SELF-IMPLEMENTING PCB CLEANUP AND DISPOSAL PLAN

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461
DASNY Project Number 3816609999

Prepared For:

NEW YORK STATE OF OPPORTUNITY. | Office of Mental Health

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TRC

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 DESCRIPTION OF COMPLETED AND PROPOSED PCB ACTIVITIES 2
2.1 Completed PCB Activities 2
2.2 Proposed PCB Activities 3
3.0 SITE DESCRIPTION AND LOCATION 4
3.1 Conceptual Site Model for PCB Contamination 4
3.2 Applicable Regulations 5
3.2.1 Federal PCB Regulations 5
3.2.2 State Permits and Regulations 5
4.0 SITE HISTORY 7
4.1 Owner/Operator and Operations History 7
4.2 Release History 7
4.3 Interim Remediation Activities 8
5.0 SITE PCB ANALYTICAL RESULTS SUMMARY 9
5.1 Concrete and Soil Investigation 9
5.2 Groundwater Investigation 9
5.3 Indoor Air Monitoring 10
6.0 INVESTIGATION ANALYTICAL RESULTS AND FINDINGS 11
6.1 Concrete & Soil Analytical Results 11
6.2 Groundwater Analytical Results 12
6.3 Supplemental Sampling Outside of Transformer Rooms 12
6.4 Survey and Sampling of Equipment and Miscellaneous Items in Transformer Rooms 12
6.4.1 Asbestos 13
6.4.2 Lead Paint Survey for OSHA Worker Exposure 13
6.4.3 RCRA Metals 13
6.4.4 PCBs 13
6.4.5 Porous Sediment/Debris 14
6.4.6 Non-Porous Materials 14
6.4.7 Transformer Oil and Empty Transformers 14
6.4.8 Manufactured Non-Liquid Building Materials 14
6.4.9 Fluorescent Light Ballasts 15
6.5 Nature and Extent of PCB Contamination 15
6.6 Data Review 15
6.6.1 Data Evaluation 15
7.0 SELF-IMPLEMENTING CLEAN UP AND DISPOSAL PLAN 16
7.1 Post-Remedial Verification Sampling 17
7.1.1 Concrete Sampling 17
7.1.2 Soil Sampling 17
7.2 PCB Removal, Site Restoration, Cap Construction and Deed Restriction 18
7.2.1 PCB Removal Uncertainties 18
7.3 Waste Characterization, Transport, and Disposal 18
7.3.1 PCB Waste Disposal 18
7.4 QA/QC Program 20
7.4.1 QC Sample Collection 20
7.5 Equipment Decontamination 20
7.5.1 Expendable Equipment 20
7.5.2 Moveable Equipment Decontamination 20
8.0 DOCUMENTATION 21

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8.1 Transport and Treatment/Disposal Certification 21
8.2 Deliverables 21
8.3 Recordkeeping 21
9.0 NOTIFICATION AND CERTIFICATION 22
10.0 LIMITATIONS 23
11.0 REFERENCES 23
12.0 PROJECT SCHEDULE 24

FIGURES

Figure 1 - Title Sheet
Figure 2 - PCB Concentrations in Concrete Transformer Room 1
Figure 3 - PCB Concentrations in Concrete Transformer Room 2
Figure 4 - PCB Concentrations in Soil Samples Transformer Room 1
Figure 5 - PCB Concentrations in Soil Samples Transformer Room 2
Figure 6 - Transformer Room 1- Limits of Concrete and Soil Removal and Post Remediation Concrete and Soil Sample Locations
Figure 7 - Transformer Room 2- Limits of Concrete and Soil Removal and Post Remediation Concrete and Soil Sample Locations
Figure 8 - Post Remediation Backfill and Concrete Installation Details

TABLES

Table 1 - Summary of Soil Results PCBs Building 1 Transformer Room No. 1
Table 2 - Summary of Soil Results PCBs Building 1 Transformer Room No. 2
Table 3 - Summary of Concrete Results PCBs Building 1 Transformer Room No. 1
Table 4 - Summary of Concrete Results PCBs Building 1 Transformer Room No. 2

APPENDICES

Appendix A – January 2026 Remedial Work Plan
Appendix B - March 2019 Record of Decision
Appendix C – February 2020 Minor Record of Decision Modification
Appendix D – November 2016 Revised Remedial Investigation Report
Appendix E – March 2026 Pre-Remedial Transformer Room Sampling Report
Appendix F – February 2019 Revised Feasibility Study

1.0 INTRODUCTION

OMH is soliciting United States Environmental Protection Agency (EPA) approval under 40 CFR § 761.61(a) to leave in-place PCB remediation waste with less than or equal to (≤) 10 parts per million (ppm) beneath a new concrete cover ("cap") and a minimum of 2 feet of clean soil (PCB concentrations less than (<) 1 ppm) to meet the compliant cap requirements under 40 CFR **§** 761.61 (a)(7). Cleanup of the PCBs to ≤ 10 ppm with a compliant cap will meet the *high occupancy area* cleanup requirements under 40 CFR § 761.61(a)(4)(i). A deed notice also will be recorded per 40 CFR § 761.61(a)(8).

The Site is a State Superfund site subject to a New York State Department of Environmental Conservation (NYSDEC) Administrative Record of Decision (ROD) dated March 2019. A Remedial Work Plan (RWP) outlining the scope of work for remedy implementation was submitted to and approved by NYSDEC on January 23, 2026. See Appendix A and Appendix B for ROD and RWP, respectively.

There were no observed PCB groundwater concerns identified during the Remedial Investigations performed at this Site. Thus, no remedial actions are necessary for groundwater, with exception of the proposed environmental easement and restriction of groundwater use at the Site to protect human health per the ROD requirements.

The source of PCB impacts to concrete and soil within the proximity of the two (2) transformer rooms located at the Site is associated with historic use of PCB transformers which operated until their replacement with non-PCB silicone-based transformers. The prior transformers operated in the transformer rooms contained PCB dielectric fluid, which leaked, impacting the concrete floors beneath and near the transformers and the soils below the building floor as described below in Section 2.0. Work completed to-date has included sampling, site monitoring, and interim remedial measures described in Section 2.1 of this submittal.

The contact for Site owner and its parties responsible for conducting response action is provided below:

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2.0 DESCRIPTION OF COMPLETED AND PROPOSED PCB ACTIVITIES

The NYSDEC has classified this State Superfund Site No. 203005 as a Class 3 Site based on the ROD Modification Memo dated February 11, 2020. The Class 3 is assigned to a site at which contamination does not presently and is not reasonably foreseeable to constitute a significant threat to public health or the environment.

NYS OMH entered a Consent Order on February 23, 2012, Index # R2-0668-06-11; the Order obligates the party responsible to implement the RWP approved by DEC on January 23, 2026, as specified in the ROD. The ROD is based on the following:

1. *Pre-Remedial Transformer Room Sampling Report, March 30, 2026*
2. *NYSDEC Remedial Work Plan Approval Letter for the Bronx Psychiatric Center site,* dated January 23, 2026
3. *Remedial Work Plan for Transformer Rooms Nos. 1 & 2 Bldg. 1, Bronx Psychiatric Center,* dated January 2026, prepared by TRC
4. *Administrative Record of Decision Modification Memo for the Bronx Psychiatric Center,* dated February 11, 2020, prepared by NYSDEC
5. *Record of Decision for the Bronx Psychiatric Center,* dated March 2019, prepared by NYSDEC.
6. *Feasibility Study Report*, dated February 2019, prepared by URS
7. *Remedial Investigation Report*, dated November 2016, prepared by URS
8. *Remedial Investigation Work Plan*, dated October 2013, prepared by URS
9. *Citizen Participation Plan,* dated March 2013 (revised June 2013), prepared by URS
10. *Order on Consent*, Index No. R2-0668-06-11, between the NYSDEC and New York State Office of Mental Health, executed on February 23, 2012
11. *Preliminary Site Assessment Report*, dated December 2000, prepared by Dvirka and Bartilucci

2.1 Completed PCB Activities

Historic Site investigations found that PCB oil from transformers located at the Site prior to 1993 had leaked onto the concrete floors and into the underlying soil in both Transformer Rooms. At that time, OMH, NYSDEC, New York State Department of Health (NYSDOH) and EPA agreed to defer remediation of the area until an anticipated major renovation project was completed due to safety considerations. In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both Transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fans and exterior walls and the space between the floors and electrical equipment were sealed, and annual surface wipe sampling and maintenance of the epoxy coating in both Transformer Rooms were conducted beginning in May 1995 but ceased in October 2023, when vandalism reportedly damaged the equipment which resulted in damage to electrical equipment and power distribution systems. No additional remedial actions have been performed at the Site since that time.

2.2 Proposed PCB Activities

PCB concentrations > 1 ppm remain at the Site within concrete floors and surface and subsurface soils situated below the transformer rooms. This proposed PCB self-implementing cleanup and disposal plan ("SIP") per 40 CFR 761.61(a) includes the following actions:

- Remove the concrete floor to the existing grade beams in the Transformer Rooms after the non-PCB transformers and electrical equipment have been removed. All dust and debris and any vandalized equipment or other materials containing regulated waste, including asbestos (wire insulation and electrical panel backing) and PCBs (light fixture ballasts) will be legally disposed.
- Excavate PCB-impacted soil to the extent that PCB concentrations in soil are less than (<) 1 ppm at the surface to 2 feet below the surface, and < 10 ppm at depths greater than 2.0 feet below the surface. A permanent cap will be constructed according to requirements of 40 CFR § 761.61(a)(7). As required under 40 CFR § 761.61(a)(8), a deed-notice will be filed for the Site to document Site conditions and use restrictions, as applicable, that includes an environmental easement and restriction of groundwater use at the Site to protect human health.

Per the NYSDEC Record of Decision dated March 2019, the implemented remedy will allow for restricted residential use of the property in the future. The restricted residential category allows for multi-family residential development under single ownership (i.e., apartments), as well as commercial or industrial uses. Single family housing shall not be allowed under the restricted-residential use category unless there is one certifying entity for the entire site, such as a Homeowners Association. The actual development would be controlled by local zoning regulations.

3.0 SITE DESCRIPTION AND LOCATION

The Bronx Psychiatric Center is located in an urban mixed-use area of Bronx County. There are currently 31 buildings on the campus, some of which were constructed approximately 65 years ago. The facility dates back to its opening in 1963 as Bronx State Hospital and was later renamed Bronx Psychiatric Center (BPC). The facility has served as a state-run psychiatric hospital providing inpatient, outpatient, and related psychiatric services. Surrounding uses outside the hospital campus include residential, commercial, light industrial, and utility and transportation rights-of-way.

For purposes of this SIP, the Site is defined as Transformer Rooms Nos. 1 & 2, located in Building No. 1. The Site occupies 0.1-acres on the 5-acre campus. Building No. 1 is constructed on piles to bedrock with pile caps under the building columns and perimeter walls. The transformer rooms are in the basement on the eastern side of the building at approximately 10 feet (ft) below the ground surface (bgs). Each Transformer Room has approximately 10 ft overhead clearance and a floor area measuring approximately 52-ft by 22-ft. See Figure 1.

Transformer Rooms No. 1 and No. 2 currently contain a total of four (4) out-of-service non-PCB Transformers which replaced two transformers which contained PCBs. The new transformers are in the original Transformer Rooms. Access to the transformer rooms is limited to facility maintenance personnel on an as-needed basis. Each transformer room can be accessed from the outside through a set of double doors in concrete-walled areaways. There are gates locked at the top of the areaways and the entrance room doors are also locked. Access to the rooms from inside the building is controlled by a series of locked basement doors and a single door for each transformer room. Given the limited accessibility, removal of the non-PCB transformers will be performed by hoisting the transformers from the basement with a crane onto a flat-bed truck for off-site recycling, reuse or disposal.

3.1 Conceptual Site Model for PCB Contamination

The presence of PCBs in the Site soil and concrete is believed to be related to the former use of PCB Transformers in the transformer rooms. Historic Site investigations found that PCB oil from transformers located at the Site prior had leaked onto the concrete floors and into the underlying soil in both Transformer Rooms. These PCB Transformers were reportedly replaced in February 1993 with non-PCB (silicone-based) transformers. In 1995 Interim Remedial Measures (IRM) were implemented that included encapsulation (sealing) of the concrete floors with a two-layer epoxy system. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed.

Annual inspections and PCB wipe sampling were performed at the Site until October 2023, when the Site was found to be vandalized resulting in damage to the transformers and other equipment and power distribution systems. Currently, Transformer Room No 1 contains a 13,800 – 480-volt double-ended unit substation, consisting of primary switches, two transformers, and switchgear; and Transformer Room No. 2 contains a 13,800 - 480-volt double-ended unit substation, consisting of primary switches, two transformers, and secondary switchgear, as well as switchgear serviced from Transformer Room No. 1.

3.2 Applicable Regulations

3.2.1 Federal PCB Regulations

Applicable regulations for the PCB remedial work to be conducted under this submittal are the Federal Toxic Substances Control Act (TSCA) PCB regulations found in Chapter 40 of the Code of Federal Regulations, Part 761 (40 CFR Part 761). State regulations refer to the Federal PCB regulations.

Sections of 40 CFR Part 761 applicable to the procedures and response actions completed and/or proposed as described in this submittal include:

- § 761.61 – PCB Remediation Waste. Provides cleanup and disposal options for PCB Remediation Waste.
- § 761.61(a). Specifies prescriptive cleanup and disposal requirements for PCB Remediation Waste.
- § 761.61(a)(7). Provides the construction specifications and requirements for compliant caps, if required. The Site area is a basement area that has a concrete floor underlain by soil; and PCB concentrations > 10 ppm will be removed under this proposed SIP. A compliant cap will be constructed.
- § 761.61(a)(8). Establishes a deed notice recording to document site conditions and use restrictions if PCB concentrations > 1 ppm are present on a property. This requirement will be met under this SIP and per the ROD.
- § 761.61(c) – Risk-Based Cleanup and Disposal. Under this authorization, EPA may approve changes or modifications to the sampling, cleanup, or disposal requirements for PCB Remediation Waste in a manner other than prescribed in § 761.61(a) or § 761.61(b) provided EPA finds that such change(s) or modification(s) does not pose an unreasonable risk of injury to human health or the environment.
- § 761.65(c)(9) – Storage requirements for Bulk PCB remediation waste or PCB bulk product waste at a clean-up site. If PCB remediation waste is to be stored on-site during the work proposed under this SIP, these requirements will apply.
- §§ 761.79(b) and (c) – Decontamination Standards and Procedures. Provides procedures and decontamination criteria that may be implemented for the decontamination of materials, equipment, and some environmental media.
- Subpart N – Cleanup Site Characterization Sampling for PCB Remediation Waste in Accordance with § 761.61(a)(2). Provides a method for collecting data for characterizing a PCB remediation waste cleanup site or for assessing the sufficiency of existing site characterization data.
- Subpart O – Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces in Accordance With § 761.61(a)(6). Specifies the sampling procedures to verify completion of the cleanup for self-implementing, onsite disposal of bulk PCB remediation waste and porous surfaces consistent with the levels of § 761.61(a)(4)(i) and (iii).
- Subpart J – General Records and Reports. Contains general recordkeeping requirements for management of PCBs.
- Subpart K – PCB Waste Disposal Records and Reports. Establishes requirements for handling and disposal of PCB waste, including notification and manifesting requirements.

3.2.2 State Permits and Regulations

Per the March 2019 ROD, all on-site soil which exceeds the restricted-residential soil cleanup objective (SCOs) for PCBs (1 ppm), as defined by 6 NYCRR Part 375-6.8 and/or the presumptive remedy for PCBs as defined in CP-51 (1 ppm in the upper 2 feet, 10 ppm below 2 feet) will be excavated and transported off-site for disposal. Clean fill will be brought in to replace the excavated soil and to re-establish site grades and to accommodate installation of a cover system (i.e., clean soil and concrete caps).

The Remedial Work Plan (RWP) dated January 2026 was approved by NYSDEC on January 23, 2026. The NYSDEC Consent Order dated February 23, 2012, Index # R2-0668-06-11 obligates the responsible party (OMH) to implement the RWP approved by DEC on January 23, 2026, as specified in the ROD.

The RWP provides for in-place disposal of PCB-impacted soil at < 10 ppm located at > 2 ft bgs under a permanent clean cap. PCB-impacted concrete and shallow soil (soil within the top 2 ft) with > 1 ppm PCBs will be removed; and subsurface soil (soil > 2 ft) with > 10 ppm will be removed and disposed off-site as PCB remediation waste. The PCB cleanup and disposal activities as proposed in this SIP will meet these requirements. A clean cap will be constructed according to requirements of 40 CFR § 761.61(a)(7). In addition, and as required under 40 CFR § 761.61(a)(8), a deed notice will be filed for the Site to document Site conditions and use restrictions. Off-site disposal of PCB remediation waste will meet the requirements and objectives as established under 40 CFR § 761.61(a)(5).

Depth to groundwater is approximately 11 feet below ground surface and 3 feet below the basement slab. Soil excavation is expected to extend to depths at or below the depth of groundwater which will require a temporary discharge of groundwater to a sanitary, storm, or combined sewer. Active groundwater pumping is anticipated at the Site in order to lower the groundwater table to facilitate implementation of the remedial work. This will require a groundwater dewatering plan to comply with the Sewer Use Regulations established in Title 15 of the Rules of the City of New York (RCNY) Chapter 19. As there is potential for an estimated discharge of groundwater greater than 10,000 gallons per day, a groundwater discharge permit from the New York City Department of Environmental Protection (NYCDEP) will be required. The permit would allow the discharge of groundwater treated to the city sewer system (Sanitary, Storm or Combined sewers) for a limited period of time. The selected contractor shall be required to secure a NYCDEP de-watering permit and required approval from NYSDEC. Per the proposed Contract Specifications Section 02 61 00 Removal, Transport and Disposal of Contaminated Soil, the treatment process for contaminated water shall include at a minimum, a fractionation tank, oil-water separator, and granular activated carbon adsorption system

The groundwater will be treated onsite, sampled and analyzed by an ELAP certified laboratory to confirm PCB concentrations in the effluent are below 0.5 micrograms per liter (µg/l) or parts per billion (ppb) prior to discharge to comply with the NYCDEP and EPA decontamination requirements (see 40 CFR § 761.79(b)).

4.0 SITE HISTORY

4.1 Owner/Operator and Operations History

The Site is owned and operated by New York State Office of Mental Health (OMH). The Bronx Psychiatric Center campus dates back to its opening in 1963 as Bronx State Hospital. In 1969, the Bronx Children's Hospital was added to the campus, which later became the New York City Children's Center. The campus was renamed Bronx Psychiatric Center (BPC) and has served as a state-run psychiatric hospital providing inpatient, outpatient, and related psychiatric services.

The Bronx Psychiatric Center campus is located in a mixed-use area of Bronx County. The current zoning of the property is R-5, which is residential that includes multifamily housing. Surrounding uses outside the hospital campus include residential, commercial, light industrial, and utility and transportation rights-of-way.

There are currently 31 buildings on the campus, some of which were constructed approximately 65 years ago. Building No. 1 (which houses Transformer Room Nos. 1 and 2) is currently vacant. The nearest residential structure from Building No. 1 is approximately 1,000 feet away east of the Hutchinson River Parkway.

Building No. 1 houses the two transformer rooms ("the Site") and is currently vacant. The Site has been used as transformer rooms for the psychiatric center for approximately 65 years and no longer used for electric power supply to the building. The transformers containing PCB oils were replaced with non-PCB transformers in 1993. Leakage/spills from the former PCB transformers are believed to be the source of PCB contamination found in the concrete and soils within the Site area.

In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between the ventilation fans and exterior walls and the space between the floors and electrical equipment were sealed. Annual surface wipe sampling and maintenance of the epoxy coating generally were conducted until October 2023 when the Site was found to be vandalized resulting in damage to equipment and power distribution systems. The Site has not been used since this time, and the non-PCB transformers at the Site are inactive and will be removed for recycling, reuse or disposal.

4.2 Release History

The prior transformers used at the Site until 1993 contained PCB dielectric fluid, which leaked within the transformer rooms, impacting the concrete floors beneath and near the transformers and the soil below the concrete floor. The former PCB transformers were replaced with non-PCB transformers, which are currently inactive (disconnected) and will be removed and legally disposed/reused/recycled of as part of this remedial work.

4.3 Interim Remediation Activities

In 1995, an interim remedial measure (IRM) was conducted under the direction of DEC. An IRM is an action that may be taken to address a source of contamination or exposure pathway until such time as a remediation can be selected and implemented.

During late 1993 to early 1994, the state and EPA agreed to defer remediation of the Site until a major renovation was planned for the Site. The primary reason for deferring the remediation was the concern that remediation in the Site could cause structural concerns while the building was in use and the transformers were active.

The IRM at the Site was limited to sealing the concrete floors by encapsulation with a two-layer epoxy system in both Transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fan and exterior walls and the space between the floors and electrical equipment were sealed, and indoor air sampling and annual surface wipe sampling and maintenance of the epoxy coating were conducted to monitor Site conditions. The results of the wipe and air sampling indicate that the IRM was implemented effectively to limit exposure and direct contact. A summary of the air and wipe sampling data is included in the November 2016 Remedial Investigation Report (RIR) included as Appendix D to this submittal.

5.0 SITE PCB ANALYTICAL RESULTS SUMMARY

Site investigation work conducted at the Site is summarized below and is described in more detail in the November 2016 RIR. Site investigations were conducted per the NYSDEC requirements and direction.

5.1 Concrete and Soil Investigation

1) Concrete. The concrete floor measures from 6.5-inches to 18-inches in thickness with PCB concentrations ranging from non-detect to 68,000 ppm. Concrete samples in 1993 were collected by saw cutting the concrete floor and collecting samples from the surface of the floor. The samples that were collected in 2000 utilized a portable coring machine with a 3-inch diameter core bit.

2) Soil. The soil beneath the concrete floor contains PCB concentrations ranging from non-detect to 23,000 ppm sampled in various locations from below the concrete slab to a depth of 6 feet below the slab. During the RI, the extent of PCB concentrations > 10 ppm in the subsurface soil was not fully characterized at all locations. (see Section 4). Soil samples typically were collected at two soil depth intervals at each sample location. During the 1993 sampling, soil beneath the concrete floor was the focus of the investigation. During the 2000 sampling event, the soil beneath the concrete floor was sampled in addition to soil located at former floor drains. All soil samples collected in 1993 were analyzed for PCBs. In 2000, PCBs in soil were quantified in the field using immunoassay kits. For confirmation, 12 soil samples (approximately 20% of the total soil samples) were selected for laboratory analysis.

3) Surface wipes. In 1993 five wipe samples were collected from the floor in front of the transformer pad in Room No. 2 to investigate an oily residue observed on the floor. PCB concentrations in the wipes ranged from 8.7 to 360 µg/100 cm^2. In 1995, the floors in both transformer rooms were encapsulated (sealed) with a two-layer epoxy system. The entire floor in Room No. 1 was epoxy sealed and only a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. In May 1995, post encapsulation wipe sampling was conducted. PCBs were detected in all eight wipe samples collected (1.0 µg/100 cm^2 to 7.8 µg/100 cm^2) at concentrations less than the TSCA cleanup standard for PCBs in wipe samples of 10 µg/100 cm^2.

5.2 Groundwater Investigation

Soils beneath the site consist of urban fill and the groundwater flows to the northeast. Depth to groundwater is approximately 11 feet below ground surface and 3 feet below the basement slab. NYSDEC has established a groundwater quality standard for PCBs of 0.09 µg/L (or part per billion (ppb)). Groundwater was monitored semi-annually for approximately 10 years from 1996 to 2005. Additional samples from downgradient monitoring wells were also collected and analyzed in 2014. There were no detections of PCBs, with one exception in November 2003. The PCB concentration was 3.8 parts per billion (ppb). The well was redeveloped and the PCB detection in MW-3 was never repeated.

Data does not indicate any off-site impacts in groundwater related to this site. Per the ROD, no Site-related groundwater contamination of concern was identified during the Remedial Investigation (See Section 4.2). Therefore, no remedial actions are required for groundwater.

5.3 Indoor Air Monitoring

Indoor air sampling occurred once per year for approximately 10 years from 1995 until 2006. There were no detections of PCBs, with one exception in May 2004. The PCB concentration was 0.16 micrograms per cubic meter ($\mu g/m^3$), which was just above the laboratory reporting limit. See Appendix D November 2016 RIR, for air monitoring data.

6.0 INVESTIGATION ANALYTICAL RESULTS AND FINDINGS

A Remedial Investigation (RI) was conducted at the Site and the Remedial Investigation Report, dated November 2016, was prepared by URS. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the Site. The field activities and findings of the investigation are described in the RI Report. The findings presented in the RI were compared to media-specific Standards, Criteria and Guidance (SCG) established for groundwater, surface water, sediments, and soil. The NYSDOH developed SCGs for drinking water and soil vapor intrusion.

The following general activities were conducted during the RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of waste,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment, and
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this Site includes data for:

- groundwater
- soil
- concrete
- indoor air

6.1 Concrete & Soil Analytical Results

PCBs were the main contaminant of concern identified during the RI for both the concrete slab and underlying soil at the Site. Tables 1 through 4, excerpted from the 2016 Remedial Investigation Report, provide detailed sampling results which are attached for reference. Figures 2 through 5 show the concrete and soil sampling locations and PCB concentrations at each sample location.

Transformer Room No. 1

PCB concentrations in soil ranged from non-detect to 23,000 ppm. The highest PCB concentration of 23,000 ppm was found in the top 2 ft below concrete at the former location of Drain 01. As previously indicated the vertical extent of PCBs > 10 ppm in the subsurface soil was not determined at location S-1; however, this is accounted for in the proposed excavation plan. For concrete in Room No. 1, the PCB concentrations in the concrete floor ranged from non-detect to 21,000 ppm. The highest PCB concentration of 21,000 ppm was found in the top of concrete at sample location S-1 TOP. Vertical delineation of concrete PCB concentrations is not necessary given that vertically the entire thickness of the PCB-impacted concrete will be removed for off-site disposal as ≥ 50 ppm PCB remediation waste.

Transformer Room No. 2

PCB concentrations in soil ranged from non-detect to a high of 49 ppm at sample location S35W7 in the 2-3 ft below floor interval. Delineation of the > 10 ppm PCB-impacted soil was not fully delineated in this area and is accounted for in the proposed excavation. For concrete in Room No. 2, PCB concentrations in the concrete floor ranged from non-detect to 68,000 ppm. The highest PCB concentration of 68,000 ppm

was found in the top of concrete at sample S35W5 TOP. Consistent with Transformer Room No. 1 concrete removal, the entire thickness of the PCB-impacted concrete will be removed for off-site disposal as ≥ 50 ppm PCB remediation waste.

