0	
							14.5	
Boring completed at depth of 15 ft. bg							15.0	

APPENDIX D

**ANALYTICAL LABORATORY REPORTS AND
DATA USABILITY SUMMARY REPORTS
ON COMPACT DISC**