6.2 Groundwater Analytical Results

OMH directed the performance of required groundwater monitoring for PCBs at the Site and the monitoring results were reported to NYSDEC. Initially four monitoring wells (MW-1 through MW-4) were constructed. Subsequently two additional wells (MW-5 and MW-6) were constructed. Monitoring well locations are shown on Figure 2 in the November 2016 Remedial Investigation Report (see Appendix D).

Groundwater was monitored semi-annually for approximately 10 years primarily from MW-2, MW-3, MW-5, and MW-6. PCBs were not detected in any of the samples over this time with exception of the November 2003 sampling event when PCBs were detected at 3.8 ug/L in MW-3. Subsequently, the well was investigated, redeveloped, and resampled for PCBs in February 2004. PCB concentrations were not detected in MW-3 during the February 2004 sampling event.

There were no observed PCB groundwater concerns identified during the Remedial Investigations performed at this Site. Therefore, no remedial actions are prescribed for groundwater, except for the proposed environmental easement and restriction of groundwater use at the Site to protect human health per the ROD requirements/conditions.

6.3 Supplemental Sampling Outside of Transformer Rooms

In 2014, soil samples were collected for PCBs outside (downgradient) of Transformer Room No. 1. PCB concentrations ranged from non-detect to 0.12 mg/Kg, indicating that soil remediation for PCBs outside the Transformer Rooms is not required.

6.4 Survey and Sampling of Equipment and Miscellaneous Items in Transformer Rooms

In 2026, a hazardous material survey and sampling program were conducted per the approved 2026 RWP for asbestos, lead paint, and RCRA (Resource Conservation and Recovery Act) metals and PCBs. Site equipment and materials identified, quantified, and/or sampled are summarized below and are detailed in the Pre-Remedial Transformer Room Sampling Report, dated March 30, 2026 (see Appendix E Tables 1 through 9).

- Suspect Asbestos-containing materials:
  - Miscellaneous Materials - suspect ACM including, but not limited to, electrical wire and cable insulation, electrical panel board, and cable conduit sealant.
- Suspect Lead-containing and lead-based paint coated materials.
- Potential RCRA metal-contaminated non-metallic porous floor sediment/debris
- Potential PCB-contaminated floor sediment/floor debris (no liquids were present at the time of the survey/sampling)

- Potential PCB-containing manufactured building materials including ventilation louver caulk and black sealant on main electrical service panel and contaminated non-porous surfaces (e.g., steel panels located near/on floor)
- Transformer Oil
- Other materials including:
  - Potentially PCB-containing materials, such as light-fixture ballasts and capacitors
  - Lamps, such as fluorescent and mercury vapor

6.4.1 Asbestos

Survey, sampling and analytical procedures were performed in general accordance with the U.S. Environmental Protection Agency's (EPA's) NESHAP 40 CFR 61 Subpart M and Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763, and New York State Department of Labor Industrial Code Rule 56 (ICR 56). Three materials were identified to be Asbestos-Containing Materials including wire insulation, electrical panel boards, and sealant materials.

6.4.2 Lead Paint Survey for OSHA Worker Exposure

As the proposed remedial activities could disturb lead-based coatings found within the Site area that could affect worker exposure within the work area during remediation, the interior and exterior areas where the remedial work will be conducted were surveyed for lead paint using a Viken Pb200e, which is a state-of-the-art handheld X-ray fluorescence (XRF) analyzer. In addition to the field readings, four suspect paint chip samples were collected from selected materials (e.g., coated steel, wallboard, and concrete) for laboratory analysis. Paint on equipment and other materials was found to contain lead at concentrations which will mandate compliance with the OSHA 29 CFR 1926.62 Lead in Construction rule during remedial work.

6.4.3 RCRA Metals

Materials to be removed during the remediation that contain heavy metals are subject to the requirements under both the NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371) and the USEPA RCRA Hazardous Waste Management regulations (40 CFR Parts 260 through 268). Bulk samples of non-metallic porous floor debris were collected for Toxicity Characteristic Leaching Procedure (TCLP) and total RCRA-8 metal analysis.

One representative sample of floor debris was collected from each Transformer Room. The TCLP results for Transformer Room 1 found elevated levels of Cadmium in the debris. TCLP sample results for Transformer Room 2 found elevated levels of Cadmium and Lead. Total Metals analysis also found detectable levels of Barium, Cadmium, Chromium, Lead, Mercury, and Silver. It is expected that the porous debris and sediment material on the floor of the transformer rooms would be characterized as hazardous waste for leachable lead and cadmium for disposal.

6.4.4 PCBs

Suspect equipment, building materials, and debris were identified during the survey and sampled for PCBs. A summary of the results follows and is more fully detailed in the Pre-Remedial Transformer Room Sampling Report, dated March 30, 2026 (Appendix E).

6.4.5 Porous Sediment/Debris

Bulk samples of porous floor sediment/debris were collected and analyzed for total PCBs per EPA Methods 3540C (extraction) and 8082A (analysis). One representative sample of floor sediment/debris was collected from each Transformer Room. The Transformer Room No. 1 sediment/debris contained a PCB concentration of 62.8 ppm; and Transformer Room No. 2 sediment/debris contained a PCB concentration of 19.0 ppm.

6.4.6 Non-Porous Materials

Wipe samples were collected to determine the concentrations of PCBs on non-porous metallic material surfaces and scrap metal. Surface wipe samples were compared to EPA's high occupancy wipe sample criteria of 10 µg/100 cm^2 in 40 CFR § 761.61(a)(4)(ii) and NYSDEC 6 NYCRR 371.4(e). Three (3) out of 12 samples were found to contain PCBs above the high occupancy wipe sample criteria. These PCB results were associated with equipment/scrap metal located on/near the floor. As a result, scrap metal and non-porous metallic material located on/near the floor and removed from the transformer rooms prior to demolition of the concrete slab will be managed as ≥ 50 ppm PCB remediation waste and as a NYSDEC hazardous waste. Alternatively, these non-porous surfaces may be decontaminated to meet the non-porous surfaces level for high occupancy unrestricted use at 40 CFR § 761.61(a)(4)(ii).

6.4.7 Transformer Oil and Empty Transformers

Four out-of-service transformers are located in the Transformers Rooms; two in Room No. 1 and two in Room No. 2. While all four transformers were installed in 1993, all four transformers were sampled to confirm the PCB concentration for removal and disposal.

During the survey, only the two transformers in Room No. 1 contained oil and the oil was collected and analyzed for PCBs per EPA Methods 3580A (extraction) and 8082A (analysis). Duplicate oil samples were collected from each transformer and sent to a second laboratory for PCB analysis by ASTM D4059-91, a method used for the quantitative determination of PCBs in mineral insulating oil and askarels. Laboratory PCB results for all samples were reported as non-detected at less than 1 mg/Kg.

The two transformers in Room No. 2 were empty without drain plugs and when opened contained no free oil to sample; and surface wipe samples were collected and analyzed for PCBs per EPA Methods 3540C (extraction) and 8082A (analysis). Duplicate wipe samples were collected from each transformer and sent to a second laboratory for PCB analysis by EPA Method 8082A. All wipe sample PCB results were reported below State and Federal regulatory thresholds. Three of the four wipe sample PCB results were reported as non-detect or < 1 µg/100 cm^2. One wipe sample collected from Transformer Serial No. 1291023 contained a PCB concentration at 9.2 µg/100 cm^2.

Other than the Transformer Room No. 1 transformers, no other equipment was identified which would contain residual oil, with exception of the fluorescent light ballasts (see Appendix E Paragraph 2.5).

6.4.8 Manufactured Non-Liquid Building Materials

During the survey, a suspect grey louver caulk and a black sealant (found at the main electric service panels) were identified and a representative sample of each was collected for PCB analysis per EPA Methods 3540C

(extraction) and 8082A (analysis). The PCB concentrations in the black sealant were reported at 61.1 ppm and in the caulk at 11.0 ppm.

6.4.9 Fluorescent Light Ballasts

At the time of the survey, fluorescent light ballasts (FLBs) were inspected, and no leaking ballasts were identified. Some ballasts were labelled as "No PCBs" while others were not marked with the "No PCBs" label. All ballasts will be assumed to contain PCB concentrations ≥ 50 ppm and will be managed per State and Federal requirements.

6.5 Nature and Extent of PCB Contamination

PCB concentrations were identified above both federal and state regulatory thresholds in Transformer Rooms 1 and 2.

- PCB concentrations ≥ 1 mg/kg (or ppm) were determined to be present in both the concrete floor and soil to an estimated depth of 8 feet below the concrete in Transformer Room 1 and to 6 feet below the concrete in Transformer Room 2. PCB concentrations ≥ 50 ppm were found in both concrete and soil.
- PCB impacts were not found in soil outside (downgradient) Transformer Room No. 1.
- No measurable impacts to groundwater were observed. There were no detections of PCBs, with one exception in November 2003. The PCB concentration was 3.8 parts per billion (ppb). The well was redeveloped and the PCB detection in MW-3 was never repeated.
- PCB concentrations of 19.0 and 62.8 ppm were identified in sediment/debris collected from the transformer rooms.
- The PCB concentration in the black sealant was reported at 61.1 ppm and in the louver caulk at 11.0 ppm.
- Some ballasts were labelled as "No PCBs" while others were not marked with the "No PCBs" label. All ballasts will be assumed to contain PCB concentrations ≥ 50 ppm and will be managed per State and Federal requirements.
- PCB concentrations ≥ 10 µg/100 cm^2 were found on scrap metal surfaces and non-porous metallic material located on/near the floor.

6.6 Data Review

6.6.1 Data Evaluation

Data Usability Summary Report (DUSR) was prepared for the Remedial Investigation Report, dated November 2016. The DUSR was prepared following the guidelines provided in NYSDEC Division of Environmental Remediation DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B – Guidance for Data Deliverables and Development of Data Usability Summary Reports, May 2010.

7.0 SELF-IMPLEMENTING CLEAN UP AND DISPOSAL PLAN

The goal of the remediation detailed herein is to achieve compliance with the state and applicable federal regulations, including the federal PCB regulations at 40 CFR Part 761. If the PCB remedial goals can be achieved, NYSDEC has determined in the ROD that this would be protective of human health and the environment.

Sampling and characterization efforts completed for the Site were performed in general accordance with 40 CFR Part 761, Subparts N and O. Delineation of PCBs was completed by obtaining representative concrete and soil samples both vertically and laterally.

Per the state requirements, an evaluation of remedial alternatives was conducted which are described in the 2019 Feasibility Study and the ROD. The 2019 Feasibility Study is provided in Appendix F.

NYSDEC selected Remedial Option 3 for remediation of the Site which includes limited removal, site cover and institutional controls. The NYSDEC determined that this alternative would meet its threshold criteria for protection of human health and the environment and for compliance with NYS SCGs and would provide the best balance of the "primary balancing criteria" used to compare positive and negative aspects of each option. (see ROD, Appendix B and February 2020 Minor Record of Decision Modification, Appendix C)

Per the ROD requirements and the NYSDEC selected Remedial Option 3, the actions proposed in this SIP will include the removal of PCB remediation waste consisting of the PCB-impacted concrete and soil within the Site area. To achieve this, initial actions will include removal and disposal of the four (4) non-PCB transformers and any overlying debris and scrap metal and other electrical (non-PCB-containing) equipment.

The proposed remedial action to be completed under this SIP for the Site includes:

- Removal of floor debris, non-porous scrap metal, non-PCB electrical equipment and FLBs.
- Removal of > 1 ppm PCB-impacted concrete floor. Concrete flooring with < 1 ppm will not be removed, unless necessary to support soil excavation work.
- Excavation of surface soil (upper 2 ft of soil) containing PCBs concentrations > 1 ppm.
- Excavation of subsurface soil (soil below 2 ft) containing PCB concentrations > 10 ppm.
- Collection of post-excavation concrete and soil samples as described in Section 7.1.
- Construction of a compliant concrete cap to meet requirements of 40 CFR § 761.61(a)(7), as applicable. The existing concrete flooring at the Site is at least 6 inches thick. Concrete with < 1 ppm will remain and not be removed.
- Filing a deed notice for the Site to document Site conditions and use restrictions. The ROD requires an institutional control in the form of an environmental easement recorded on the property. Per § 761.61(a)(8), a deed notice is required to be recorded since PCB concentrations in soil will remain above the 1 ppm unrestricted use level without further conditions (see 761.61(a)(4)(i)(A)) beneath a clean cover/cap.
- A maintenance and monitoring plan will be prepared and implemented to assess the performance and continued effectiveness of the remedy.
- Dispose of waste removed from the Site as described in Section 7.3.

Attached Figures 2 through 7 depict the PCB concentrations and areas of the Site where PCB concentrations greater than (>) 1 ppm are present and the proposed concrete and soil excavation/removal limits.

Given the depth of groundwater expected at or near the bottom of the concrete slab, dewatering likely will be required to stabilize the work area and permit removal of PCB-impacted soil. A discharge permit for discharging to the combined sanitary stormwater sewer will require a Discharge Permit from NYCDEP and approval from NYCDEP. The dewatering permit and approval will be secured prior to starting concrete/soil removal. The selected remediation contractor also will be required to prepare and submit a dewatering work plan for TRC review.

Removal of any manufactured non-liquid PCB-containing building materials, such as the black sealant and louver caulk is not proposed and will not be conducted under this remedial action. However, in the event it is determined that removal of the caulk or sealant is necessary to conduct the remedial work proposed in this SIP, the removed caulk or sealant will be managed as a PCB bulk product waste per 40 CFR § 761.62.

7.1 Post-Remedial Verification Sampling

7.1.1 Concrete Sampling

Proposed concrete excavation limits and verification sample locations are shown in Figures 6 and 7. Concrete samples will be collected from remaining concrete after initial removal to confirm PCB concentrations are < 1 ppm. Samples will be collected in accordance with the Subpart O sampling frequency and the EPA Region 1 *Standard Operating Procedures for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)* dated May 2011. Samples will be collected at 0.5-inch depth intervals. Multiple sub-samples located closely adjacent to each other may be needed to generate sufficient sample volumes for PCB analysis. Samples will be placed directly into pre-cleaned labeled containers for transport and delivery to laboratory for PCB extraction (EPA Method 3540C or other approved EPA extraction methods) and analysis using GC/ECD per SW846 Method 8082A.

Should the verification samples show PCB concentrations > 1 ppm, additional concrete removal and verification sampling will be conducted to the extent feasible.

7.1.2 Soil Sampling

Proposed soil excavations limits and verification sample locations are shown in Figures 6 and 7. Soil samples will be collected after initial removal to confirm PCB concentrations are < 1 ppm in the top 2 ft of soil and ≤ 10 ppm in soil deeper than 2 ft. Soil sampling will comply with the 40 CFR Part 761 Subpart O sampling requirements. Samples will be placed directly into pre-cleaned labeled containers for transport and delivery to laboratory for PCB extraction (EPA Method 3540C or other approved EPA extraction methods) and analysis using GC/ECD per SW846 Method 8082A.

Should the verification samples show PCB concentrations in soil that exceed the remedial objectives, addition soil removal will be conducted with verification sampling to the extent feasible.

7.2 PCB Removal, Site Restoration, Cap Construction and Deed Restriction

PCB-contaminated soil and concrete will be removed to the extent feasible to achieve less than < 1 ppm at the surface to 2 feet below the concrete and less than or equal to (≤) 10 ppm at soil depths greater than 2 feet. Clean backfill (gravel) will be reinstalled into the excavations within the basement Site area and new reinforced concrete floor will be installed to act as a cap/barrier to prevent potential exposure to ≤ 10 ppm PCB-impacted soil that remains at > 2 ft below the concrete floor.

The permanent new reinforced concrete floor (cap/barrier) will be constructed according to requirements of 40 CFR § 761.61(a)(7), as applicable. As required under 40 CFR § 761.61(a)(8), a deed notice will be filed for the Site to document Site conditions and use restrictions, as applicable. As previously indicated, existing concrete flooring (6-inches thick minimum) with < 1 ppm will not be removed, unless necessary for soil remediation, and would still serve as an exposure barrier to the underlying soil and as the cap per the 40 CFR § 761.61(a)(7) requirements.

7.2.1 PCB Removal Uncertainties

Removal of PCB remediation waste (i.e., PCB-impacted soil and concrete) will be conducted to the extent feasible to achieve remedial objectives. The feasibility of removal to the proposed clean up objectives will be driven by existing Site conditions and building structural concerns, as well as the PCB concentrations at the proposed removal or "cut" line. Based on the remedial investigation, concrete removal outside of the grade beams will be required to remove concrete and soil at > 1 ppm.

Building 1 is constructed of a concrete encased steel frame with a cast-in-place concrete floor slab. Per TRC's structural engineer review, removal of the concrete outside of the grade beams will require additional measures to protect the grade beams and foundation of the building. Structural Engineering design plans for removal of the concrete and soil will be provided to the remediation contractor with the bid documents. For removal of soil with > 10 ppm PCBs at depths greater than 2 ft below the floor, the structural analysis indicates that soil excavation to a maximum depth of 10 ft below the existing slab elevation could be conducted without additional structural reinforcement. However, if achieving the 10-ppm level in soil becomes technically impractical, a risk-based approach to leave the > 10 ppm PCBs in-place under 40 CFR § 761.61(c) would likely be sought from EPA.

7.3 Waste Characterization, Transport, and Disposal

7.3.1 PCB Waste Disposal

The following wastes are expected to be generated during the remedial work described in this SIP.

a) Concrete

The expected concrete removal limits are illustrated on Figures 6 and 7. It is estimated that approximately 850 square feet (SF) and 875 SF of concrete will be removed in Transformer Room No. 1 and No.2, respectively. The total estimated volume is approximately 65 cubic yards. All removed concrete will be managed as a ≥ 50 ppm PCB remediation waste and disposed per 40 CFR 761.61(a)(5)(i)(B)(2)(iii) in a TSCA-permitted disposal facility or an RCRA-permitted hazardous waste landfill.

b) Soil

The estimated limits of soil excavation are shown on Figures 6 and 7, which outline the excavation generally within the existing grade beams and pile caps to protect the building structural integrity. Using these limits, the soil area to be removed is estimated to be less than 250 SF in Transformer Room No. 1 and less than 250 SF in Transformer Room No. 2. Total volume will depend upon end-point PCB sample results and the feasibility of removal outside these limits if the PCB cleanup objectives cannot be achieved within the grade beams/pile caps limits. All excavated soil will be managed as ≥ 50 ppm PCB remediation waste and disposed per 40 CFR 761.61(a)(5)(i)(B)(2)(iii) in a TSCA-permitted disposal facility or a RCRA-permitted hazardous waste landfill.

c) Floor Debris and FLBs

- Floor sediment and porous and non-porous debris overlying the floor will be removed, handled and disposed of in accordance with applicable local, state, and federal rules and regulations as part of remedial activities. This waste will be considered both hazardous waste in NYS and (≥ 50 ppm) TSCA regulated for disposal based on laboratory analysis. Alternatively, the non-porous surfaces may be decontaminated to meet the non-porous surfaces level for high occupancy unrestricted use at 40 CFR § 761.61(a)(4)(ii).

- PCB remediation waste will be segregated, and steps will be taken to avoid commingling PCB remediation waste with other regulated materials such as ACM waste or Toxicity Characteristic (e.g., leachable lead and cadmium) hazardous waste.

- FLBs in both transformer rooms will be assumed to contain PCBs and recycled/managed as TSCA PCB regulated waste as well as NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371).

d) Transformers and non-PCB Electrical Equipment

- The four non-PCB transformers and other non-PCB electrical equipment will be reused/recycled or disposed per NYSDEC regulations.

e) Contractor Generated Waste

- Other waste that may be generated by the contractor during remedial actions includes personal protective equipment (PPE), poly sheeting, and decontamination waste. It is anticipated that the solid decontamination wastes would be managed in accordance with 40 CFR § 761.61(a)(5)(v).

- Removal of any manufactured non-liquid PCB-containing building materials, such as the black sealant and louver caulk is not proposed and will not be conducted under this remedial action. However, in the event it is determined that removal of the caulk or sealant is necessary to conduct the remedial work proposed in this SIP, the removed caulk or sealant will be conservatively managed as a PCB bulk product waste per 40 CFR § 761.62.

7.4 QA/QC Program

A Quality Assurance Project Plan (QAPP) has been prepared with organization, objectives, planned activities, and specific quality assurance/quality control (QA/QC) procedures associated with the sampling described in this SIP. See Appendix A – January 2026 Remedial Work Report

New York State Analytical Services Protocol (ASP) Category B laboratory packages will be provided by the laboratory.

7.4.1 QC Sample Collection

QC samples will include field duplicate samples for soil, concrete and groundwater (from dewatering, as needed). Refer to Tables 1A-1C for a summary of QC sample preservation and container requirements.

a. **Field duplicates** are an additional aliquot of the same sample submitted for the same parameters as the original sample. Field duplicates will be used to assess sampling and analytical reproducibility. Field duplicates will be collected by alternately filling sample bottles from the source being sampled. Field duplicates will be submitted at a frequency of one per 20 samples for all matrices and all parameters.

b. **Sample Preservation and Containerization:** The analytical laboratory will supply the containers for analytical samples. These containers will be cleaned by the manufacturer to meet or exceed all analyte specifications established in the latest USEPA's Specifications and Guidance for Contaminant-Free Sample Containers. Certificates of analysis are provided with each bottle lot and maintained on file to document conformance to USEPA specifications. Soil samples will be placed in chilled coolers immediately after collection.

7.5 Equipment Decontamination

Sampling (e.g., trowels) and movable equipment (e.g., excavator bucket, etc.)) will be either (1) disposed of as PCB remediation waste or (2) decontaminated prior to removal from the Site per 40 CFR § 761.79(c) or alternatively with sampling to confirm the 40 CFR § 761.79(b) decontamination standards for non-porous surfaces have been met.

7.5.1 Expendable Equipment

Used personal protective equipment (PPE), disposable sampling equipment, used rags and any other non-liquid waste used within the Site area will be disposed of per 40 CFR § 761.61(a)(5)(v).

7.5.2 Moveable Equipment Decontamination

In lieu of decontamination per 40 CFR § 761.79(c), moveable equipment decontamination may be conducted by pressure washing surfaces with an aqueous based solvent. In this event, wipe samples will be collected per 40 CFR § 761.123 to confirm that the surfaces meet the measurement-based decontamination level of < 10 µg/100 cm^2 per 40 CFR § 761.79(b) prior to removal from the Site.

8.0 DOCUMENTATION

The proposed work conducted under this SIP will be monitored on a daily basis by TRC personnel. TRC will also be onsite to monitor the remediation contractor mobilization, including waste storage locations and the logistics for transport of wastes removed from the Site. TRC personnel will also collect post-excavation (i.e., verification) PCB samples. TRC personnel will maintain a photo-documentation log and field notes for the sampling activities.

8.1 Transport and Treatment/Disposal Certification

The New York State Office of Mental Health (OMH) or its authorized representatives will complete and sign the waste profiles and manifests. Copies of manifests and bills of lading for the transportation of waste, and certificates of disposal (for PCB waste) received will be maintained by OMH for EPA inspection.

8.2 Deliverables

A copy of the executed and recorded deed restriction and certification will be provided to EPA per the requirements of 40 CFR § 761.61(a)(8). In addition, a Remedial Report shall be prepared documenting the work that was conducted. This Remedial Report shall be provided to both NYSDEC and EPA.

8.3 Recordkeeping

Records and documents required by 40 CFR Part 761, including the records required under Subpart K, will be maintained by the New York State Office of Mental Health (OMH) in a centralized location for a minimum of three years, or as otherwise directed by EPA. These records will be available for inspection by representatives of EPA if required.

9.0 NOTIFICATION AND CERTIFICATION

Per 40 CFR § 761.61(a)(3)(i)(E), the required written certification from the New York State Office of Mental Health (OMH) is provided below.

Under civil and criminal penalties of law for the making of submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I, as an authorized representative for the New York State Office of Mental Health (OMH), certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I can certify as the New York State government official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination within the Basement Transformer Rooms at the Thompson Building No. 1 at Bronx Psychiatric Center are on file at the Capital Operations Offices, New York State Office of Mental Health, 75 New Scotland Avenue, Albany NY 12208 location and available for EPA inspection.

_____ _____

New York State Office of Mental Health **Date**

10.0 LIMITATIONS

This submittal was prepared exclusively for use by Dormitory Authority of the State of New York (DASNY) and/or the New York State Office of Mental Health (OMH). The conclusions presented in this submittal are based solely on the information reported in this document. Additional information regarding the Site, which was not available to or determined by TRC, are not considered in this submittal. The submittal has been prepared in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same type of area and for the purpose of compliance with federal PCB regulatory requirements. No other warranty, expressed or implied, is made.

11.0 REFERENCES

1. December 4, 1958, Architectural; Drawings for Thompson Building
2. February 23, 2012 – Order on Consent with NYSDEC
3. February 2012 - Citizen Participation Plan - URS Corporation
4. August 2012 – Remedial Investigation Report - URS Corporation
5. March 2013 (Revised June 2013) (Updated February 2019)- Citizen Participation Plan - URS Corporation
6. September 4, 2013 - Summary of Supplemental Remedial Investigation and Request for Additional Investigation
7. July 2015 - Bronx DASNY Focused Feasibility Study Construction Cost Estimate
8. July 2015 - Focused Feasibility Study - URS Corporation
9. November 2016 (Original August 2012; Revised January 2015) - Remedial Investigation Report, revised.
10. March 6, 2017 – Table 1 Approximate Maximum Removal
11. October 25, 2017 - Review of Structural Analysis - URS Corporation
12. May 1, 2017 – AECOM Email Review of EPA involvement, and Self-Implementing Plan
13. February 2019 – Revised Feasibility Study
14. Proposed Remedial Action Plan for the Bronx Psychiatric Center site, dated February 2019, prepared by the Department (NYSDEC)
15. March 2019 – NYSDEC Record of Decision (ROD) State Superfund Project
16. March 29, 2019 - Responsiveness Summary
17. February 11, 2020 - Minor NYSDEC ROD Modification State Superfund Project
18. October 6, 2020 - August 2020 Environmental Monitoring Event
19. February 18, 2022 - Pre-Design Investigation Work Plan Langan Engineers
20. June 15, 2023 - Monthly Progress Report - Reporting Period: May 12, 2023, through June 15, 2023 - URS Corporation
21. January 2026 Remedial Work Plan (RWP) approved by NYSDEC on January 23, 2026
22. March 30, 2026 - Pre-Remedial Transformer Room Sampling Report

12.0 PROJECT SCHEDULE

The following identifies projected time frames for each task described in this Self-Implementing Plan which are provided in calendar days. The estimated time frames assume authorization and successful completion for all tasks as shown but are subject to change.

Task 1 – Submission of Self-Implementing Plan (SIP) for USEPA

USEPA Review and Approval of Self-Implementing Plan (30 Days)

Task 2 - Contractor Award and RWP Project Implementation with OHM/DASNY

Project Award and Review/Approval of Contractor Submittals

Within 60 Days of USEPA Self-Implementing Plan Approval

Project Completion

Within 180 Days of Approval of Contractor Award and Approval of Contractor Submittals

FIGURES

TRANSFORMER ROOMS NO.1 & NO.2

BUILDING NO.1 MEDICAL SURGICAL BUILDING 101
1500 WATERS PLACE
BRONX, NEW YORK

PCB REMEDIATION BRONX PC

100% SUBMISSION

NYS OFFICE OF MENTAL HEALTH
ENVIRONMENTAL OPERATIONS AND MAINTENANCE
ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Seal & Signature

ENGINEER

TRC ENGINEERS, INC.
1437 BROADWAY SUITE 3301
NEW YORK, NY 10018
PHONE # 212-221-7002

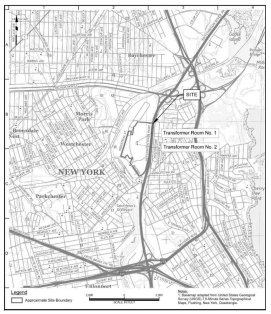
LIST of DRAWINGS

FIGURE 1 TITLE SHEET

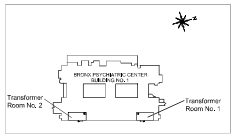
HAZMAT:

FIGURE 2 PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 1
FIGURE 3 PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 2
FIGURE 4 PCB CONCENTRATIONS IN SOIL TRANSFORMER ROOM NO. 1
FIGURE 5 PCB CONCENTRATIONS IN SOIL TRANSFORMER ROOM NO. 2
FIGURE 6 TRANSFORMER ROOM NO. 1 LIMITS OF CONCRETE AND SOIL REMOVAL AND POST REMEDIATION CONCRETE AND SOIL SAMPLE LOCATIONS
FIGURE 7 TRANSFORMER ROOM NO. 2 LIMITS OF CONCRETE AND SOIL REMOVAL AND POST REMEDIATION CONCRETE AND SOIL SAMPLE LOCATIONS
FIGURE 8 POST REMEDIATION BACKFILL AND CONCRETE INSTALLATION DETAILS

LOCATION PLAN

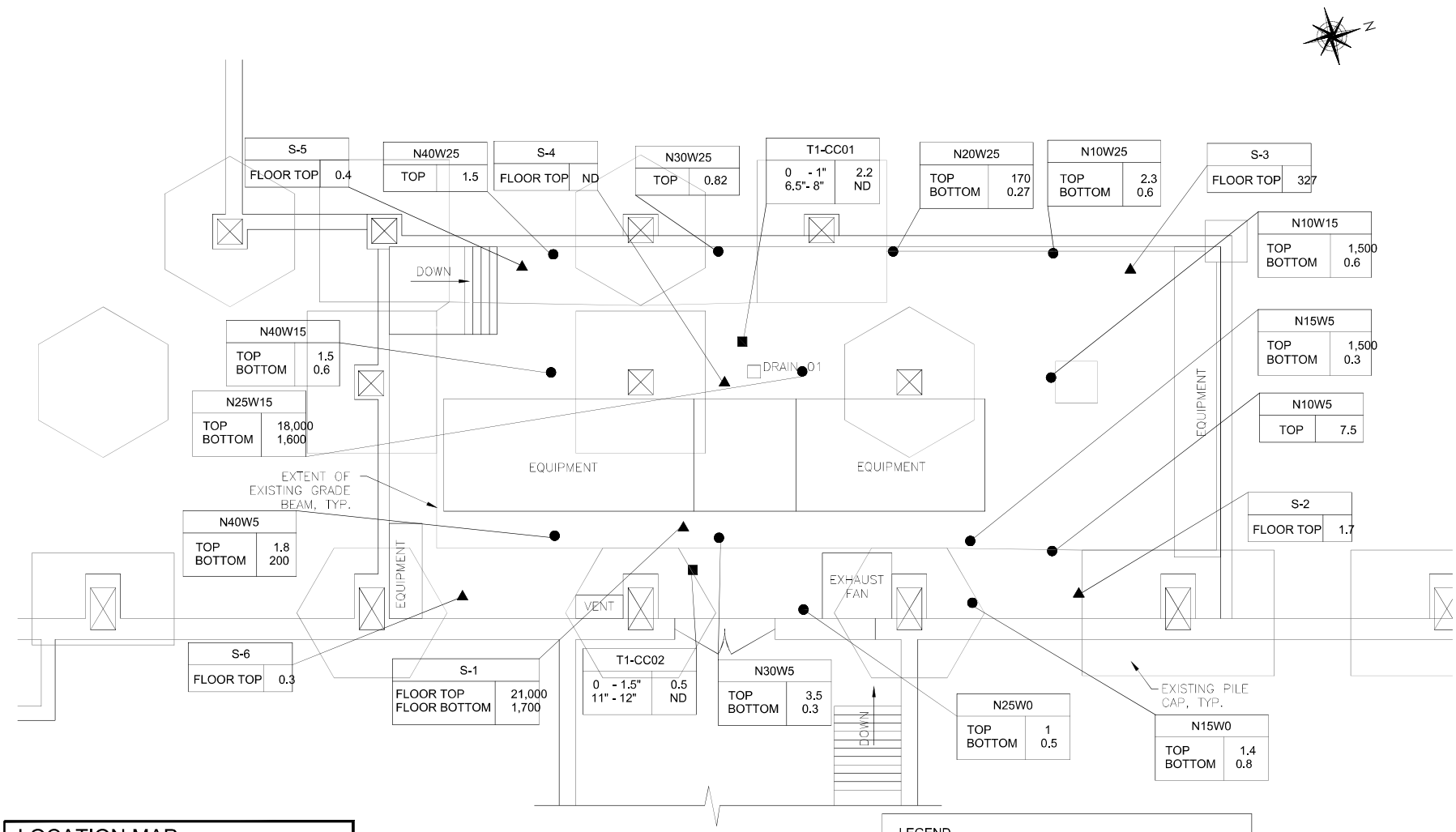


SITE PLAN



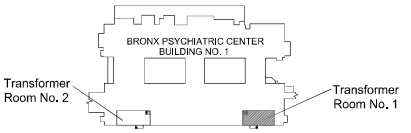
DASNY

TRANSFORMER ROOMS NO.1 & NO.2
PCB REMEDIATION BRONX PC
BUILDING NO.1 MEDICAL SURGICAL BUILDING 101
100% SUBMISSION
Date: 04/08/2026
DASNY Project No: 3816609999
Drawing 1 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Concrete Sample Location - 1993
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

DASNY

Consultants:
TRC
1467 Broadway, Suite 3301, New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

Project Key

REVISIONS

No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
NYS OFFICE OF MENTAL HEALTH, NYS OFFICE FOR PEOPLE WITH DEVELOPMENTAL DISABILITIES, DIVISION OF INFORMATION TECHNOLOGY, DIVISION OF ADMINISTRATIVE SUPPORT SERVICES, GROUP 2
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING NO.1 MEDICAL SURGICAL BUILDING 10
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title:
PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM 1

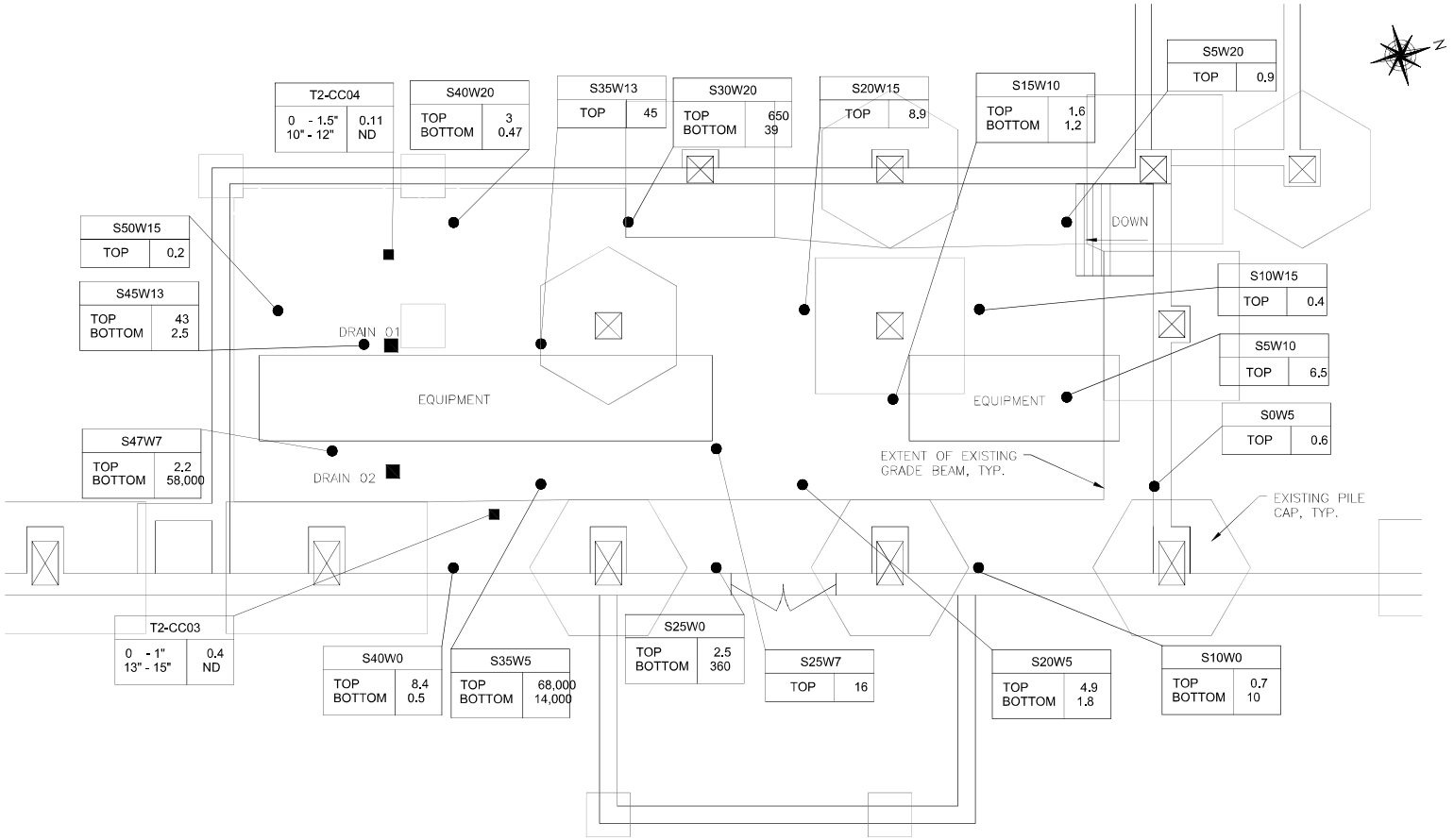
Phase:
100% SUBMISSION

Professional Seal & Signature

Date: 04/08/2026
DASNY Project No.: 3816609999
Consultant Project No.: 411323
Scale: AS NOTED
Drawn By: FS
Checked By: AS

FIGURE 2

Drawing Number: Drawing 2 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

DASNY

Consultants:
TRC
1467 Broadway, Suite 3301, New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

Project Key

REVISIONS

No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
OMH ENVIRONMENTAL OPERATIONS AND HOUSING FACILITIES SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING NO.1 MEDICAL SURGICAL BUILDING 10
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title:
PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM 2

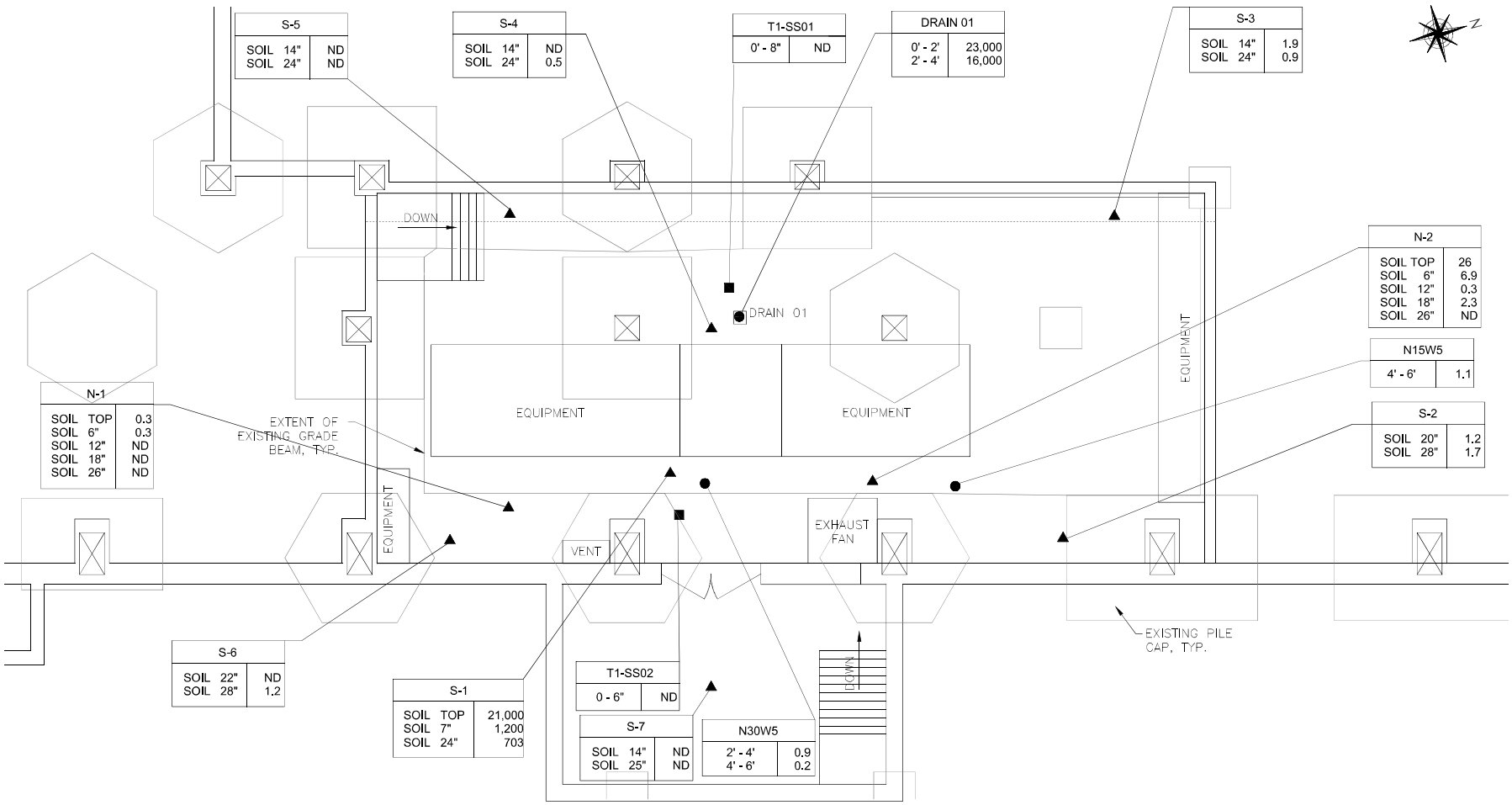
Phase:
100% SUBMISSION

Professional Seal & Signature

Date: 04/08/2026
DASNY Project No: 3816609999
Omnibus Project No: 411323
Scale: AS NOTED
Drawn By: FS
Checked By: AS

FIGURE 3

Drawing Number: Drawing 3 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- ☒ Structural Column
- ▲ Soil Sample Location - 1993
- ● Soil Sample Location - 2000
- ■ Soil Sample Location - 2013
- ☐ Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND - Not Detected
NA - Not Analyzed

Source: Figures 1-8, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

DASNY

Consultants:
TRC
1497 Broadway, Suite 3301, New York, NY 10018
Phone: 212.221.7622
www.TRCcompanies.com

Project Key

REVISIONS

No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
OMH ENVIRONMENTAL OPERATIONS AND WATER POLICY
ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING 30 MEDICAL SURGICAL BUILDING 10
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title:
PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM 1

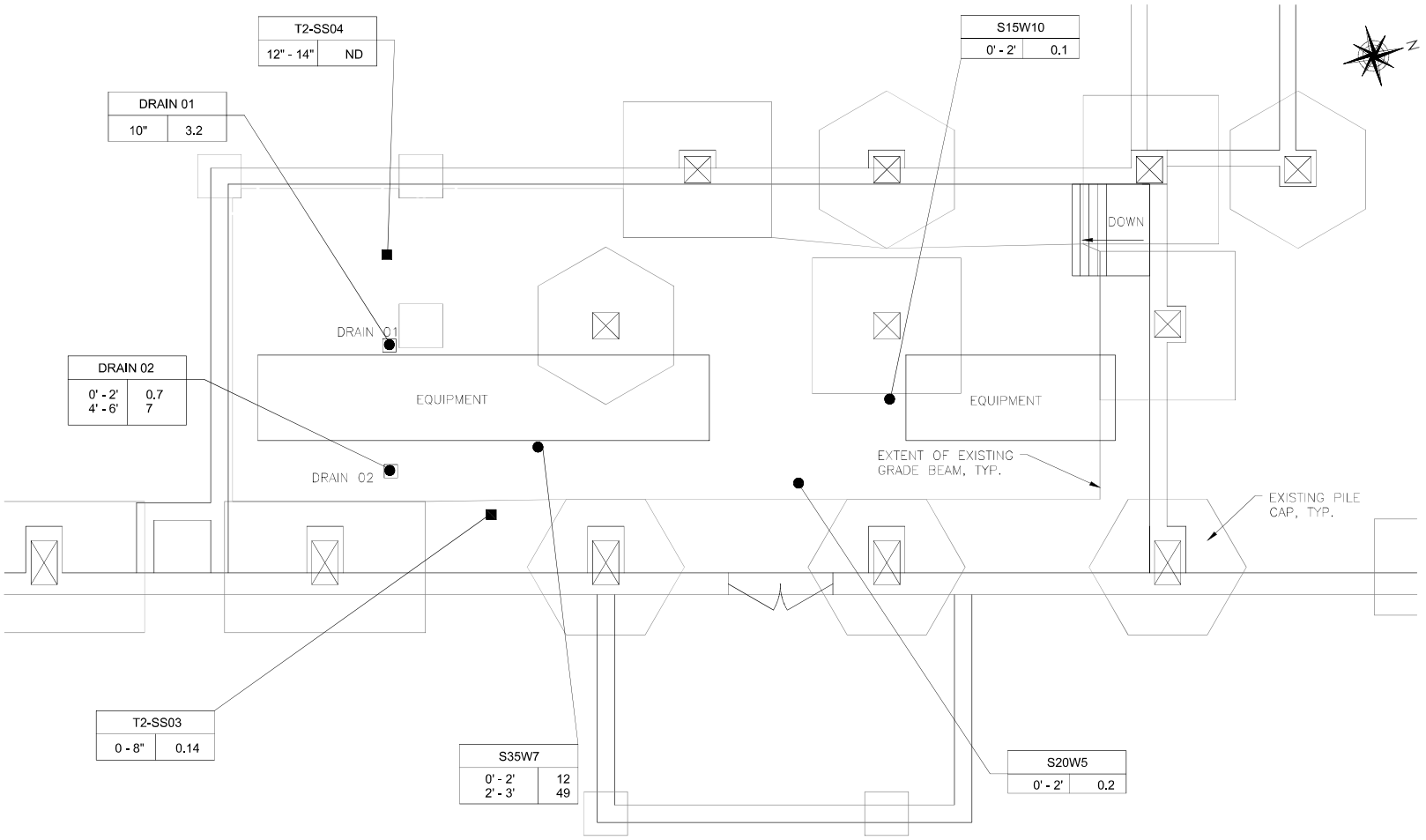
Phase:
100% SUBMISSION

Professional Seal & Signature:
ANTHONY JOHN SOMMA
STATE OF NEW YORK
075727
LICENSED PROFESSIONAL ENGINEER

Date: 04/01/2026
DASNY Project No.: 3816605999
Consultant Project No.: 411323
Scale: AS NOTED
Drawn By: FS
Checked By: AS

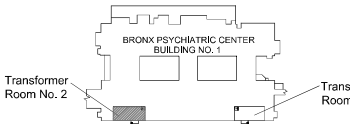
FIGURE 4

Drawing Number: Drawing 4 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Soil Sample Location - 2000
- Soil Sample Location - 2013

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND - Not Detected
NA - Not Analyzed

Source: Figures 1-8, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

DASNY

Consultants:
TRC
1407 Broadway, Suite 3301, New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

Project Key

REVISIONS

No	Description	Date

Client
NYS OFFICE OF MENTAL HEALTH
DIVISION OF DOMESTIC, OPERATIONS AND FACILITIES MANAGEMENT, BUREAU OF SERVICES & SAFETY
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title
PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING NO.1 MEDICAL SURGICAL BUILDING 101
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title
PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM 2

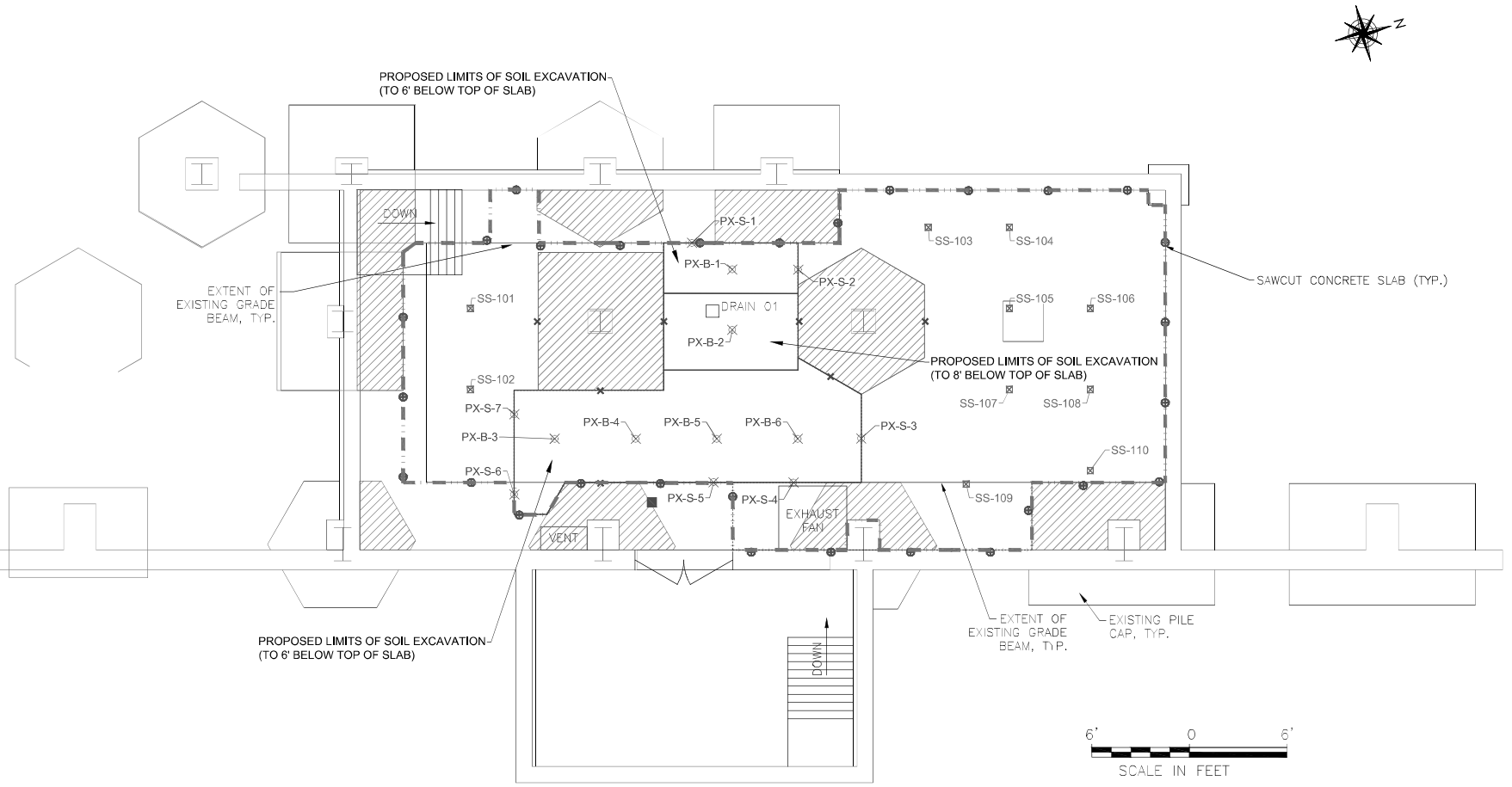
Phase
100% SUBMISSION

Professional Seal & Signature
ANTHONY JOHN LOSS
STATE OF NEW YORK
075727
LICENSED PROFESSIONAL ENGINEER

Date: 04/01/2026
DASNY Project No: 3816609999
Consultant Project No: 411323
Scale: AS NOTED
Drawn By: FS
Checked By: AS

FIGURE 5

Drawing Number Drawing 5 of 8



NOTES:

1. THE WORK IS SUBJECT TO A CONSENT ORDER WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC). AS A RESULT, WORK IN THIS SECTION SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE NYSDEC-APPROVED REMEDIAL ACTION PLAN AND ADDITIONAL OVERSIGHT OF CONSTRUCTION ACTIVITIES UNDERTAKEN AT THIS SITE WILL BE REQUIRED BY DASNY AND THEIR ENVIRONMENTAL CONSULTANTS. AUTHORIZED REPRESENTATIVES OF DASNY WILL PERFORM FULL-TIME ON-SITE MONITORING OF ALL GROUND-INTRUSIVE WORK. THESE CONSULTANTS ARE RETAINED BY DASNY, SEPARATE FROM THIS CONTRACT. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND THE DASNY'S ENVIRONMENTAL CONSULTANTS FOR THE DURATION OF THE CONTRACT. DASNY AND THE DASNY'S ENVIRONMENTAL CONSULTANTS SHALL HAVE FULL AND IMMEDIATE ACCESS TO THE SITE AND ALL AVAILABLE DOCUMENTS AND RECORDS. NO DELAY CLAIMS SHALL BE MADE BY THE CONTRACTOR REGARDING COORDINATION WITH DASNY'S ENVIRONMENTAL CONSULTANTS.
2. A COMMUNITY AIR MONITORING PLAN (CAMP) SHALL BE IN EFFECT DURING ALL GROUND INTRUSIVE ACTIVITIES AND THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE CAMP. THE CAMP WILL BE PERFORMED BY AN ENVIRONMENTAL CONSULTANT OF DASNY. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND DASNY'S ENVIRONMENTAL CONSULTANT, AND THE CONTRACTOR MUST NOTIFY DASNY AND THEIR CONSULTANT A MINIMUM OF TWO (2) DAYS PRIOR TO PERFORMING GROUND INTRUSIVE ACTIVITIES ONSITE. REFER TO SPECIFICATIONS 02 61 00.
3. A GROUNDWATER DEWATERING AND TREATMENT PLAN WILL BE REQUIRED DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL SECURE NYCDEP DE-WATERING PERMIT AND REQUIRED APPROVAL FROM NYSDEC PURSUANT TO THE EXISTING ORDER ON CONSENT.
4. THE ENTIRETY OF THE REMOVED CONCRETE SLABS AND REMOVED SOIL SHALL BE MANAGED AS A ≥ 50 PPM TOXIC SUBSTANCES CONTROL ACT (TSCA) PCB REMEDIATION WASTE IN A TSCA PERMITTED OR RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) HAZARDOUS WASTE LANDFILL. IN NEW YORK STATE HAZARDOUS WASTE CODE B007 IS DESIGNATED FOR OTHER PCB WASTES, INCLUDING CONTAMINATED PCB CONCRETE MATERIAL.
5. AFTER THE COMPLETION OF CONCRETE AND SOIL REMOVAL AS SHOWN, AND ANY OTHER INVASIVE REMEDIAL ACTIVITIES AND PRIOR TO BACKFILLING, THE CONTRACTOR SHALL NOTIFY DASNY AND SHALL PROVIDE ACCESS TO DASNY AND/OR AN ENVIRONMENTAL CONSULTANT OF DASNY FOR THE COLLECTION OF POST-REMEDIATION CONCRETE AND SOIL SAMPLES FROM THE EXCAVATED AREAS. THE CONTRACTOR SHOULD INCLUDE THE TIME REQUIRED FOR POST-REMEDIATION SAMPLING AND ANALYSIS AS PART OF THEIR CONSTRUCTION SCHEDULE AND NO DELAY CLAIMS SHALL BE MADE BY THE CONTRACTOR. IF POST-REMEDIATION CONCRETE OR SOIL SAMPLE RESULTS EXCEED THE PROJECT'S SOIL CLEANUP OBJECTIVE (1 PPM FOR CONCRETE AND SURFACE SOIL TO BE MET FROM 0-2 FEET BELOW THE SLAB SURFACE, AND LESS THAN 10 PPM FOR SOIL TO BE MET GREATER THAN 2 FEET BELOW THE SLAB SURFACE), THEN THE CONTRACTOR WILL BE DIRECTED TO CONTINUE EXCAVATING AND ADDITIONAL POST-REMEDIATION SAMPLE(S) WILL BE COLLECTED AND ANALYZED. THE EXCAVATION AREA(S) SHALL NOT BE BACKFILLED UNTIL POST-REMEDIATION SAMPLES ARE COLLECTED BY A REPRESENTATIVE OF DASNY OR DASNY'S ENVIRONMENTAL CONSULTANT AND DASNY HAS CONFIRMED THAT NO ADDITIONAL EXCAVATION OR SAMPLING IS REQUIRED AND THE CONTRACTOR CAN PROCEED WITH BACKFILLING.
6. EXCAVATED, CONTAMINATED SOIL SHALL NOT BE REUSED ONSITE. CLEAN FILL MEETING THE REQUIREMENTS OF 6 NYCRR PART 375-6.7 (D) SHALL BE BROUGHT IN TO REPLACE THE EXCAVATED SOIL AND ESTABLISH THE DESIGN GRADES AT EACH OF THE BASEMENT TRANSFORMER ROOM IN ACCORDANCE WITH SECTION 02 61 00. NOTIFICATION OF CLEAN FILL FORM WILL NEED TO BE COMPLETED AND SUBMITTED TO NYS DEC WHEN > 10 CUBIC YARDS OF FILL IS REQUIRED.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE EROSION CONTROL AND STOCKPILE PROTECTION MEASURES ARE PUT IN PLACE AND MAINTAINED AT THE SITE (I.E. IF CONTAMINATED EXCAVATED MATERIAL IS TEMPORARILY STOCKPILED ON-SITE, THE STOCKPILE SHALL BE COVERED WITH HEAVY-DUTY TARPS, SECURED WITH SAND BAGS, AND SILT CURBS SHALL BE INSTALLED AROUND THE STOCKPILE. IF THERE IS NO ROOM ON THE SITE FOR STOCKPILING, CONTRACTOR SHALL PROVIDE CONTAINERS FOR STOCKPILING OR OTHER MEANS [E.G, ROLL-OFFS].
8. CONTRACTOR SHALL SUBMIT A SCHEDULE, HEALTH AND SAFETY PLAN AND EXCAVATED MATERIAL DISPOSAL PLAN (EMDP), AND GROUNDWATER DEWATERING AND TREATMENT PLAN FOR DASNY PRIOR TO THE START OF EXCAVATION WORK. ALL EXCAVATED MATERIAL SHALL BE HANDLED AND MANAGED IN ACCORDANCE WITH SECTION 02 61 00 AND THE APPROVED EMDP.
9. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL REQUIREMENTS TO BE IMPLEMENTED DURING PERFORMANCE OF THE WORK.

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated) and Post Remediation Concrete (Floor Slab) Sample Location
- Post Remediation Concrete (Concrete Footing) Sample Location
- Post Excavation Soil Sample Location and Identification Number (PX-B-# / PX-S-#) B - Bottom, S - Sidewall
- Post Excavation Surface Soil Sample Location and Identification Number (SS-10#)
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

LOCATION MAP

NOT TO SCALE



DASNY

Consultants:
TRC

Project Key

REVISIONS

No	Description	Date:

Client:
NYS OFFICE OF MENTAL HEALTH
OFFICE OF OPERATIONS AND ADMINISTRATIVE SERVICES
INFRASTRUCTURE, FACILITY SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title
PCB REMEDIATION BRONX PC TRANSFORMER ROOMS NO.1 & NO.2 BUILDING NO. MEDICAL SURGICAL BUILDING 06 1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title
TRANSFORMER ROOM 1 - LIMITS OF CONCRETE AND SOIL REMOVAL AND POST REMEDIATION CONCRETE AND SOIL SAMPLE LOCATIONS

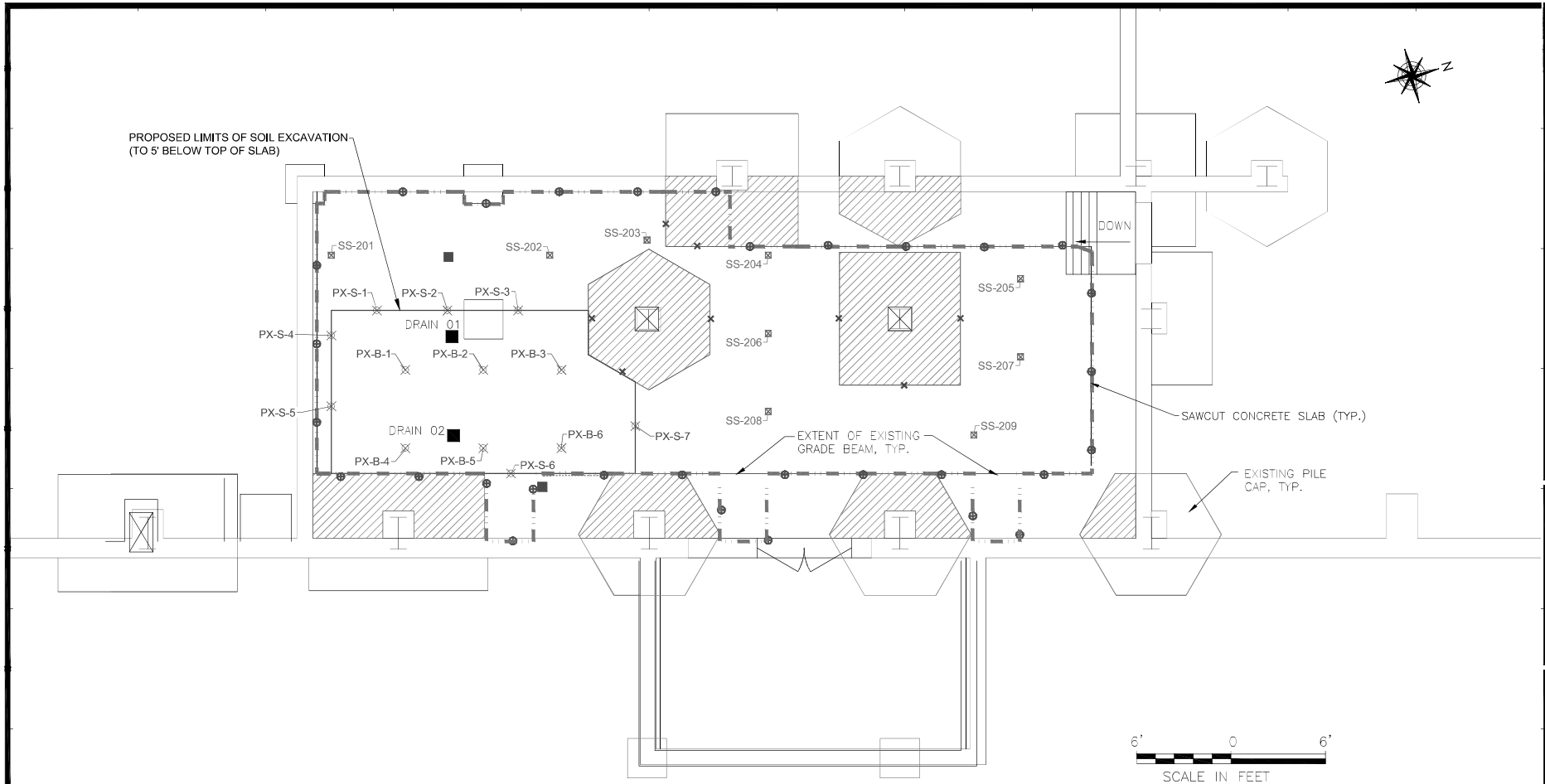
Phase
100% SUBMISSION

Professional Seal & Signature
STATE OF NEW YORK
JOHN SMITH
073737
PROFESSIONAL ENGINEER

Date: 04/08/2026
DASNY Project No: 381660/9500
Consultant Project No: 411323
Scale: AS NOTED
Drawn By: HD
Checked By: RB

FIGURE 6

Drawing Number: Drawing 6 of 8



NOTES:

1. THE WORK IS SUBJECT TO A CONSENT ORDER WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC). AS A RESULT, WORK IN THIS SECTION SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE NYSDEC-APPROVED REMEDIAL ACTION PLAN AND ADDITIONAL OVERSIGHT OF CONSTRUCTION ACTIVITIES UNDERTAKEN AT THIS SITE WILL BE REQUIRED BY DASNY AND THEIR ENVIRONMENTAL CONSULTANTS. AUTHORIZED REPRESENTATIVES OF DASNY WILL PERFORM FULL-TIME ON-SITE MONITORING OF ALL GROUND-INTRUSIVE WORK. THESE CONSULTANTS ARE RETAINED BY DASNY, SEPARATE FROM THIS CONTRACT. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND DASNY'S ENVIRONMENTAL CONSULTANTS FOR THE DURATION OF THE CONTRACT. DASNY AND DASNY'S ENVIRONMENTAL CONSULTANTS SHALL HAVE FULL AND IMMEDIATE ACCESS TO THE SITE AND ALL AVAILABLE DOCUMENTS AND RECORDS. NO DELAY CLAIMS SHALL BE MADE BY THE CONTRACTOR REGARDING COORDINATION WITH DASNY'S ENVIRONMENTAL CONSULTANTS.
2. A COMMUNITY AIR MONITORING PLAN (CAMP) SHALL BE IN EFFECT DURING ALL GROUND INTRUSIVE ACTIVITIES AND THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE CAMP. THE CAMP WILL BE PERFORMED BY AN ENVIRONMENTAL CONSULTANT OF DASNY. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND DASNY'S ENVIRONMENTAL CONSULTANT, AND THE CONTRACTOR MUST NOTIFY DASNY AND THEIR CONSULTANT A MINIMUM OF TWO (2) DAYS PRIOR TO PERFORMING GROUND INTRUSIVE ACTIVITIES ONSITE. REFER TO SPECIFICATIONS 02 61 00.
3. A GROUNDWATER DEWATERING AND TREATMENT PLAN WILL BE REQUIRED DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL SECURE NYCDEP DE-WATERING PERMIT AND REQUIRED APPROVAL FROM NYSDEC PURSUANT TO THE EXISTING ORDER ON CONSENT.
4. THE ENTIRETY OF THE REMOVED CONCRETE SLABS AND REMOVED SOIL SHALL BE MANAGED AS A ≥ 50 PPM TOXIC SUBSTANCES CONTROL ACT (TSCA) PCB REMEDIATION WASTE IN A TSCA PERMITTED OR RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) HAZARDOUS WASTE LANDFILL. IN NEW YORK STATE HAZARDOUS WASTE CODE B007 IS DESIGNATED FOR OTHER PCB WASTES, INCLUDING CONTAMINATED PCB CONCRETE MATERIAL.
5. AFTER THE COMPLETION OF CONCRETE AND SOIL REMOVAL AS SHOWN, AND ANY OTHER INVASIVE REMEDIAL ACTIVITIES AND PRIOR TO BACKFILLING, THE CONTRACTOR SHALL NOTIFY DASNY AND SHALL PROVIDE ACCESS TO DASNY AND/OR AN ENVIRONMENTAL CONSULTANT OF DASNY FOR THE COLLECTION OF POST-REMEDIATION CONCRETE AND SOIL SAMPLES FROM THE EXCAVATED AREAS. THE CONTRACTOR SHOULD INCLUDE THE TIME REQUIRED FOR POST-REMEDIATION SAMPLING AND ANALYSIS AS PART OF THEIR CONSTRUCTION SCHEDULE AND NO DELAY CLAIMS SHALL BE MADE BY THE CONTRACTOR. IF POST-REMEDIATION CONCRETE OR SOIL SAMPLE RESULTS EXCEED THE PROJECT'S SOIL CLEANUP OBJECTIVE (1 PPM FOR CONCRETE AND SURFACE SOIL TO BE MET FROM 0-2 FEET BELOW THE SLAB SURFACE, AND LESS THAN 10 PPM FOR SOIL TO BE MET GREATER THAN 2 FEET BELOW THE SLAB SURFACE), THEN THE CONTRACTOR WILL BE DIRECTED TO CONTINUE EXCAVATING AND ADDITIONAL POST-REMEDIATION SAMPLE (S) WILL BE COLLECTED AND ANALYZED. THE EXCAVATION AREA (S) SHALL NOT BE BACKFILLED UNTIL POST-REMEDIATION SAMPLES ARE COLLECTED BY A REPRESENTATIVE OF DASNY OR DASNY'S ENVIRONMENTAL CONSULTANT AND DASNY HAS CONFIRMED THAT NO ADDITIONAL EXCAVATION OR SAMPLING IS REQUIRED AND THE CONTRACTOR CAN PROCEED WITH BACKFILLING.
6. EXCAVATED, CONTAMINATED SOIL SHALL NOT BE REUSED ONSITE. CLEAN FILL MEETING THE REQUIREMENTS OF 6 NYCRR PART 375-6.7 (D) SHALL BE BROUGHT IN TO REPLACE THE EXCAVATED SOIL AND ESTABLISH THE DESIGN GRADES AT EACH OF THE BASEMENT TRANSFORMER ROOM IN ACCORDANCE WITH SECTION 02 61 00. NOTIFICATION OF CLEAN FILL FORM WILL NEED TO BE COMPLETED AND SUBMITTED TO NYS DEC WHEN > 10 CUBIC YARDS OF FILL IS REQUIRED.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE EROSION CONTROL AND STOCKPILE PROTECTION MEASURES ARE PUT IN PLACE AND MAINTAINED AT THE SITE (I.E. IF CONTAMINATED EXCAVATED MATERIAL IS TEMPORARILY STOCKPILED ON-SITE, THE STOCKPILE SHALL BE COVERED WITH HEAVY-DUTY TARPS, SECURED WITH SAND BAGS, AND SILT CURBS SHALL BE INSTALLED AROUND THE STOCKPILE. IF THERE IS NO ROOM ON THE SITE FOR STOCKPILING, CONTRACTOR SHALL PROVIDE CONTAINERS FOR STOCKPILING OR OTHER MEANS [E.G. ROLL-OFFS]).
8. CONTRACTOR SHALL SUBMIT A SCHEDULE, HEALTH AND SAFETY PLAN AND EXCAVATED MATERIAL DISPOSAL PLAN (EMDP), AND GROUNDWATER DEWATERING AND TREATMENT PLAN FOR DASNY PRIOR TO THE START OF EXCAVATION WORK. ALL EXCAVATED MATERIAL SHALL BE HANDLED AND MANAGED IN ACCORDANCE WITH SECTION 02 61 00 AND THE APPROVED EMDP.
9. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL REQUIREMENTS TO BE IMPLEMENTED DURING PERFORMANCE OF THE WORK.

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated) and Post Remediation Concrete (Floor Slab) Sample Location
- Post Remediation Concrete (Concrete Footing) Sample Location
- PX-B-#, PX-S-#: Post Excavation Sample Location and Identification Number (B - Bottom, S - Sidewall)
- SS-20#: Post Excavation Surface Soil Sample Location and Identification Number
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

LOCATION MAP
NOT TO SCALE



DASNY

Consultants:
TRC

Project Key

REVISIONS

No:	Description	Date:

Client:
NYS OFFICE OF MENTAL HEALTH
OPERATIONS AND MAINTENANCE
ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title
PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING NO.1 MEDICAL SURGICAL BUILDING OF
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title
TRANSFORMER ROOM 2 - LIMITS OF CONCRETE AND SOIL REMOVAL AND POST REMEDIATION CONCRETE AND SOIL SAMPLE LOCATIONS

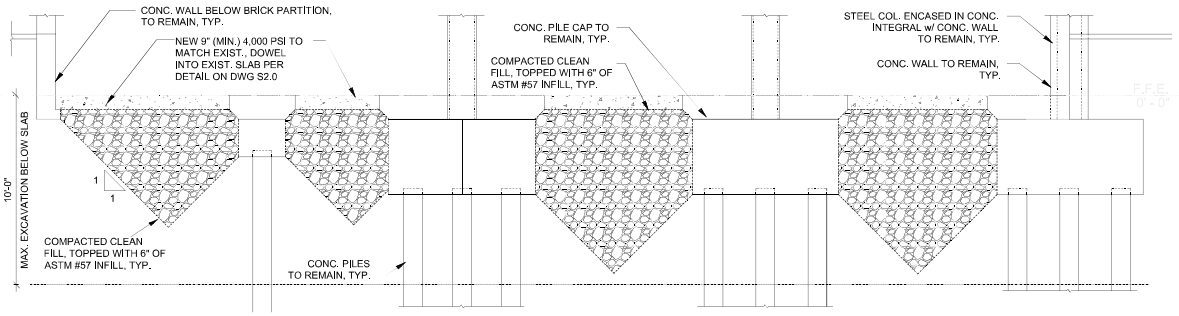
Phase
100% SUBMISSION

Professional Seal & Signature
STATE OF NEW YORK
ANTHONY JOHN MANCINI
073737
LICENSED PROFESSIONAL ENGINEER

Date: 04/08/2026
DASNY Project No: 381660999
Consultant Project No: 411323
Scale: AS NOTED
Drawn By: HD
Checked By: RB

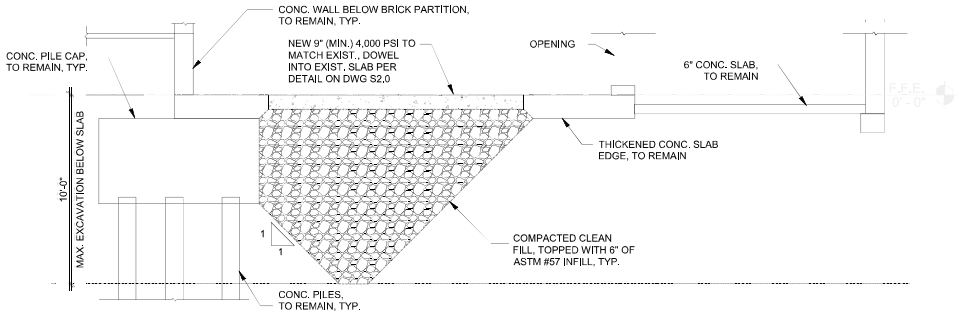
FIGURE 7

Drawing Number: Drawing 7 of 8



1 H104 TYPICAL EAST-WEST BACKFILL AND RESTORATION SECTION

SCALE: 1/4" = 1'-0"



2 H104 TYPICAL NORTH-SOUTH BACKFILL AND RESTORATION SECTION

SCALE: 1/4" = 1'-0"

NOTES:

1. THE WORK IS SUBJECT TO A CONSENT ORDER WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC). AS A RESULT, WORK IN THIS SECTION SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE NYSDEC-APPROVED REMEDIAL ACTION PLAN AND ADDITIONAL OVERSIGHT OF CONSTRUCTION ACTIVITIES UNDERTAKEN AT THIS SITE WILL BE REQUIRED BY DASNY AND THEIR ENVIRONMENTAL CONSULTANTS. AUTHORIZED REPRESENTATIVES OF DASNY WILL PERFORM FULL-TIME ON-SITE MONITORING OF ALL GROUND-INTRUSIVE WORK. THESE CONSULTANTS ARE RETAINED BY THE DASNY, SEPARATE FROM THIS CONTRACT. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND THE DASNY'S ENVIRONMENTAL CONSULTANTS FOR THE DURATION OF THE CONTRACT. DASNY AND THE AUTHORITY'S ENVIRONMENTAL CONSULTANTS SHALL HAVE FULL AND IMMEDIATE ACCESS TO THE SITE AND ALL AVAILABLE DOCUMENTS AND RECORDS. NO DELAY CLAIMS SHALL BE MADE BY THE CONTRACTOR REGARDING COORDINATION WITH DASNY'S ENVIRONMENTAL CONSULTANTS.
2. THE EXCAVATION AREA (S) SHALL NOT BE BACKFILLED UNTIL POST-REMEDIATION SAMPLES ARE COLLECTED BY A REPRESENTATIVE OF DASNY OR DASNY'S ENVIRONMENTAL CONSULTANT AND DASNY HAS CONFIRMED THAT NO ADDITIONAL EXCAVATION OR SAMPLING IS REQUIRED AND THE CONTRACTOR CAN PROCEED WITH BACKFILLING.
3. EXCAVATED, CONTAMINATED SOIL SHALL NOT BE REUSED ONSITE. CLEAN FILL MEETING THE REQUIREMENTS OF 6 NYCRR PART 375-6.7 (D) SHALL BE BROUGHT IN TO REPLACE THE EXCAVATED SOIL AND ESTABLISH THE DESIGN GRADES AT EACH OF THE BASEMENT TRANSFORMER ROOM IN ACCORDANCE WITH SECTION 02 61 00. NOTIFICATION OF CLEAN FILL FORM WILL NEED TO BE COMPLETED AND SUBMITTED TO NYS DEC WHEN > 10 CUBIC YARDS OF FILL IS REQUIRED.
4. A MINIMUM OF 6 INCHES OF ASTM #57 INFILL SHALL BE INSTALLED AND COMPACTED ABOVE IMPORTED AND COMPACTED STRUCTURAL FILL. ALL IMPORTED MATERIALS SHALL MEET THE DEFINITION OF CLEAN FILL IN SPECIFICATION SECTION 02 61 00.
5. A CONCRETE SLAB SHALL BE INSTALLED ABOVE 6-INCH LAYER OF ASTM #57 INFILL TO SERVE AS ENVIRONMENTAL SITE COVER CAP, AS SPECIFIED IN REMEDIAL ACTION PLAN. THE CONCRETE SLAB SHALL BE A MINIMUM OF 9-INCH THICK AND 4,000 PSI.
6. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL REQUIREMENTS TO BE IMPLEMENTED DURING PERFORMANCE OF THE WORK.

LEGEND

- New 9" thick (min), 4,000 PSI concrete slab to be installed
- Compacted, Clean Fill, topped with 6" of ASTM #57 Infill

LOCATION MAP

NOT TO SCALE



DASNY

Consultants:

TRC

1467 Broadway, Suite 3301, New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

Project Key

REVISIONS

No'ts	Description	Date:

Client: NYS OFFICE OF MENTAL HEALTH
OMH ENVIRONMENTAL OPERATIONS INFORMATION AND CONSTRUCTION SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title: PCB REMEDIATION BRONX PC
TRANSFORMER ROOMS NO.1 & NO.2
BUILDING NO.1 MEDICAL SURGICAL BUILDING 10
1500 WATERS PLACE, BRONX, NEW YORK

Drawing Title: POST REMEDIATION BACKFILL AND CONCRETE INSTALLATION DETAILS

Phase: 100% SUBMISSION

Professional Seal & Signature: STATE OF NEW YORK · JOHN J. DOOM · 099757 · PROFESSIONAL ENGINEER

Date: 04/08/2026
DASNY Project No.: 3816609999
Consultant Project No.: 411323
Scale: AS NOTED
Drawn By: HD
Checked By: RB

FIGURE 8

Drawing Number: Drawing 8 of 8

TABLES

Table 1
Summary of Soil Results
PCBS
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
S-1	3/8/1993	TOP	21,000
S-1	3/8/1993	7 inches b.c.	1,200
S-1	3/19/1993	24 inches b.c.	703
S-2	3/22/1993	20 inches b.c.	1.2
S-2	3/22/1993	28 inches b.c.	1.7
S-3	3/19/1993	14 inches b.c.	1.9
S-3	3/19/1993	24 inches b.c.	0.9
S-4	3/19/1993	14 inches b.c.	ND
S-4	3/19/1993	24 inches b.c.	0.5
S-5	3/19/1993	14 inches b.c.	ND
S-5	3/19/1993	24 inches b.c.	ND
S-6	3/19/1993	22 inches b.c.	ND
S-6	3/19/1993	28 inches b.c.	1.2
S-7	3/19/1993	14 inches b.c.	ND
S-7	3/19/1993	25 inches b.c.	ND
N-1	5/93	TOP	0.3
N-1	5/93	6 inches b.c.	0.3
N-1	5/93	12 inches b.c.	ND
N-1	5/93	18 inches b.c.	ND
N-1	5/93	26 inches b.c.	ND
N-2	5/93	TOP	26
N-2	5/93	6 inches b.c.	6.9
N-2	5/93	12 inches b.c.	0.3
N-2	5/93	18 inches b.c.	2.3
N-2	5/93	26 inches b.c.	ND
DRAIN 01	8/29/2000	0-2'	23,000
DRAIN 01	8/29/2000	2'-4'	16,000
N15W5	8/30/2000	4'-6'	1.1
N30W5	8/29/2000	2'-4'	0.9
N30W5	8/31/2000	4'-6'	0.2
T1-SS01	6/11/2013	0 - 8 inches b.c.	ND
T1-SS02	6/12/2013	0 - 6 inches b.c.	ND
T1-SB02	7/23/2014	0 - 2'	ND
T1-SB02	7/23/2014	5' - 10'	ND
T1-SB02	7/23/2014	10' - WT	ND
T1-SB03	7/23/2014	0 - 2'	ND

Table 1
Summary of Soil Results
PCBS
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
T1-SB03	7/23/2014	5' - 10'	ND
T1-SB03	7/23/2014	10' - WT	ND
T1-SB04	7/23/2014	0 - 2'	ND
T1-SB04	7/23/2014	5' - 10'	ND
T1-SB04	7/23/2014	10' - WT	ND
T1-SB05	7/23/2014	0 - 2'	0.12
T1-SB05	7/23/2014	5' - 10'	ND

Notes

ND	: Not detected
-	: Not available
>	: Greater than the indicated depth
b.c.	: Below concrete
PCBs	: Polychlorinated Biphenyls
mg/kg	: milligrams per kilogram
WT	: Water Table

Table 2
Summary of Soil Results
Building 1 - Transformer Room No. 2
PCBS

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
DRAIN-01	8/30/2000	10 inches b.c.	3.2
DRAIN-02	8/30/2000	0-2'	0.7
DRAIN-02	8/30/2000	4'-6'	7
S15W10	8/31/2000	0-2'	0.1
S20W5	8/31/2000	0-2'	0.2
S35W7	8/31/2000	0-2'	12
S35W7	8/31/2000	2'-3'	49
T2-SS03	6/11/2013	0 - 8 inches b.c.	0.14
T2-SS04	6/12/2013	12 - 14 inches b.c.	ND

Notes

ND	: Not detected
b.c.	: Below concrete
feet bgs	: feet below ground surface
PCBs	: Polychlorinated Biphenyls
mg/kg	: milligrams per kilogram

Table 3
Summary of Concrete Results
PCBs
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Core Thickness (inches)	Depth (inches)	Total PCBs (mg/kg)
S-1 TOP	3/8/1993	-	-	21,000
S-1 BOTTOM	3/8/1993	-	-	1,700
S-2 FLOOR TOP	3/19/1993	-	-	1.7
S-3 FLOOR TOP	3/22/1993	-	-	327
S-4 FLOOR TOP	3/19/1993	-	-	ND
S-5 FLOOR TOP	3/19/1993	-	-	0.4
S-6 FLOOR TOP	3/19/1993	-	-	0.3
N10W5 TOP	8/31/2000	11	-	7.5
N10W15 TOP	8/28/2000	10	-	1,500
N10W15 BOTTOM	8/28/2000	-	-	0.6
N10W25 TOP	8/28/2000	8	-	2.3
N10W25 BOTTOM	8/28/2000	-	-	0.6
N15W0 TOP	8/29/2000	15	-	1.4
N15W0 BOTTOM	8/30/2000	-	-	0.8
N15W5 TOP	8/28/2000	9	-	1,500
N15W5 BOTTOM	8/28/2000	-	-	0.33
N20W25 TOP	8/28/2000	9	-	170
N20W25 BOTTOM	8/28/2000	-	-	0.27
N25W0 TOP	8/29/2000	16	-	1.0
N25W0 BOTTOM	8/29/2000	-	-	0.54
N25W15 TOP	8/28/2000	12.5	-	18,000
N25W15 BOTTOM	8/28/2000	-	-	1,600
N30W5 TOP	8/28/2000	7.5	-	3.5
N30W5 BOTTOM	8/28/2000	-	-	0.3
N30W25 TOP	8/28/2000	>7	-	0.82
N40W5 TOP	8/28/2000	9	-	1.8
N40W5 BOTTOM	8/28/2000	-	-	200
N40W15 TOP	8/30/2000	16	-	1.5
N40W15 BOTTOM	8/30/2000	-	-	0.6
N40W25 TOP	8/28/2000	>12	-	1.5
T1-CC-01	7/9/2013	-	0 - 1	2.2
T1-CC-01	7/9/2013	-	6.5 - 8	ND
T1-CC-02	7/9/2013	-	0 - 1.5	0.5
T1-CC-02	7/9/2013	-	11 - 12	ND

Notes

ND : Not detected
- : Not available
> : Greater than the indicated depth
PCBs : Polychlorinated Biphenyls
mg/kg : milligrams per kilogram

Table 4
Summary of Concrete Results
PCBs
Building 1 - Transformer Room No. 2

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Core Thickness (inches)	Depth (inches)	Total PCBs (mg/kg)
S0W5 TOP	8/30/2000	15	-	0.6
S5W10 TOP	8/30/2000	9	-	6.5
S5W20 TOP	8/30/2000	13	-	0.9
S10W0 TOP	8/30/2000	14	-	0.7
S10W0 BOTTOM	8/30/2000	-	-	10
S10W15 TOP	8/30/2000	8	-	0.4
S15W10 TOP	8/30/2000	8.5	-	1.6
S15W10 BOTTOM	8/30/2000	-	-	1.2
S20W5 TOP	8/30/2000	8	-	4.9
S20W5 BOTTOM	8/30/2000	-	-	1.8
S20W15 TOP	8/30/2000	10	-	8.9
S25W0 TOP	8/30/2000	13	-	2.5
S25W0 BOTTOM	8/30/2000	-	-	360
S25W7 TOP	8/30/2000	9	-	16
S30W20 TOP	8/30/2000	9	-	650
S30W20 BOTTOM	8/30/2000	-	-	39
S35W5 TOP	8/30/2000	8	-	68,000
S35W5 BOTTOM	8/30/2000	-	-	14,000
S35W13 TOP	8/30/2000	8	-	45
S40W0 TOP	8/30/2000	15	-	8.4
S40W0 BOTTOM	8/30/2000	-	-	0.5
S40W20 TOP	8/30/2000	11	-	3
S40W20 BOTTOM	8/30/2000	-	-	0.47
S45W13 TOP	8/30/2000	7	-	43
S45W13 BOTTOM	8/30/2000	-	-	2.5
S47W7 TOP	8/30/2000	6.5	-	2.2
S47W7 BOTTOM	8/30/2000	-	-	58,000
S50W15 TOP	8/30/2000	10	-	0.2
T2-CC-03	7/9/2013	-	0 - 1	0.4
T2-CC-03	7/9/2013	-	13 - 15	ND
T2-CC-04	7/9/2013	-	0 - 1.5	0.11
T2-CC-04	7/9/2013	-	10 - 12	ND

Notes
ND : Not detected
- : Not available
PCBs : Polychlorinated Biphenyls
mg/kg : milligrams per kilogram

APPENDICES

APPENDIX A - JANUARY 2026 REMEDIAL WORK REPORT

REMEDIAL WORK PLAN

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461
DASNY Project Number 3816609999

Prepared For:

New York State Office of Mental Health
75 New Scotland Avenue
Albany NY 12208

Prepared by:
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TRC Project No. 411323.0000.0022

January 2026

TABLE OF CONTENTS

CERTIFICATION ..... **III**
1.0 INTRODUCTION AND PROJECT OBJECTIVES **1**
2.0 BACKGROUND **2**
3.0 PRE REMEDIAL TRANSFORMER ROOM SAMPLING **4**
3.1 Asbestos Sampling 4
3.2 Lead Paint Survey 4
3.3 RCRA Metal Sampling 5
3.4 PCB Sampling 5
3.4.1 PCB Liquid and Bulk Sampling 5
3.4.2 PCB Wipe Sampling 6
3.4.3 Transformer PCB Oil Sampling 6
3.5 Sampling Methodologies 7
3.6 Training & Medical/Fit Tests 7
3.7 General Field Requirements 7
3.8 TRC Mobile Data Solutions 7
3.9 Sampling and Analytical Procedures 8
3.10 Sampling Media and Materials 8
3.10.1 Containers 8
3.10.2 Sample Labels 8
3.11 Community Air Monitoring Plan (CAMP) 8
4.0 TRANSFORMER ROOM SUPPLEMENTAL INVESTIGATION REPORT **10**
5.0 STRUCTURAL ENGINEERING **11**
6.0 PROJECT SPECIFICATIONS **12**
7.0 REMEDIATION WORK **13**
7.1 General Field Requirements 13
7.2 Daily Activities 13
7.2.1 Daily Reports 13
7.3 Transformer Room Remediation 14
7.3.1 Procedures for Removal of Equipment and Debris on Concrete Slab 14
7.4 Concrete Pad Demolition and Removal 15
7.5 Post Remedial Concrete Sampling 15
7.6 Soil Excavation 15
7.6.1 Engineering Shoring Plan 16
7.6.1.1 Soil Classification 16
7.6.1.2 Requirements for Protective Systems 17
7.6.2 Groundwater Dewatering and Treatment Plan 17
7.6.3 Transformer Room Soil Sampling 18
7.6.3.1 Soil Sampling Procedures 18
7.7 Transportation and Disposal of Waste 19
7.7.1 Procedures for Waste Disposal 20
8.0 BACKFILLING AND INSTALLATION OF CONCRETE PAD (COVER) **22**
9.0 REMEDIAL WORK REPORTING **23**
10.0 PROJECT SCHEDULE **24**

GANTT CHART

FIGURES

Figure 1 – Site Location Map
Figure 2 – Thomson Building Foundation Plan and Transformer Rooms 1 & 2
Figure 3 – PCB Concentrations in Soil Samples Transformer Room 1
Figure 4 – PCB Concentrations in Soil Samples Transformer Room 2
Figure 5 – PCB Concentrations in Concrete Transformer Room 1
Figure 6 – PCB Concentrations in Concrete Transformer Room 2
Figure 7 – Transformer Room 1 – Slab and Soil Removal Plan
Figure 8 – Transformer Room 2 – Slab and Soil Removal Plan
Figure 9 – Transformer Room 1 – Post Remediation Concrete Sample Locations
Figure 10 – Transformer Room 1 – Post Remediation Soil Sample Locations
Figure 11 – Transformer Room 2 – Post Remediation Concrete Sample Locations
Figure 12 – Transformer Room 2 – Post Remediation Soil Sample Locations

APPENDICES

Appendix 1 – Quality Assurance Project Plan
Appendix 2 – Project Personnel Organization Chart and Resumes
Appendix 3 – Specifications
Appendix 4 – Health and Safety Plan
Appendix 5 – Community Air Monitoring Plan

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CERTIFICATION

I, Anthony Sigona, PE certify that I am currently a registered professional engineer licensed by the State of New York and that this Remedial Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

Anthony Sigona, PE
Name

073727
New York State Profession Engineer License Number

DocuSigned by:
Anthony J. Sigona
5424E7E2C59042E...
Signature

January 15, 2026
Date

Signed by:



DocuSigned by:
Anthony J. Sigona
5424E7E2C59042E...

1.0 INTRODUCTION AND PROJECT OBJECTIVES

This Remedial Work Plan (RWP) has been prepared by TRC Engineers, Inc. (TRC) on behalf of Dormitory Authority of the State of New York (DASNY) and the New York Office of Mental Health (OMH) for Transformer Room No. 1 and Transformer Room No. 2 located inside Building No. 1 (Medical Surgical Building 101 (Thomson Building), located at the Bronx Psychiatric Center located at 1500 Waters Place in Bronx County of New York City, tax block 4226, lot 30.

This RWP outlines the scope of work for the implementation of the remedy selected which is specified in the Administrative Record of Decision (ROD) governing the cleanup of Hazardous Waste at this Site according to New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

In order to ensure proper performance of all key objectives of this work plan, TRC Engineers, Inc. (TRC) will review this RWP with New York Office of Mental Health (OMH) and its Environmental Contractor before scheduling this work. The RWP is divided into sequential steps as follows: Transformer Room Sampling, Sampling Room Methodologies, Transformer Room Investigation Report, Project Specifications, Transformer Room Remediation, Soil Excavation and Sampling, Backfilling, and Installation of Concrete Pads (Cover), Solid Waste Management, Transportation and Disposal, and Final Report. The Project Schedule is presented in Section 10.0 of this RWP.

All TRC work will be performed in accordance with the Site-Specific Health and Safety Plan (HASP) presented in Appendix 4 that defines the potential hazards expected to be encountered during the implementation of the scope of work presented in this RWP, the Community Air Monitoring Plan (CAMP) presented in Appendix 5 to monitor for particulates will be implemented, as well as the appropriate exposure controls including engineering, administrative, and personal protective equipment required for each task. In addition, the contractor assigned to perform RWP tasks in this plan will be required to prepare a separate HASP.

2.0 BACKGROUND

The Transformer Rooms Nos. 1 & 2 are located at Building No. 1 Medical Surgical Building 101 (Thomson Building) on a 0.1-acre portion of the 5-acre Bronx Psychiatric Center campus, which is considered an urban area (the "Site").

Current Site Usage
The Site has been used as transformer rooms for the psychiatric center for over 50 years and is no longer used for electric power supply to the building. The transformers containing PCB oils were reportedly replaced in 1993 with non-PCB transformers. In 1995, the entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fan and exterior walls and the space between the floors and electrical equipment were sealed, and annual surface wipe sampling and maintenance of the epoxy coating was conducted. The non-PCB transformers and associated electrical equipment in the rooms were vandalized in 2023 for copper wiring and related equipment resulting in significant damage, the release of transformer oils, and the presence of both built-up debris and general inaccessibility. The Site is currently unoccupied.

Site History
The Thomson Building Site at the Bronx Psychiatric Center, a State Superfund Project in Bronx County recorded as Site No. 203005, was originally classified as a Class 2 inactive hazardous waste disposal site and reclassified as a Class 3 inactive hazardous waste disposal site on August 9, 2006. From 2015 through 2019, the Department developed the Feasibility Study Work Plan and completed several rounds of review and comment, culminating in a public meeting in March 2019 and issuance of the Record of Decision (ROD). A ROD Modification Memorandum dated February 11, 2020, subsequently corrected several inconsistencies in the original documents, including clarifying that the Site is classified as a Class 3 site rather than Class 2. This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the DEC) for the Bronx Psychiatric Center Site and the public's input to the remedy presented by the Department. The DEC and NYS OMH also entered a Consent Order on February 23, 2012, Index # R2-0668-06-11; the Order obligates the responsible party to implement this RWP.

The Administrative Record of the New York State Department of Environmental Conservation (the NYSDEC) is based on the following:

1. *Proposed Remedial Action Plan for the Bronx Psychiatric Center site*, dated February 2019, prepared by the NYSDEC
2. *Order on Consent, Index No. R2-0668-06-11, between the NYSDEC and New York State Office of Mental Health, executed on February 23, 2012*
3. *Preliminary Site Assessment Report*, dated December 2000, prepared by Dvirka and Bartilucci Consulting Engineers.
4. *Citizen Participation Plan*, dated March 2013 (revised June 2013), prepared by URS Corporation (URS)
5. *Remedial Investigation Work Plan*, dated October 2013, prepared by URS
6. *Remedial Investigation Report*, dated November 2016, prepared by URS
7. *Feasibility Study Report*, dated February 2019, prepared URS

The transformer rooms at the psychiatric center were operated for over 50 years for electric power supply to the building. There are transformers and associated electrical equipment in the transformer rooms. The prior transformers used at the facility contained PCB dielectric fluid, which leaked historically within the

transformer rooms, impacting the concrete floors beneath and near the transformers and the soils below the building floor. The former PCB transformers were replaced, and the current transformers reportedly contain non-PCB oil.

Transformer Rooms No. 1 and No. 2 are in the east side of the basement of Building No. 1 Medical Surgical Building 101 (Thomson Building). Access to the transformer rooms is limited to maintenance personnel. Transformer Rooms No. 1 and No. 2 currently contain inactive transformers that previously supplied electricity to Building No 1.

In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fan and exterior walls and the space between the floors and electrical equipment were sealed, and surface wipe sampling and maintenance of the epoxy coating were being conducted until October 2023, when access to the Transformer Rooms was compromised due to vandalism. The transformer room floors are currently accessible, however there are areas of the floor that are partially covered with damaged equipment and debris.

Currently, Transformer Room No. 1 contains a 13,800-480-volt double-ended unit substation, consisting of primary switches, transformers, and switch gear. Transformer Room No. 2 contains a 13,800-480-volt double-ended unit substation, consisting of primary switches, transformers, and secondary switchgear, as well as switchgear that is served from Room No. 1. The power is disconnected, and building is unoccupied, and the transformers and equipment and miscellaneous debris will be removed to implement the selected remedy specified in the ROD issued by NYSDEC.

3.0 PRE REMEDIAL TRANSFORMER ROOM SAMPLING

The transformers for Building No. 1 Medical Surgical Building 101 (Thomson Building) will be surveyed for suspect asbestos-containing materials (ACM), Lead Paint, RCRA metals, PCBs, and universal and hazardous wastes prior to any proposed remedial work. The transformers and associated equipment must be sampled and properly characterized prior to removal. The actual number of samples collected for each type of material will depend on the quantity and types of suspect ACM, RCRA metals, and PCB containing material identified.

The proposed survey and sampling will not include an assessment of concrete, soil or groundwater impacts beneath the transformers which was previously performed prior to the ROD. The additional sampling in the Transformer Rooms will be used for waste characterization of the transformers, vandalized equipment and building materials to be removed during remedial activities.

3.1 Asbestos Sampling

The asbestos survey will involve the inspection of all building materials present within the two (2) transformer rooms, including but not limited, to the transformers and associated equipment, vandalized components, debris, and any fire-rated doors. The asbestos survey will involve sampling of all suspect building materials impacted by the work. Homogeneous materials will be classified according to color, appearance and texture and evidence of being installed at the same general time. The suspect homogeneous asbestos containing materials (ACM) will be categorized into one of the three following groups:

- Surfacing Materials - sprayed or trowelled onto structural members (such as beams, columns, decking) for fire protection; on ceilings and walls for fireproofing; or for acoustical or decorative purposes.
- Thermal System Insulation (TSI) - applied to hot and cold-water systems and HVAC systems to prevent heat transfer and water condensation. This includes insulation on piping, pipe joints, and ducts.
- Miscellaneous Materials - all other suspect ACM including, but not limited to, gaskets, pumps, valves, roofing materials, caulk, tar, mastics and transite insulations.

The asbestos sampling will be performed by New York State Department of Labor (NYSDOL) and New York City Department of Environmental Protection (NYCDEP) certified asbestos inspectors/investigators.

The asbestos samples will be transported to a New York State Environmental Laboratory Approved Program (NYS ELAP) laboratory, following proper chain-of-custody procedures for analysis by New York State Polarized Light Microscopy (PLM) Method 198.1, non-friable organically bound (NOB) Method 198.6 or transmission electron microscopy (TEM) Method 198.4, as applicable.

3.2 Lead Paint Survey

A visual inspection of the Transformer Rooms will be performed for suspect Lead Paint.

- Preparation of a Lead Paint summary of field notes, location diagrams, observations and estimated quantities of suspect lead paint will be submitted with the supplemental environmental survey report for the property.

- TRC will conduct lead-based coating inspection of painted building materials using USEPA trained lead inspectors. The method used for the inspection will utilize an X-Ray Fluorescence (XRF) spectrum analyzer.

3.3 RCRA Metal Sampling

Disposal of porous floor debris may contain lead-based paint, as well as other regulated heavy metals typically associated with electrical equipment and is subject to the requirements under both the NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371) and the USEPA RCRA Hazardous Waste Management regulations (40 CFR Parts 260 through 268).

TRC will collect up to two (2) samples, one (1) bulk sample of representative porous floor debris and non-metallic (non-recyclable) materials being removed from each Transformer Room. The samples will be placed in a container and delivered to a New State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory following proper chain-of-custody procedures. The sample will be analyzed following the Toxicity Characteristic Leaching Procedure (TCLP) for leachable RCRA (8) metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury).

The TCLP analysis will provide a preliminary characterization of the projected waste stream for the non-recyclable debris materials as either hazardous or non-hazardous waste. The preliminary hazardous waste sampling can be used as final if TRC visually verifies that the waste stream is the same as what was originally sampled. TRC shall perform final waste characterization to obtain disposal facility acceptance prior to disposal by the contractor if required.

3.4 PCB Sampling

3.4.1 PCB Liquid and Bulk Sampling

The accumulation of any liquid and sediment in the Transformer Rooms may be contaminated. This may include the potential release of di-electric or silicone oils, and potential PCB contamination. Bulk samples of residual liquid and sediment from the surface of concrete and/or drainage low points will be collected. PCB samplers will wear phthalate-free gloves such as neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) when handling PCB samples.

Sediment Sampling

A total of six (6) discrete liquid and/or sediment samples will be collected using a dedicated disposable Teflon scoop for each liquid and/or sediment sample. Additional bulk samples of manufactured building materials with suspect PCBs will be collected if suspect caulking, textured paint or fireproofing is observed. Additional bulk samples of suspect asbestos porous materials will be sampled for PCBs if present. The samples will be containerized in appropriately labeled and sealed laboratory-supplied glassware.

Liquid and Aqueous Sampling

Collecting aqueous and liquid samples involves a standardized process to ensure accurate analysis. This includes proper sample collection, preservation, and transportation to a lab for analysis. A general approach involves using sterile, rinsed collection bottles, filling them to a specific level, and placing them in coolers with ice for transport according to laboratory for analysis for USEPA SW846 Method 8082A.

Manufactured Building Materials

Bulk Samples will be collected at no more than 1/2-inch depth intervals using a metal chisel or sharp cutting knife. Thus, the initial surface sample should be collected from 0 - 0.5 inches. For porous surfaces, such as caulking and rubber, a representative sample can be collected using a metal chisel or sharp cutting knife. A minimum sample size of the bulk materials will be weighed in the field to achieve at least 10 grams for analysis.

Liquid/sediment samples will be submitted for laboratory analysis acceptable to both New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (USEPA).

3.4.2 PCB Wipe Sampling

Wipe Samples: A total of twelve (12) discreet PCB wipe samples will be collected from non-porous surfaces identified within Transformer Rooms 1 and 2 which include vandalized equipment and materials which will be removed for off-site recycling and/or disposal. Samplers will wear phthalate-free gloves such as neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) when handling PCB samples.

Each wipe sample will be collected using hexane-rinsed cotton gauze wipe which will be placed in a separate, pre-cleaned glass jar with a Teflon-lined cap for submission to the laboratory under standard chain-of-custody procedures for submission to an independent laboratory certified to perform PCB analysis according to New York State Department of Health (NYSDOH) ELAP program.

Wipe samples will be analyzed using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A following Soxhlet Extraction (SW846 Method 3540C) or approved alternative method.

Laboratory reporting limits for each Aroclor in each sampling media are:

- *Surface Wipe Samples* – reporting limit of 0.1 µg/100 cm^2.
- Surface wipe samples will be compared to EPA's high occupancy wipe sample criteria of 10 µg/100 cm^2 40 CFR 761.61(a)(4)(ii) and NYSDEC 6 NYCRR 371.4(e).

3.4.3 Transformer PCB Oil Sampling

TRC will collect samples of di-electric or silicone-based oil inside the transformers for laboratory analysis. Oil samples will be submitted to the laboratory for PCB analysis. Although the site records indicate they are non-PCB transformers, the sampling of these transformers is recommended by the NYSDEC for legal disposal.

The sampling technician will locate the sampling valve or port, usually at the bottom of the transformer, and prepare all necessary sampling equipment, including clean containers, sampling pumps or syringes, tubing, and safety goggles. Sampling shall be performed including proper sample collection, preservation, and transportation to a laboratory for analysis. A general approach will be followed which involves filling cleaned containers to a specific level and placing them in coolers with ice for transport to laboratory for analysis via USEPA SW846 Method 8082A.

3.5 Sampling Methodologies

All work shall be completed in accordance with this RWP, referenced sampling/analytical methods, the HASP, DER-10/Technical Guidance for Site Investigation and Remediation dated May 2010, and the QAPP included in this Work Plan. No deviations from this RWP or the HASP shall be made without prior receipt of alternate technical direction issued by TRC Project Manager and/or OMH.

3.6 Training & Medical/Fit Tests

All management and field personnel conducting sampling activities in this RWP have experience in the implementation of hazardous waste remediation and related field sampling programs. All TRC staff working on-site will comply with the HASP in effect at the time and will have completed Hazard Communication training specific to the project.

3.7 General Field Requirements

- All Electrical Equipment shall be fully de-energized and inspected by a licensed electrician to ensure the safety of all employees and contractors working in the Transformer Building for the duration of this sampling and remedial work under this project. OSHA Lock out / tag out regulations (29 CFR 1910.147) for the control of hazardous energy for the electric shut down of the Transformer Rooms shall be satisfied.
- During sampling, high powered flashlights or equivalent temporary lighting will be used to supplement poor lighting.
- The "Buddy System" will be strictly enforced for work in building. At no time will personnel be present in the building alone.
- All personnel performing the work will have appropriate training and be familiar with the content of the HASP and safety protocols for the Site (refer to Appendix 4*)*.
- Proper protective clothing such as Tyvek® Suits and half-face purifying respirators will be utilized, as necessary. The respirator filters/cartridges shall provide oil resistant P100 and organic vapor protection.
- A Community Air Monitoring Plan (CAMP) to monitor particulates will be implemented during slab removal, excavation, material handling, and off-site transport, (refer to Appendix 5).
- To prevent cross-contamination, neoprene, butyl, or Viton gloves (> 8-hour breakthrough for PCBs) shall be used when handling PCB samples.
- TRC will provide all sampling equipment and sampling supplies and consumables necessary to perform the sampling, including sample containers, labels, disposable gloves, and templates.

3.8 TRC Mobile Data Solutions

TRC has developed, under our TRC Mobile Data Solutions program, a customizable data collection and reporting process for our project teams to utilize to efficiently collect and report field data.

- Real Time Information - TRC's real time retrieval allows project staff to coordinate efficiently to provide real-time data on the project.
- The TRC Mobile Data Solutions tool has undergone rigorous internal testing
- TRC-designed mobile applications are customized for asbestos, lead-based paint & hazardous materials surveys, abatement & air monitoring projects, building water intrusion assessments, industrial hygiene evaluations, due-diligence, SPCC inspections, groundwater monitoring, etc.

3.9 Sampling and Analytical Procedures

Analytical methods to be utilized in the analysis of samples collected during this sampling event shall comply with federal, state, and local requirements. TRC will utilize a chain-of-custody, which will accompany all samples to the laboratories. TRC personnel will complete Field Records on TRC Mobile Data Solutions. The site-specific sampling techniques and analytical methods to be used in implementing the remedial action are presented in the Quality Assurance Project Plan (QAPP) in Appendix 1.

3.10 Sampling Media and Materials

All samples shall be collected in laboratory-supplied pre-cleaned glass jars for PCBs and RCRA metal samples. Asbestos samples will be collected into new unused resealable plastic bags.

3.10.1 Containers

All glass sample containers will meet the QA/QC specifications in EPA's Office of Solid Waste and Emergency Response (OSWER) Directive 9240.0-05A, "Specifications and Guidance for Contaminant Free Sample Containers".

3.10.2 Sample Labels

Sample labels will clearly identify the sample, and should include the following:

- Laboratory
- Sample identification number
- Sample collection date and time
- Sample preservative
- Analytical Method

3.11 Community Air Monitoring Plan (CAMP)

The requirements of the CAMP presented in Appendix 5 will be implemented during slab removal, soil excavation, and material loading and off-site transport. The CAMP requires real-time monitoring for particulates (i.e., dust) at the downwind perimeter of the Site. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the remediation work activities) from potential airborne contaminant releases as a direct result of remedial work activities. The action levels specified in the CAMP require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP documents that work activities did not spread contamination off-Site through the air.

Transformer Rooms 1 and 2 are located in the basement of an unoccupied building and are secluded from the public. Each Transformer Room has an egress on the basement level with dedicated exterior stairs from the basement level directly to the ground level, which is the primary pathway for remedial work and waste removal for basement Transformer Rooms 1 and 2 (refer to the attached photos). During the intrusive remedial activities and slab removal the front primary pathway entrance to the basement can be isolated (e.g. poly vinyl plastic sheeting (curtain wall) to prevent dust from leaving the work area). Polyvinyl plastic sheeting (curtain wall) will be installed at each exterior doorway during intrusive work. Soil and concrete

will be transported to roll-off containers on the ground level via the exterior stairwells, and bins utilized to transport soil and concrete will be covered during transport to the roll-off.

There is a potential for dust emissions to impact the community during transport of soil and concrete into roll off containers, or during off-site transport. Therefore, as a precautionary measure, an exterior dust monitor will be positioned at a downwind location at the exterior doorway nearest to the work, during transport of material outside of the building.

4.0 TRANSFORMER ROOM SUPPLEMENTAL INVESTIGATION REPORT

TRC will prepare a supplemental environmental survey report for the property. This report will include the following:

- Executive Summary.
- Background - detailing facility information, inspector's name(s), certifications and date of survey, and general sampling and analysis procedures employed.
- Inspection Results Summary - identifying materials (with associated locations) confirmed or suspected to be ACM, Lead Paint, RCRA metals, PCBs, universal and hazardous waste.
- Inspection Assessment Results - detailing homogeneous materials, material condition, number of samples collected per group and results.
- Quantity Schedule identifying quantities of ACM, Lead Paint, RCRA metals, PCBs, universal & hazardous waste.
- Areas Not Accessible - identifying all areas where suspect ACM may be present but was not able to be accessed; and
- Report Appendices - including all report documentation, such as analytical results, chain of custody forms, calculation sheets, etc.

In the event that the result of the additional investigation shows contamination not anticipated, these findings would be reviewed with DEC before implementing Remedial Action and before submittal of a remedial plan to the USEPA.

5.0 STRUCTURAL ENGINEERING

TRC's structural engineer has reviewed the structural drawings provided by New York State Office of Mental Health (OMH) Medical Surgical Building 101 (Thomson Building), Dated December 4, 1958, along with URS's "Review of Structural Analysis" for Building 1, Transformer Rooms 1 & 2, dated October 25, 2017. This included a review of the original 2017 design loading versus the proposed loading condition during the excavation. Prior to the excavation work, the structure will be vacant without any additional interior demolition and unoccupied during the proposed remediation work. Figures 7 and 8 identify the boundaries for the removal of the concrete slab and soil to achieve the restricted-residential soil cleanup objectives (SCOs) for PCBs based on the investigations that were previously completed. Concrete removal outside of the grade beams will be required to remove surface concrete and soil identified with PCB concentrations above 1 ppm.

Per TRC's Structural Engineer's review, the removal of the concrete slab outside of the grade beams will require some additional measures to protect the grade beams and foundations of the Building. Structural Engineering design plans for the removal of the concrete slab and soil will be provided to the remediation contractor with the bid documents.

The Record of Decision (ROD) Alternative 3 identifies soil excavation to a maximum depth of 10 feet below the existing slab elevation as the initially required depth. If the 10 ppm cleanup threshold for contaminants is achieved within this depth, the remediation can proceed as planned under this alternative.

A technical or structural limitation would arise if achieving the 10 ppm cleanup goal requires excavation beyond the 10-foot depth, and that additional depth exceeds what the existing foundations can support without structural reinforcement. If the 10 ppm cleanup objective for subsurface soil is technically impracticable because of these structural limitations, the project objectives would be reviewed with NYSDEC and a risk-based approval from USEPA would be sought.

Additional discussion on the structural issues are described in Section 7.4.

6.0 PROJECT SPECIFICATIONS

Based on the findings of the Transformer Investigation Report in Section 4.0, applicable DASNY Project Specifications will be selected:

- Removal of asbestos-containing materials present in the Transformer Rooms shall be performed by a New York State Department of Labor licensed asbestos abatement contractor, and should be handled, stored, and disposed of according to all local, state, and federal regulations.
- Asbestos Removal - Section 02 82 00
- Lead Containing Paint/Lead Based Paint Disturbances Using OSHA Lead Safe Work Practices – Section 02 83 10
- Non-Liquid PCB Material Removal - Section 02 84 00
- Identification and Disposal of Hazardous Waste – Section 02 86 00
- Removal and Disposal of Universal Waste - Section 02 87 00
- Removal Transport and Disposal of Contaminated Soil – Section 02 61 00

Project Specifications are presented in Appendix 3.

7.0 REMEDIATION WORK

The scope of work for the implementation of this remedy has been selected as specified in the Administrative Record of Decision (ROD) governing the cleanup of Hazardous Waste at this Site according to New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375. All applicable Training & Medical/Fit Testing and General Field Requirements from Sampling Section 3.0 will be enforced during remediation work. Key project personnel and contact information along with resumes of key TRC project personnel are in Appendix 2.

7.1 General Field Requirements

- Community air monitoring will be conducted in accordance with the Community Air Monitoring Plan (CAMP) provided in Appendix 5 during ground-intrusive remediation activities, including slab removal, excavation, material handling, and off-site transport, to protect downwind receptors and prevent off-site migration of contaminants.
- All Electrical Equipment shall be fully de-energized and inspected by a licensed electrician to ensure the safety of all employees and contractors working on this project. OSHA Lock out / tag out regulations (29 CFR 1910.147) for the control of hazardous energy for the electric shut down of the Transformer Rooms shall be satisfied. Sufficient high-powered flashlights or temporary lighting will be used to supplement poor lighting.
- The “Buddy System” will be strictly enforced for work in building. At no time will personnel be present in the building alone.
- All personnel performing the work will have appropriate training and be familiar with the content of the approved Contractor Site HASP and safety protocols for the Site.
- Proper protective clothing such as Tyvek® Suits and half-face purifying respirators will be utilized, as necessary. The respirator filters/cartridges shall provide oil resistant P100 and organic vapor protection.
- To prevent cross-contamination, neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) shall be used when handling PCB samples.
- OSHA Confined-Space Entry health and safety equipment and training procedures.

7.2 Daily Activities

- All field personnel shall attend a daily kick-off meeting prior to work commencement. The daily meetings will include a safety talk, and remediation work planned for the day.
- An entry/exit log shall be utilized for all workers in each transformer room for safety and emergency purposes.
- The Contractor will provide a daily log of activities and planned next day’s work to TRC’s project manager via email.
- The Project Manager will review all data generated daily.

7.2.1 Daily Reports

Daily reports will be submitted to NYSDEC Project Managers by noon of each day following the field activities and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to alpha-numeric map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- Photographs of site activities; and
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RWP will be addressed directly to NYSDEC Project Manager via personal communication.

7.3 Transformer Room Remediation

The remediation of the Transformer Rooms aside from asbestos abatement (based on asbestos sampling) shall consist of the removal and clearing of all contents (transformers and equipment) from transformer rooms to prepare removal of the concrete pads. The following are sequential order for this activity.

1. Remove overgrown vegetation to create access to remove transformer and waste materials from the building.
2. Establish Egress to the Transformer Rooms. Temporary removal of Fire Rated Doors and Louvres within the existing limits of the Basement exterior foundation wall. These entry doors and Louvre panels shall be assessed for suspect materials (i.e., asbestos, lead paint) such as insulation.
3. Clean and remove non-porous scrap metal; Additional PCB-wipe sampling may be necessary to confirm the materials have been thoroughly cleaned for recycling.
4. Remove the other porous materials and debris as Toxic Substances and Control Act (TSCA) Regulated PCB Remediation Waste and/or Potentially Hazardous Waste depending on the results of waste characterization sampling activities as described in Section 3.0.
5. The four (4) transformers along with all associated equipment will be de-energized, drained if necessary, and removed from Transformer Rooms 1 & 2, as non-porous scrap metal for recycling depending on waste characterization.

7.3.1 Procedures for Removal of Equipment and Debris on Concrete Slab

a) Prior to mobilization the contractor shall assure that its employees have received safety equipment training for applicable equipment for this project, i.e., ladders, forklift, crane, and scaffolds training, along with Hazard Communication training as required to perform the work described by this protocol.
b) The contractor shall submit to TRC all Safety Data Sheets (SDS) for all chemical products proposed to be used in the cleaning process.
c) Hazardous Material Technicians will remove debris on the floor in each of the rooms.
d) Equipment and Debris will be segregated as non-porous scrap metal vs porous debris, and based on the results of the supplemental investigation.
e) All generated waste will be placed in lined containers.
f) All used cleaning materials, personnel protective equipment (PPE) containing cleaning agents /water, epoxy paint chips and all other waste will be placed into 55-gallon drum(s).
g) The 55-gallon drum(s) will be moved to a designated onsite temporary storage area.

h) Optional: If PCB concentrations are greater than 10 µg/100 cm^2 , the Scrap metal may be cleaned and re-tested via wipe sampling. The Scrap metal may be recycled (i.e. non-PCB transformer equipment, and other scape metal) if the surface wipe concentrations meet EPA's high occupancy surface wipe sample criteria of ≤10 µg/100 cm^2 (40 CFR 761.61(a)(4)(ii)) and NYSDEC 6 NYCRR 371.4(e).

7.4 Concrete Pad Demolition and Removal

The maximum feasible removal of concrete slabs from Transformer Room 1 and 2 will be based upon the recommendations of the Structural Engineer. The outline of the concrete slab areas to be removed in both Transformer Rooms are based on the building drawings prepared by Urbahn, Brayton & Burrows, Hart & Jerman Associated Architects, dated December 4, 1958. The feasible area for removal of the concrete slab is generally within the foundation lines. Additional protective measures will be required to permit removal of the concrete slab and soil areas located outside of the grade beams where the concrete and soil exceed restricted-residential soil cleanup objectives (SCOs) for PCBs. The bottom elevation of the concrete slab is expected to be above groundwater based on historical data. The maximum concrete slab area to be removed is estimated to be 850 square feet in Transformer Room 1 and approximately 875 square feet in Transformer Room 2. The total volume of concrete to be removed may vary depending on the thickness of the concrete slab which is estimated as 6.5-inches to 18-inches thick. The estimated volume of concrete removal is 65 cubic yards with an assumed weight of 130 tons if the slab is steel-reinforced.

The entirety of the removed concrete slabs will be managed as a ≥ 50 ppm TSCA PCB remediation waste in a TSCA permitted or RCRA Hazardous Waste Landfill. In New York State Hazardous Waste Code B007 is designated for other PCB wastes, including contaminated PCB concrete material. Alternatively, prior to the demolition of the concrete slab, OMH may consider additional in situ sampling to support the segregation of waste for off-site disposal.

7.5 Post Remedial Concrete Sampling

Concrete samples will be collected from remaining concrete to confirm PCB concentrations are less than 1 ppm. Samples will be collected utilizing approximately 1-inch diameter carbide drill bit with an impact hammer drill. Drill bits will be decontaminated between sampling locations. For easy identification, sample locations will be pre-marked using a marker or paint.

Samples will be collected at 1/2·inch depth intervals. Thus, the initial surface sample will be collected from 0 - 0.5 inches. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes (10 grams (20 mL) of powder) for a PCB determination. Samples will be placed directly into pre-cleaned and labeled containers for transport and delivery to laboratory for PCB analysis using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A. The post remedial concrete sample locations for Transformer Rooms 1 and 2 are shown in Figures 9 and 11, respectively.

7.6 Soil Excavation

To achieve re-classification of the site from a Class 3 to a Class 4 Inactive Hazardous Waste Disposal Site, the post-excavation PCB soil concentrations in the Transformer Rooms must demonstrate to NYSDEC that the PCB concentrations in subsurface soil greater than 2 feet below building slab depth meet the cleanup criteria of 10 ppm.

The soils underneath the transformers will be excavated and end point samples will be collected. All on-site soils which exceed restricted-residential soil cleanup objectives (SCOs) for PCBs (1 ppm) shallow soil (0-2 feet) and 10 ppm in subsurface soil, as set forth in NYSDEC's CP-51 and Part 375-6.8, will be excavated and transported off-site for disposal.

The removal of the soil below the concrete slabs from Transformer Rooms 1 and 2 is depicted on Figures 7 and 8, which outline the excavation mostly within the existing grade beams and pile caps to protect and maintain building integrity. However, there will be some limited areas where the removal of the concrete slab will be performed outside of the grade beams to achieve the SCOs, previously described in Section 5. The area outlined to depict the removal of soil below the concrete slabs in Transformer Rooms 1 and 2 is based on the building drawings prepared by Urbahn, Brayton & Burrows, Hart & Jerman Associated Architects, dated December 4, 1958. The feasible area for removal of the soil below the concrete slabs is drawn within the grade beams and foundation lines. The elevation of the soil at the required depth of the excavation below the concrete slab is expected to be below the groundwater.

The soil area to be removed is estimated to be less than 250 square feet in Transformer Room 1, and less than 250 square feet in Transformer Room 2. The total volume of soil to be removed will vary depending on the depth of groundwater and corresponding de-watering activity required, soil type(s), types of shoring and shielding required and the PCB concentrations in the soil. The soil excavation is required to remove and safely access PCB contaminated soil greater than 10 ppm, based on remedial investigations and the ROD selected for this site.

The entirety of the removed soil will be managed as a ≥ 50 ppm TSCA PCB remediation waste in a TSCA permitted or RCRA Hazardous Waste Landfill. In New York State Hazardous Waste Code B007 is designated for other PCB wastes, including contaminated PCB soil material. Alternatively, prior to the excavation of soil, OMH may consider additional in situ sampling to support the segregation of waste for off-site disposal.

7.6.1 Engineering Shoring Plan

A temporary shoring plan will be prepared by a NYS licensed Professional Engineer working for the remedial contractor for the excavation and backfilling of soil beneath the existing concrete pads located in the transformer rooms. The shoring plan will require an investigation of the underlying soil and groundwater along with review of the existing foundation pile caps and grade beams within the work area. Excavation will be performed around the piles and potentially below the pile caps, and grade beams in the Transformer Rooms. The removal of PCB contaminated soils exhibiting PCB concentrations greater than 10 ppm at depths greater than 2 feet below the concrete slab may require additional shielding to protect workers, and foundation pile caps and grade beams. Shielding may include trench boxes or other types of supports to prevent soil cave-ins. Protection of building foundation and maintaining overall soil stability is essential.

7.6.1.1 Soil Classification

The Occupational Safety and Health Act (OSHA) provides federal regulations under 29 CFR Subpart P of Part 1926 for excavation of soil in relation to soil types. This involves determination of the maximum allowable or permitted slopes of the sidewalls of excavations. The slope can be expressed in terms of the tangent or degrees of the angle that the walls form with the horizontal.

Imminent danger and slope failure is anticipated if the actual slope of the walls exceeds the allowed maximum without additional shielding to protect workers.

Soils that are Type C must not be sloped to greater than >34°, and Type B soils must not be sloped to greater than >45°. Type A soils must not be sloped greater than >63°; if the wall is greater than >12 ft. high, it must not be sloped greater than >53°. Type C represents the lowest strength soil, and it requires a flatter slope than Type A and Type B soil to attain the same stability.

Both the USCS and the U.S. Dept. Of Agriculture (USDA) Textural Soil Classification System are complementary methods used to analyze and classify soils. The USDA system is emphasized in the federal OSHA regulations, but the USCS is more consistent with the definitions and engineering terms of the regulatory codes. The Unified Soil Classification System (USCS) is a soil classification system used in engineering and geology to describe the texture and grain size of a soil.

7.6.1.2 Requirements for Protective Systems

Additional shielding is specified by OSHA in 29 CFR Subpart P of Part 1926 to protect workers and permit access for soil sampling at the maximum depths required for soil excavation during the remedial activities. The shielding requirements for protecting employees working in excavations from cave-ins may require additional protective systems to be performed in accordance with the requirements set forth in 1926.652.

Shielding systems include trench boxes, steel plates, and/or combination of protective systems. Shielding does not protect against soil failures. Shielding systems do not support the face of excavations, rather they protect the workers inside of them. For that reason, shielding systems do not allow anyone to work outside the protection of the system being used. These systems must be used in accordance with manufacturer recommendations.

- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type A soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type A soil is 1 to 0.75 (1' rise to 0.75' run).
- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type B soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type B soil is 1 to 1 (1' rise to 1' run).
- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type C soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type C soil is 1 to 1.5 (1' rise to 1.5' run).

7.6.2 Groundwater Dewatering and Treatment Plan

Based on estimated depth of groundwater expected at or near the bottom of the concrete slab, dewatering will be required for this project to stabilize work area and permit removal of PCB contaminated soil. Excavation within the groundwater interfacing elevations requires dewatering activities to control water intrusion and maintain slope stability. Based on applicable regulations the dewatering plan must be prepared by a NYS licensed professional engineer familiar with hydrology. The location for nearest New York City Department of Environmental Protection (NYCDEP) combined sanitary stormwater sewer must be identified and required sampling and effluent treatment must be performed during all dewatering activities.

Discharging to combined sanitary stormwater sewer requires a Discharge Permit obtained from NYCDEP and approval from NYSDEC for impacting stormwater sewer. Self-Certification Form will be submitted to the Bureau of Customer Service based on an estimated discharge of (less than) <10,000 gallons per day.

- Contractor will be responsible for all components of the groundwater de-watering program:

  - Secure NYCDEP de-watering permit and required approval from NYSDEC pursuant to the existing Order on Consent
  - Identify proposed ELAP certified lab(s) to be used for analysis of samples required for dewatering permits.
  - Develop a site map showing proposed piezometers and/or groundwater monitoring wells used for groundwater monitoring and sample locations as needed for permitting processes.
  - Install piezometer(s) and/or groundwater monitoring wells required to adequately measure depth of groundwater, estimate rate of recharge and sample for discharge parameters by field and laboratory analysis.
  - Perform any required well installation, record boring logs, develop, and properly dispose of waste according to NYSDEC requirements.
  - Determine background and upgradient groundwater quality by groundwater monitoring and sampling activities according to federal, state, and local discharge requirements.
  - Conduct limited groundwater sampling applicable to DER-10 technical guidance and - Quality Assurance Project Plan (QAPP) Guidelines to satisfy discharge permitting.
  - TRC will review the de-watering work plan prepared by the remediation contractor and update the QAPP for the project objectives and compliance.

7.6.3 Transformer Room Soil Sampling

Most of the contamination identified by prior investigations are limited to the areas around the drains in the transformer rooms. The removal of the soil to the proposed maximum depth of 10 feet below bottom of concrete pad(s) is expected to be sufficient to meet the cleanup criteria of 10 ppm PCBs.

The objective is to remove the contaminated soil exceeding the PCB cleanup standards after the accessible portions of the concrete pad have been removed without compromising the building foundation and safety of the personnel involved. The concrete pad will be replaced with a clean concrete slab, as specified in the Record of Decision (ROD) dated March 30, 2019. Based on this decision, the NYSDEC will accept the Soil Cleanup Objective (SCO) of 1 part per million (ppm) for surface soil to be met from 0-2 feet below the slab surface, and less than 10 ppm for soil to be met greater than 2 feet below the slab surface. Therefore, below the new concrete pad, the subsurface soil must meet the NYSDEC's Commissioner's Policy 51 (CP-51) guidance value of 10 ppm.

7.6.3.1 Soil Sampling Procedures

Soil sampling will be conducted following excavation below the concrete pad as shown in Figures 10 and 12.

The purpose of this post remediation soil investigation is to:

- assess the concentration of any PCBs remaining in the soil at the depth of 0 to 2 feet below the depth measured from the bottom of the existing floor slab to meet the restricted residential SCOs for PCBs; and,

- assess the concentration of any PCBs remaining in the soil at depths greater than 2' below the bottom of the existing floor slab will be at PCBs concentrations of ≤10 ppm.

Sampling locations will be biased toward locations expected to have the greatest degree of contamination at the source areas, i.e., drainage points. However, the post-remedial sampling is intended to also provide sufficient coverage of the entire excavation to allow decisions relative to classification of the site. The results of the sampling for PCB soils inside the building room excavations will also determine whether there is any potential for any remaining PCBs to migrate to and impact the environment outside of the building.

- An Environmental Professional along with HAZ MAT team using confined-space entry permit procedures will conduct PCB soil sampling and will collect end-point excavation samples to be used to determine post-remedial site conditions.
- Soil samples shall be collected along the sidewalls and bottom of the excavation of each transformer room. Soil samples shall be collected from 0 - 2 inches below the surface of the sidewalls and bottom.
- Soil samples will be collected using dedicated disposable plastic trowels and placed in laboratory-supplied 8-ounce glass jars with Teflon lids. Dedicated sampling equipment will be used to prevent cross-contamination between sampling locations. All soil sampling equipment will be properly disposed of with other wastes that are generated during the soil investigation.
- All samples to be submitted for laboratory analysis will be collected, properly cooled, and packaged to prevent breakage. Soil samples will be transported under Chain-Of-Custody to a DOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory and analyzed for PCB Arochlors in accordance with EPA Method 8082A.
- All the results of PCB soil sampling will be compared with NYSDEC's Commissioner's Policy 51 (CP-51) to determine whether additional soil excavation and sampling is required.
- All soils 0-2 feet below the building slab surface elevation in Transformer Rooms No. 1 and 2 which exceed the restricted residential SCOs for PCBs will be excavated and transported off-site for disposal. The volume of contaminated soil removed from the site will be determined after implementation of the ROD and subsequent results of the PCB soil sampling and laboratory results.
- The results of soil sampling will not impact the requirements for an environmental easement with a restriction of groundwater use at the site, a cover system, and site management to protect human health.

7.7 Transportation and Disposal of Waste

Transportation and Disposal of Waste to Authorized transportation, storage, and disposal facilities (TSDF) according to 6 NYCRR Part 360 and/or 373 depending on laboratory results. All PCB waste containers must be marked per 761.40 and .45.

Community air monitoring shall be conducted in accordance with the Community Air Monitoring Plan (CAMP) provided in Appendix 5 during slab removal, excavation, material handling, and off-site transport. Real-time particulate monitoring will be implemented at a location downwind of soil/concrete loading activities for off-Site transport, as applicable. Exceedances of action levels will require, corrective measures, and/or work shutdown to prevent off-site migration of contaminants.

1) As the work progresses, remove waste containers from the work area and place in a secured and lockable trailer, dumpster, or other shipping container meeting DOT requirements for transport of PCB-containing waste. The hard top or tarp covered waste container shall be lined with two layers of fire-retardant plastic. PCB-containing waste shall remain under the positive control of the Contractor and must never be left unattended in an area or on a vehicle where unauthorized persons could gain access.
2) All waste and debris shall be placed in covered or sealed containers to ensure that dust is not dispersed during transport. Separate PCB containing material debris and collected HEPA dust/debris from other waste (e.g., poly) to minimize the amount of hazardous waste.
3) All wastewaters not being managed by the applicable on-site de-watering permit(s) shall be collected in appropriate containers and characterized. If the testing shows levels of PCBs greater than 0.5 ppb PCBs, it will be managed according to TSCA requirements for PCB Remediation Waste.
4) Wastewater treatment (media) solid wastes shall also be placed in appropriate hazardous waste containers. If the testing shows levels of ≥ 1 ppm PCBs, it will be managed according to TSCA requirements for PCB Remediation Waste.
5) All excavated soil and concrete waste shall be disposed of in accordance with all applicable local, State and Federal regulations. Specifically, waste shall be treated as TSCA regulated PCB Remediation Waste greater than 50 ppm unless an alternative is determined based on additional in situ sampling. In addition, waste characterization may be needed to comply with other federal, state and local requirements.
6) All hazardous and TSCA Regulated waste shall be disposed of using USEPA Generator ID# (To Be determined) assigned to this site.
7) Disposal Certificates: Contractor shall submit a letter from a permitted TSCA and/or Hazardous Waste Facility, stating that the facility has agreed to accept the waste generated by the work; is authorized to accept the waste under the laws of the State of residence; has the required capacity to treat and dispose of the material; and shall provide or ensure the ultimate disposal method indicated on Uniform Hazardous Waste Manifest.

7.7.1 Procedures for Waste Disposal

i). Contractor shall submit a Part 364 Waste Transporter Permit, confirming the requirements of NYSDEC Division of Materials Management, to haul to the selected Waste Disposal Facility.
ii). Contractor shall submit a letter with a statement from the selected Waste Disposal Facility that the waste and waste containers are acceptable for disposal at the facility.
iii). Contractor shall submit a copy of the Hazardous waste manifest signed by the transporter and the Treatment, Storage and Disposal (TSD) facility accepting the waste.
iv). Contractor shall submit evidence to the authority that those preparing/signing manifests have received DOT Hazardous Materials Shipping Training (initial and refresher every 3 years).
v). The waste shall be temporarily stored and managed at a pre-designated location to be determined with consultation with OMH and DEC.
vi). Prior to removal of any PCB-containing impacted materials the Contractor shall notify Environmental Consultant and request a pre-removal inspection. Posting of warning signs, plasticizing of work area, and all other preparatory steps shall be taken prior to notification of the Environmental Consultant.

vii). After completion of the removal and cleaning of the work area of equipment and staged materials, a visual inspection for general housekeeping shall be performed by the Contractor. If the removal and cleaning of work area is approved by the Contractor's Supervisor, the Contractor shall then request a visual inspection in writing from the Environmental Consultant.

8.0 BACKFILLING AND INSTALLATION OF CONCRETE PAD (COVER)

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the design grades at each of the basement transformer room. Notification of Clean Fill form will need to be completed and submitted to NYS DEC if > 10 cubic yards of fill is required. The basement transformer rooms will be re-graded to accommodate installation of a concrete cover system to match the existing conditions.

A new steel reinforced concrete pad cover of sufficient thickness and compressive strength (i.e., greater than 4,000 psi) for building equipment and structural requirements will be installed in the two (2) Transformer Rooms. An independent 3rd party concrete testing and inspection firm will be retained to confirm the construction is completed as intended.

9.0 REMEDIAL WORK REPORTING

Based on the implementation of this RWP, a Remedial Report shall be prepared. This report shall include field data, sample collection data, analytical results, and associated data validation results. A critical component of the Remedial Work Reporting shall be the evaluation and interpretation of the results of the Implementation of the Remedial Work, including waste classifications, estimates of waste quantities and waste disposal and/or recycling alternatives. The Report shall include:

- A general description of the subject properties with a focus on the Transformer Rooms,
- A detailed description of the inventory and sampling program,
- A detailed description of the inventory and waste materials porous and non-porous (including estimated quantities disposed/recycled and representative photographs) from all remedial work,
- Site plans or sketches denoting referenced locations, including bulk and wipe sample locations,
- Table(s) summarizing the findings by material, estimated quantity, location and analytical parameters, and material classification for management/disposal purposes.
- Analytical data for all samples pre and post remedial (included in an appendix).
- Chain of custody forms and lab reports included an appendix.
- Data usability summary reports included as an appendix.
- All waste manifests, bill of ladings, certificates of disposal, certificates of recycling, etc.
- Contractor daily reports (included in an appendix).
- Findings and recommendations.
- General description of final site conditions of Transformer Rooms and Concrete Covers.
- Professional Engineer's certification of final condition of Transformer Room and Concrete Surfaces.
- Institutional controls in the form of an environmental easement and a Site Management Plan will be required.

10.0 PROJECT SCHEDULE

The following identifies projected time frames for each task described in this RWP are provided in calendar days. The time frames assume authorization for all tasks and concurrent implementation of many sub-tasks; however, many sub-tasks have critical path predecessor requirements. In addition, subtask efforts can be prioritized to provide interim reports for the most time critical issues.

Task 1 - Haz Mat Survey of Transformers Rooms 1 & 2

Waste Characterization Sampling of Transformers, Asbestos, PCB and Lead Paint Sampling PCB Wipe Sampling of Non-Porous Surfaces, PCB and RCRA Metal Sampling of Residual Liquids and Sediment

21 Days of Approval of RWP

HAZ MAT Survey & Sampling Report

39 Days of Approval of RWP

Task 2 – Preparation of Self-Implementing Plan for USEPA

39 Days of Approval of RWP

EPA Review and Approval of Self-Implementing Plan (30 Days)

68 Days of Approval of RWP

Task 3 - Prepare Bid Documents with Plans & Performance Based Specification

99 Days of Approval of RWP

Task 4 – Contractor Bid and Selection Process with OHM/DASNY

Submit RFP to Bidders and Selection of Contractor

161 Days of Approval of RWP

Task 5 - Contractor Award and RWP Project Implementation with OHM/DASNY

Project Award and Review/Approval of Contractor Submittals

186 Days of Approval of RWP

Project Completion

357 Days of Approval of RWP

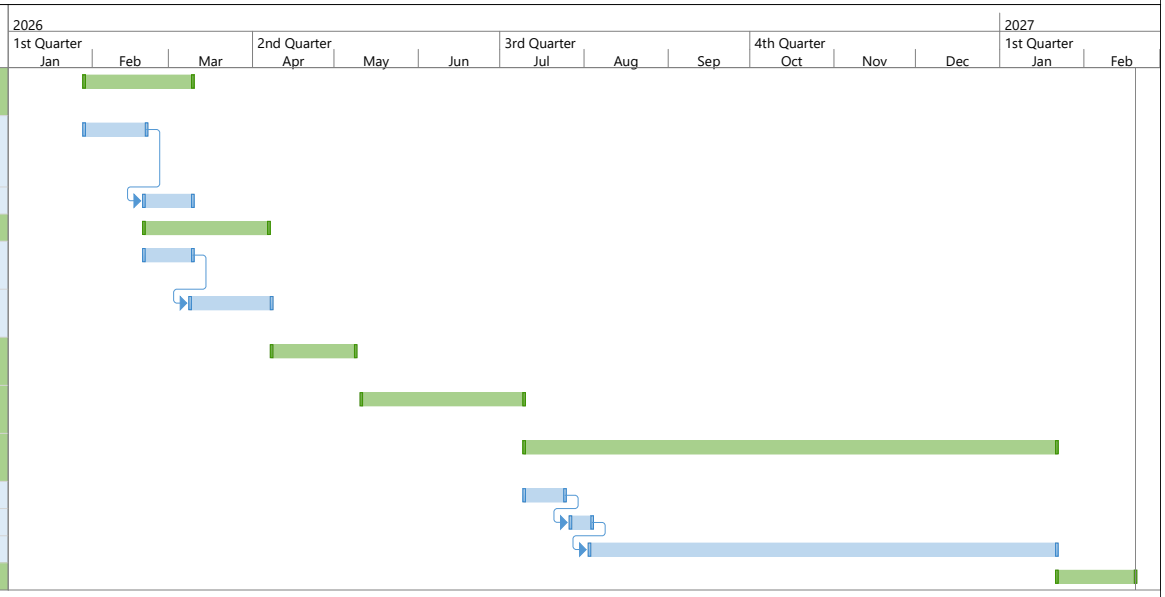
Submit Final Report to DEC

386 Days of Approval of RWP

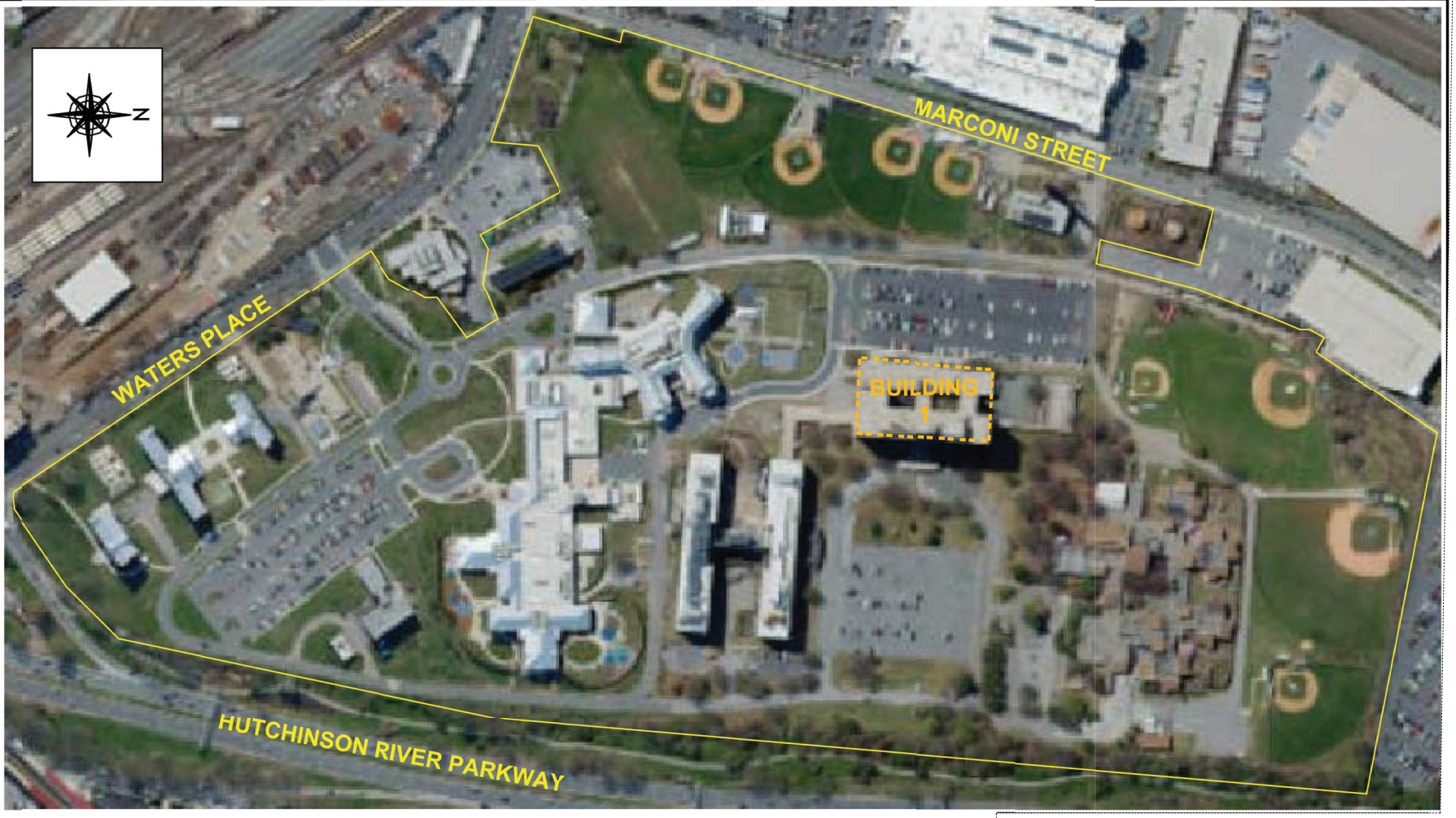
GANTT CHART

Project Schedule
Dormitory Authority of the State of New York and the New York State Office of Mental Health
Transformer Room No. 1 and Transformer Room No. 2 - Building 1
Bronx Psychiatric Center
1500 Waters Place, Bronx, New York 10461

ID	Task Name	Start	Finish	Duration
1	**Task 1 - Haz Mat Survey of Transformers Rooms 1 & 2**	**Thu 1/29/26**	**Mon 3/9/26**	**39 days**
2	Waste Characterization Sampling of Transformers, Asbestos, PCB and Lead Paint Sampling	Thu 1/29/26	Fri 2/20/26	21 days
3	HAZ MAT Survey & Sampling Report	Fri 2/20/26	Mon 3/9/26	18 days
4	**Task 2 – Self-Implementing Plan for USEPA**	**Fri 2/20/26**	**Mon 4/6/26**	**46 days**
5	Preparation of Self-Implementing Plan for USEPA	Fri 2/20/26	Mon 3/9/26	18 days
6	Response from EPA for Self-Implementing Plan	Mon 3/9/26	Tue 4/7/26	30 days
7	**Task 3 - Prepare Bid Documents with Plans & Performance Based Specification**	**Wed 4/8/26**	**Fri 5/8/26**	**31 days**
8	**Task 4 – Contractor Bid and Selection Process with OHM/DASNY**	**Mon 5/11/26**	**Thu 7/9/26**	**60 days**
9	**Task 5 - Contractor Award and RWP Project Implementation with**	**Fri 7/10/26**	**Thu 1/21/27**	**196 days**
10	Project Award	Fri 7/10/26	Fri 7/24/26	15 days
11	Review/ Approval of Contractor Submittals	Mon 7/27/26	Mon 8/3/26	8 days
12	Project Start Date & Implementation	Mon 8/3/26	Thu 1/21/27	172 days
13	**Task 6 - Final Report**	**Fri 1/22/27**	**Fri 2/19/27**	**29 days**



FIGURES





SITE LOCUS

IMAGE SOURCE: geology.com

Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

0 150 300

APPROXIMATE GRAPHIC SCALE IN FEET

IMAGE SOURCE: DISCOVER GIS DATA NY

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ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.
650 AMERICANA, SUITE 300, NEW YORK, NY 10005

REVISIONS

Rev No	Description	Date:

Client
NYS OFFICE OF MENTAL HEALTH
ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

SITE LOCATION MAP

Phase: 100% SUBMISSION

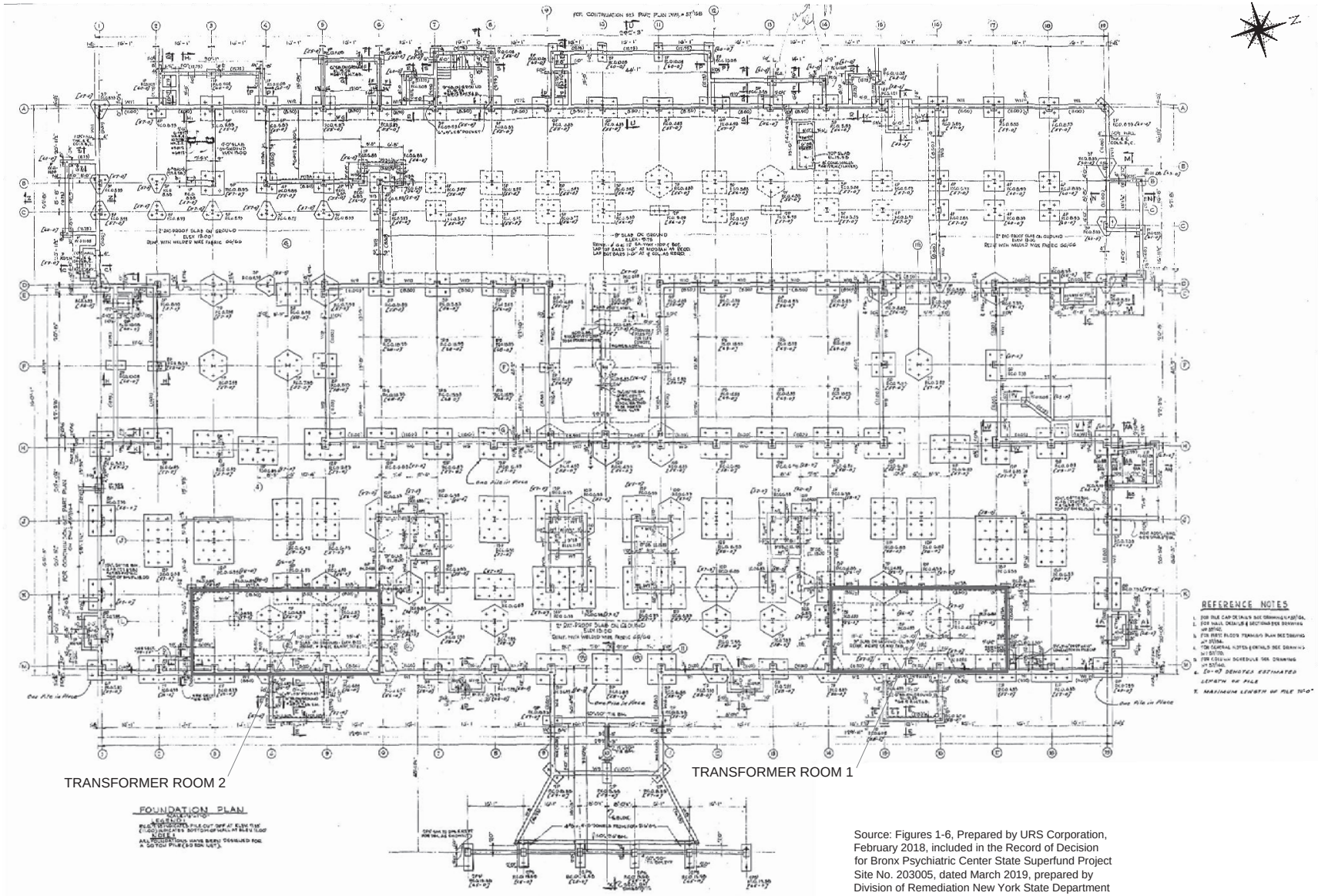
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FS	AS	5/5/2025

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DASNY Project No.: 3393409999

FIGURE 1

Drawing 1 of 8



Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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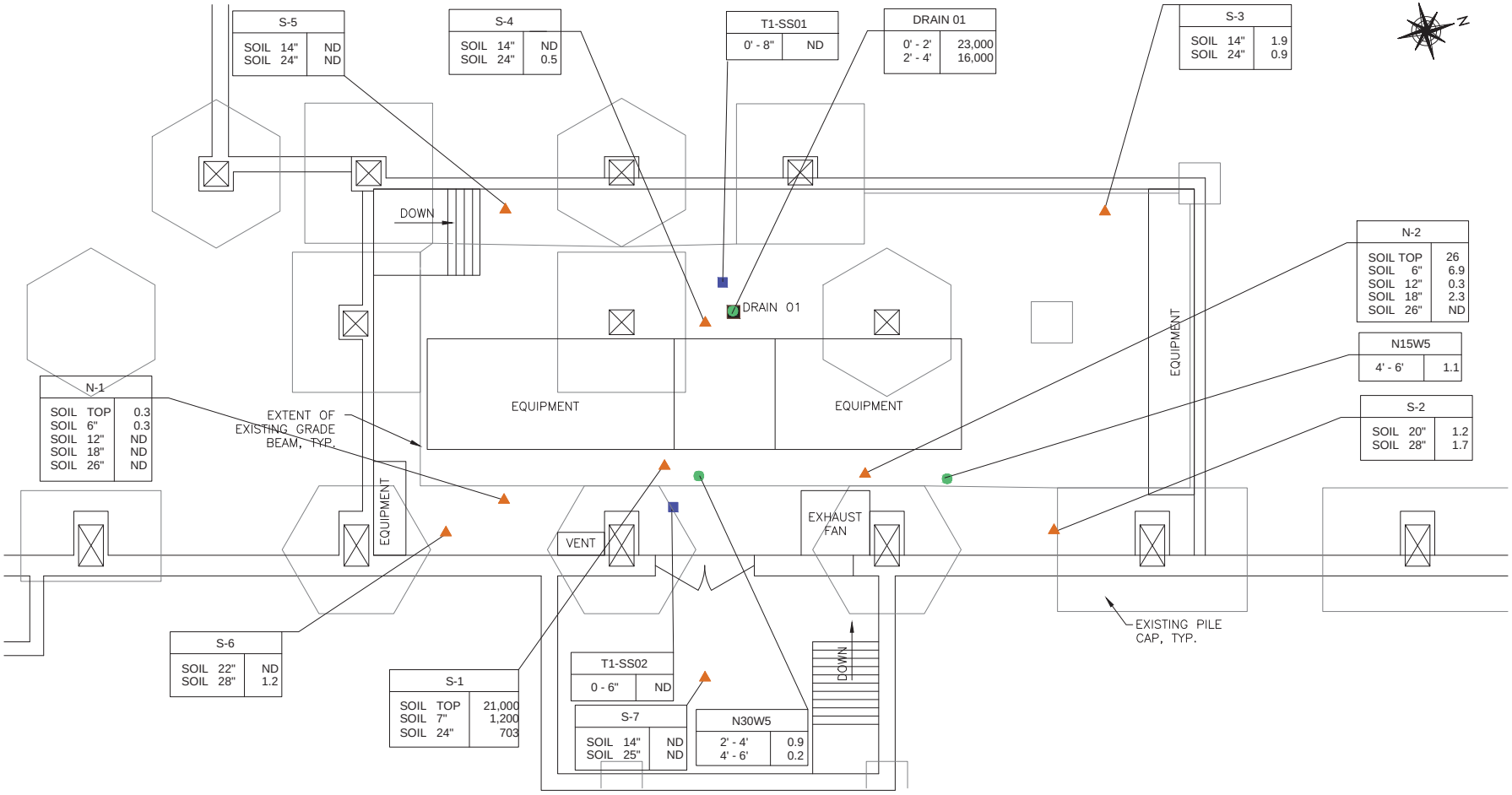
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Client: NYS OFFICE OF MENTAL HEALTH
OMH ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

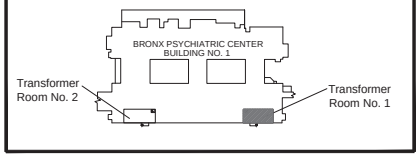
THOMSON BUILDING
FOUNDATION PLAN
AND TRANSFORMER
ROOMS 1 & 2

Phase: 100% SUBMISSION
Drawn By: FS | Checked By: AS | Date: 5/5/2025
Seal & Signature
DASNY Project No: 3393409999
FIGURE 2
Drawing 2 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Soil Sample Location - 1993
- Soil Sample Location - 2000
- Soil Sample Location - 2013

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND - Not Detected
NA - Not Analyzed

Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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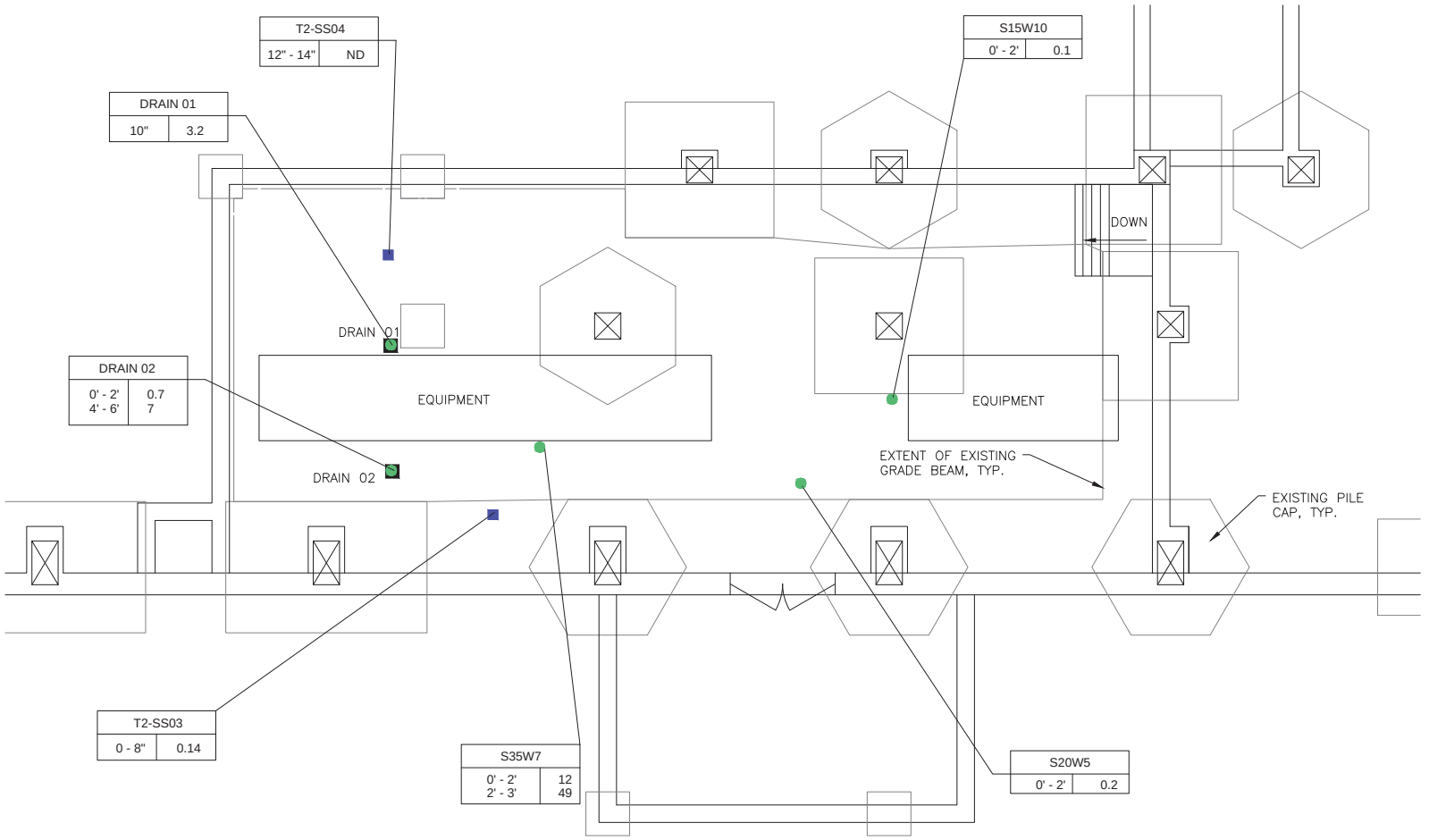
No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 160
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM 1

Phase: 100% SUBMISSION
Drawn By: FS
Checked By: AS
Date: 5/5/2025
Seal & Signature
DASNY Project No.: 3393409999
FIGURE 3
Drawing 3 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Soil Sample Location - 2000
- Soil Sample Location - 2013

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND - Not Detected
NA - Not Analyzed

Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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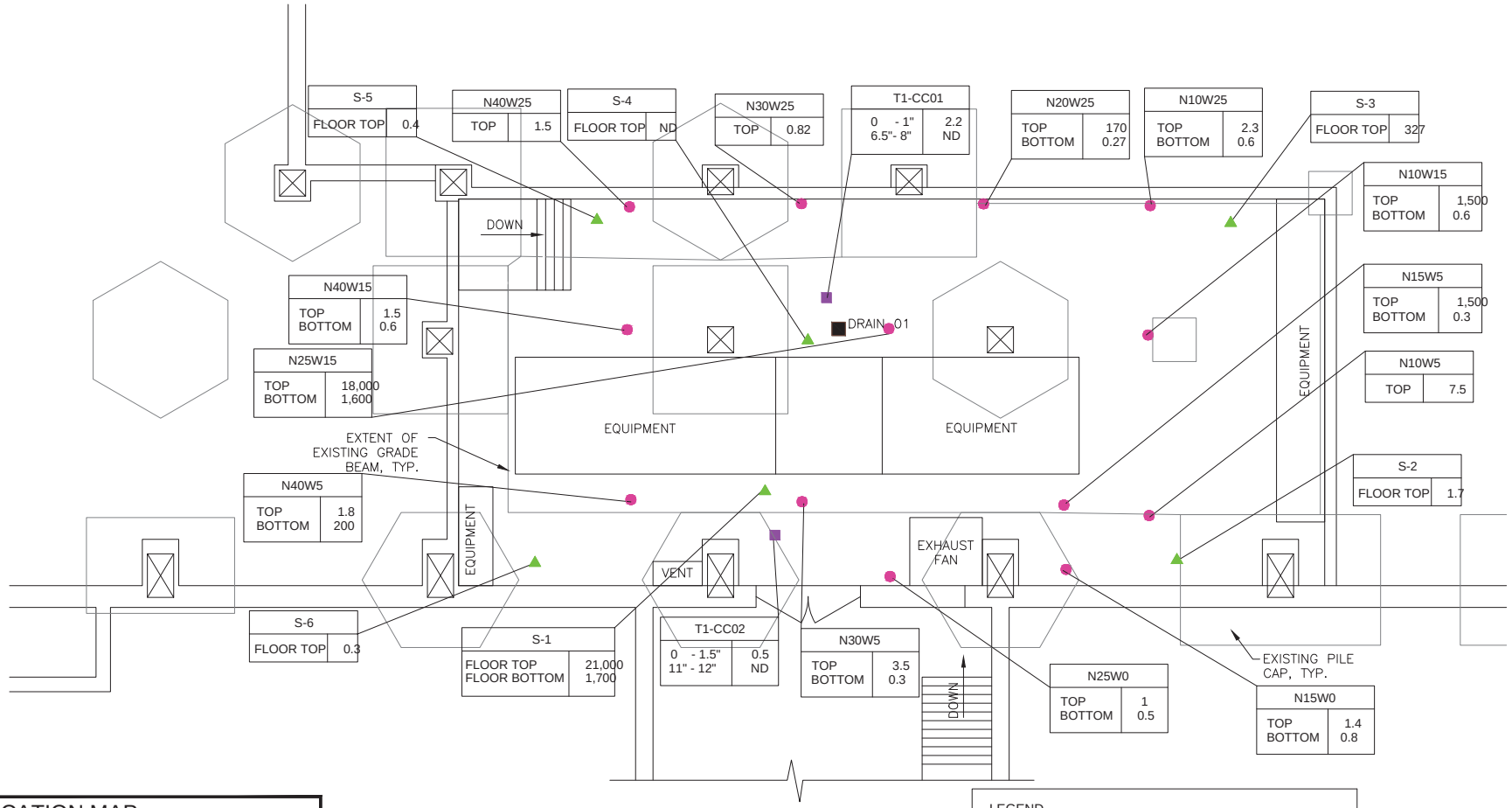
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Project Title
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

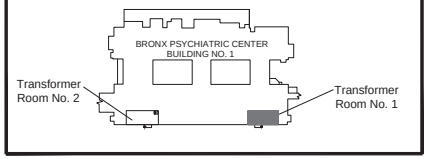
PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM 2

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Checked By: AS
Date: 5/5/2025
Seal & Signature
DASNY Project No: 3393409999
FIGURE 4
Drawing 4 of 8



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

6' 0 6'
SCALE IN FEET

LEGEND

- Structural Column
- Former Drain
- Concrete Sample Location - 1993
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013

NOTES:
All locations are approximate. ND - Not Detected
Concentrations are in mg/kg. NA - Not Analyzed

Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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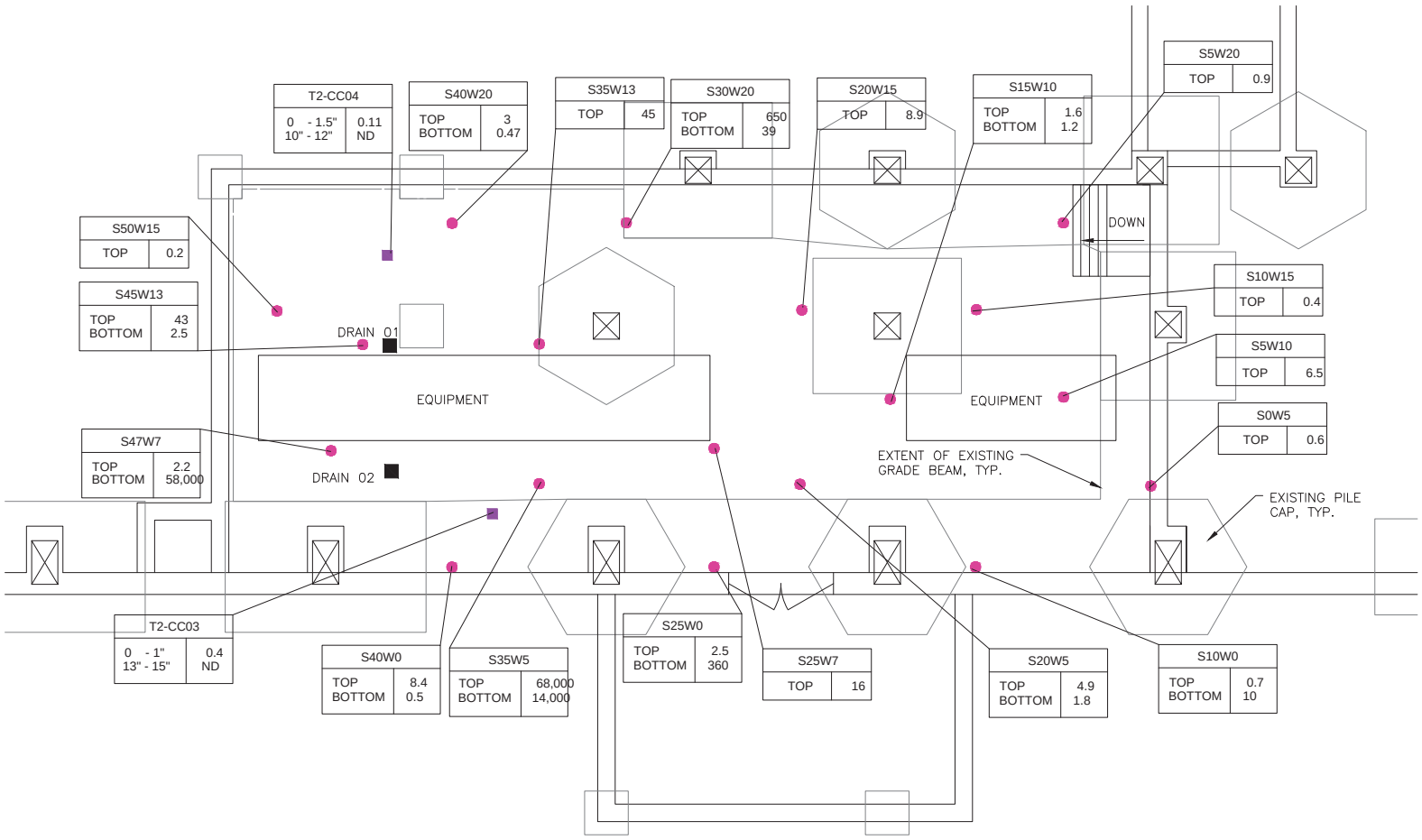
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OMH ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
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ALBANY, NY 12208

Project Title
BRONX PC MEDICAL SURGICAL BUILDING 500
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM 1

Phase: 100% SUBMISSION
Drawn By: FS | Checked By: AS | Date: 5/5/2025
Seal & Signature
DASNY Project No: 3393409999
FIGURE 5
Drawing 5 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND - Not Detected
NA - Not Analyzed
Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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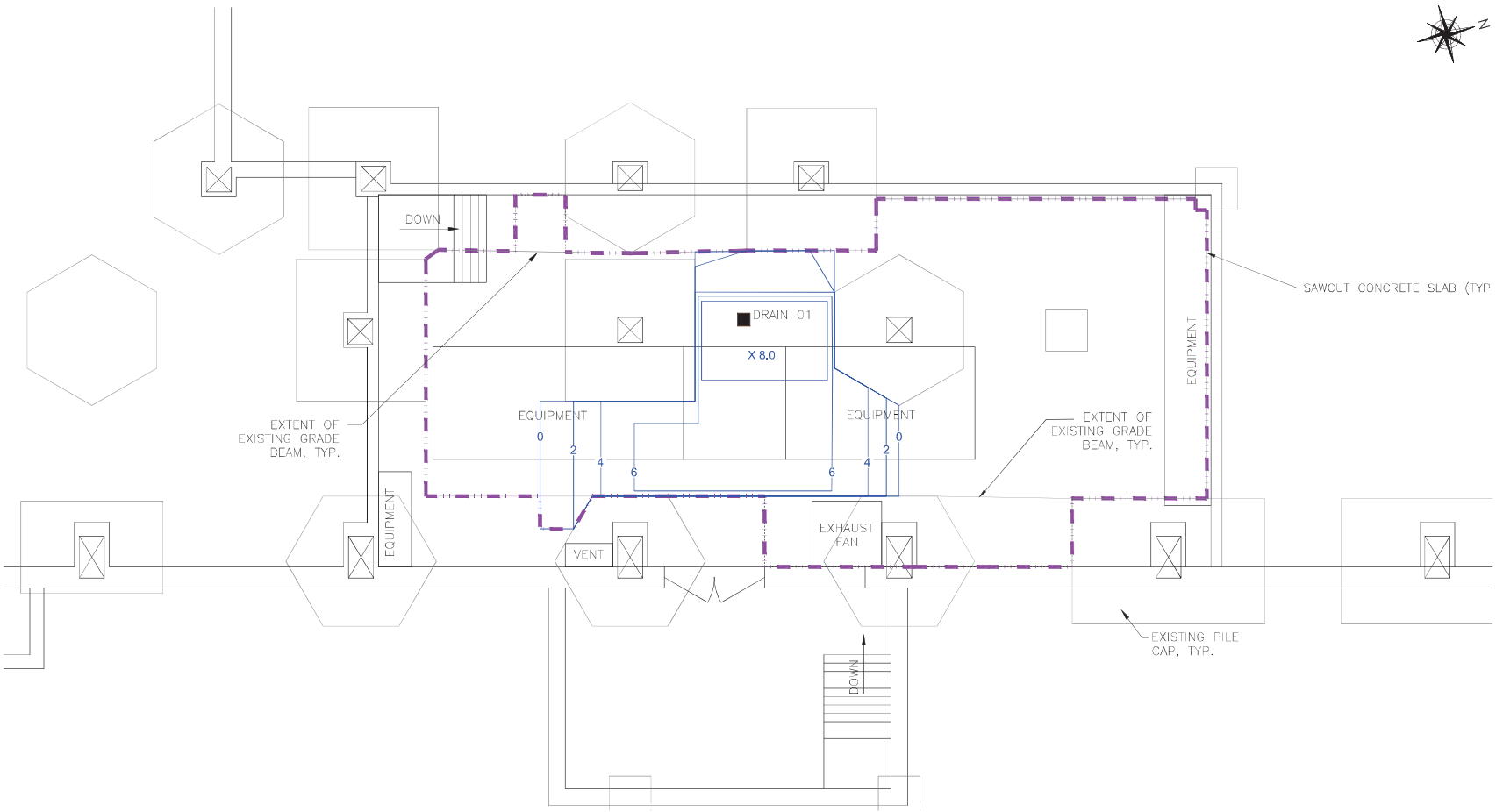
Rev No	Description	Date

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ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM 2

Phase: 100% SUBMISSION
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Checked By: AS
Date: 5/5/2025
Seal & Signature
DASNY Project No.: 3393409999
FIGURE 6
Drawing 5 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- Impacted Soil Excavation Depth Contours (Estimated)

NOTE:
All locations are approximate.
Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

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No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
OMH OFFICE OF OPERATIONS AND FACILITIES ENGINEERING SERVICES REGION 2
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PSYCHIATRIC BUILDING 10
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 1 - SLAB AND SOIL REMOVAL PLAN

Phase: 100% SUBMISSION

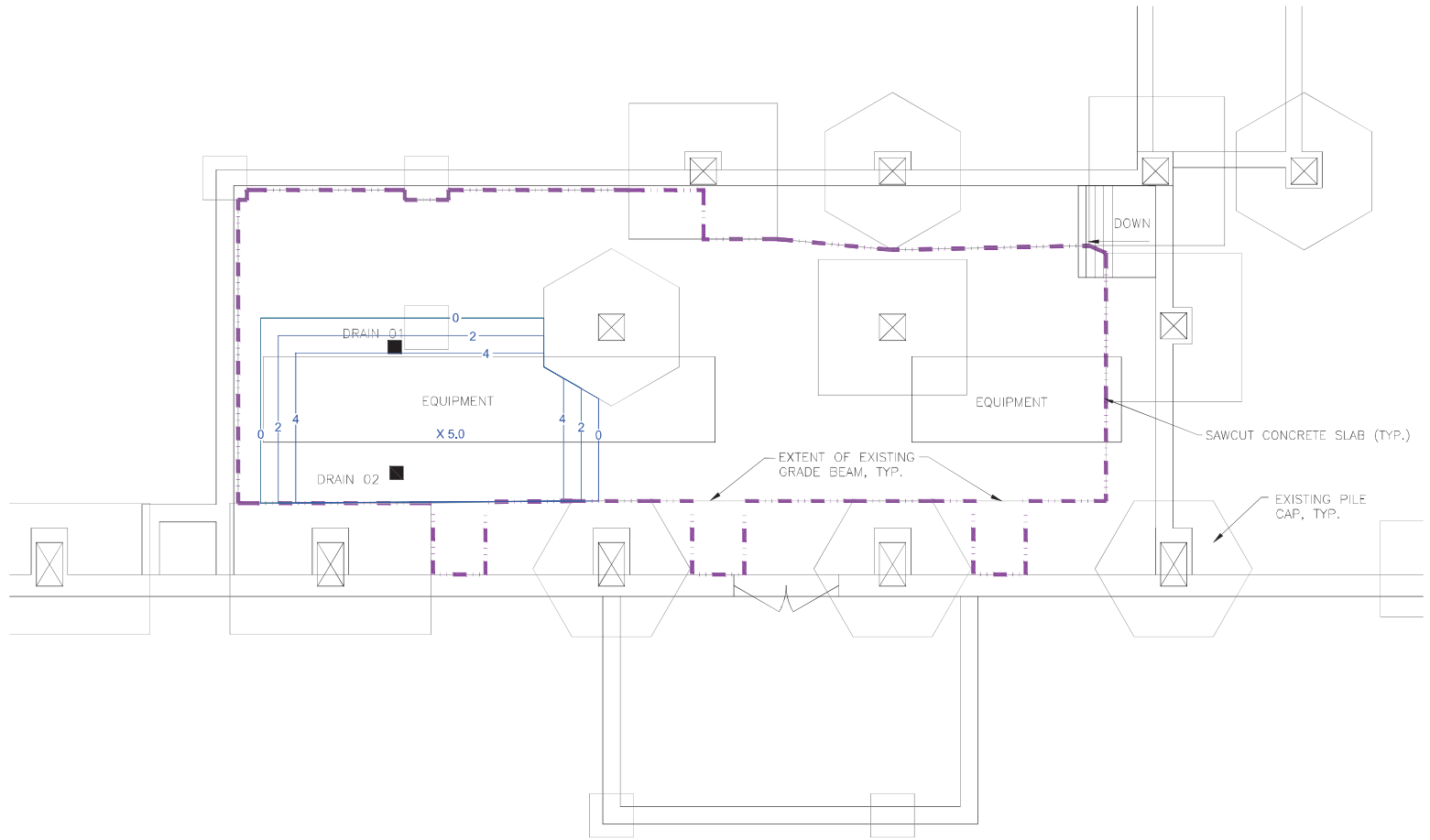
Drawn By:	Checked By:	Date:
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DASNY Project No.: 3393409999

FIGURE -7

Drawing 7 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- —4— Impacted Soil Excavation Depth Contours (Estimated)

NOTE:
All locations are approximate.
Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

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OMH BUREAU OF OPERATIONS AND REAL ESTATE
ENGINEERING & SUPPORT SERVICES UNIT
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PSYCHIATRIC CENTER BUILDING NO. 10
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 2 - SLAB AND SOIL REMOVAL PLAN

Phase: 100% SUBMISSION

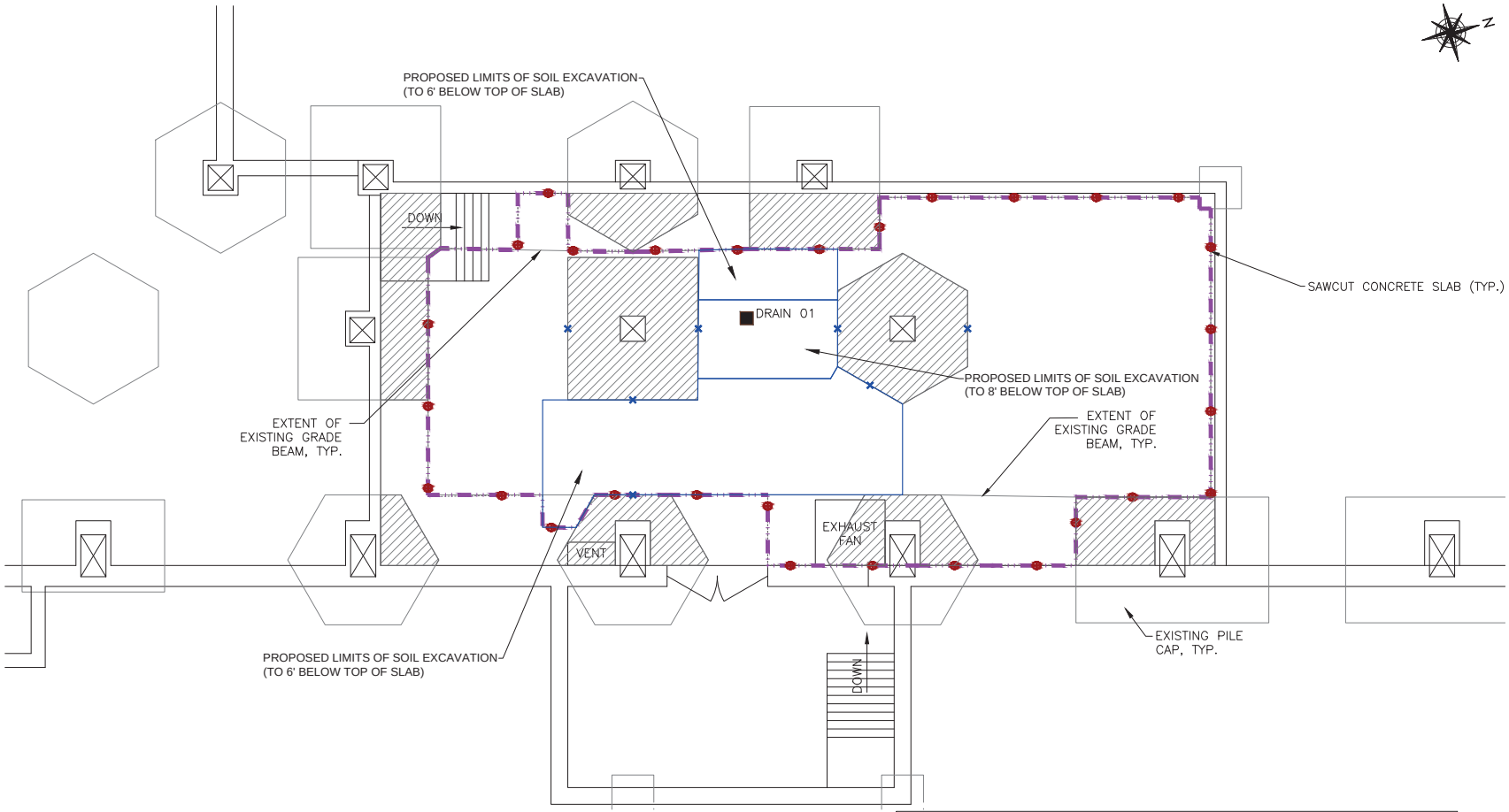
Drawn By:	Checked By:	Date:
FS	AS	5/5/2025

Seal & Signature

DASNY Project No.: 3393409999

FIGURE 8

Drawing 8 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Post Remediation Concrete (Floor Slab) Sample Location
- Post Remediation Concrete (Concrete Footing) Sample Location
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

NOTES:

1. All locations are approximate.
2. Concrete Samples will be collected at 1/2-inch depth intervals. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes (10 grams (20 mL) of powder) for a PCB determination. Concrete sampling will be conducted following removal of the concrete slab as shown in Figure 7.
3. Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

100% SUBMISSION
NOT FOR CONSTRUCTION

Floor Slab Removal (Estimated)
Impacted Soil Excavation Depth Contours (Estimated)

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BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

No	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
OMH ENVIRONMENTAL OPERATIONS AND MAINTENANCE ADMINISTRATIVE SERVICES UNIT
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 10
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 1 - POST REMEDIATION CONCRETE SAMPLE LOCATIONS

Phase: 100% SUBMISSION

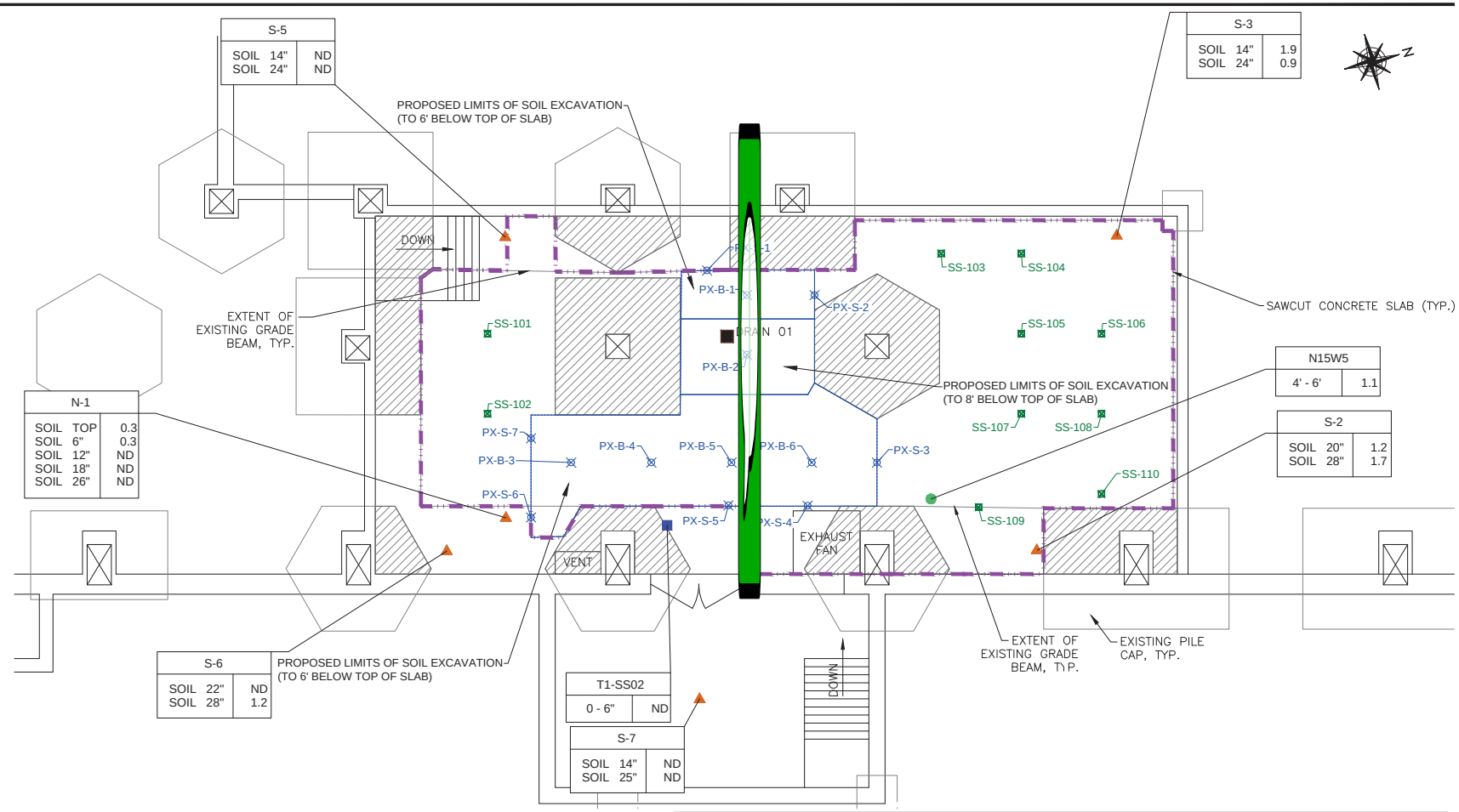
Drawn By:	Checked By:	Date:
FS/HD	AS	9/22/2025

Seal & Signature

DASNY Project No.: 3393409999

FIGURE 9

Drawing 9 of 12



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Historic Soil Sample Location
- Floor Slab Removal (Estimated)
- Post Excavation Sample Location and Identification Number (PX-B-# / PX-S-#) B - Bottom, S - Sidewall
- Soil Sample Location and Identification Number (to be collected beneath concrete slab following removal) (SS-10#)
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

NOTES:

1. All locations are approximate. All soil sample identifications will contain the prefix ("RM-1") for sample collection (I.E., RM-1-PX-B-1).
2. Soil sampling will be conducted following excavation. Soil sampling will be conducted following the excavation of soil shown in figure 7. Please note that only historic soil sample locations outside of the limits of soil excavation are shown.
3. Two distinct sidewall soil samples will be collected at each sidewall location (at grade and 5' below the top of slab).
4. Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

100% SUBMISSION
NOT FOR CONSTRUCTION

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BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

No	Description	Date:

Client: NYS OFFICE OF MENTAL HEALTH
INFORMATICS, OPERATIONS AND MAINTENANCE ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 1 - POST REMEDIATION SOIL SAMPLE LOCATIONS

Phase: 100% SUBMISSION

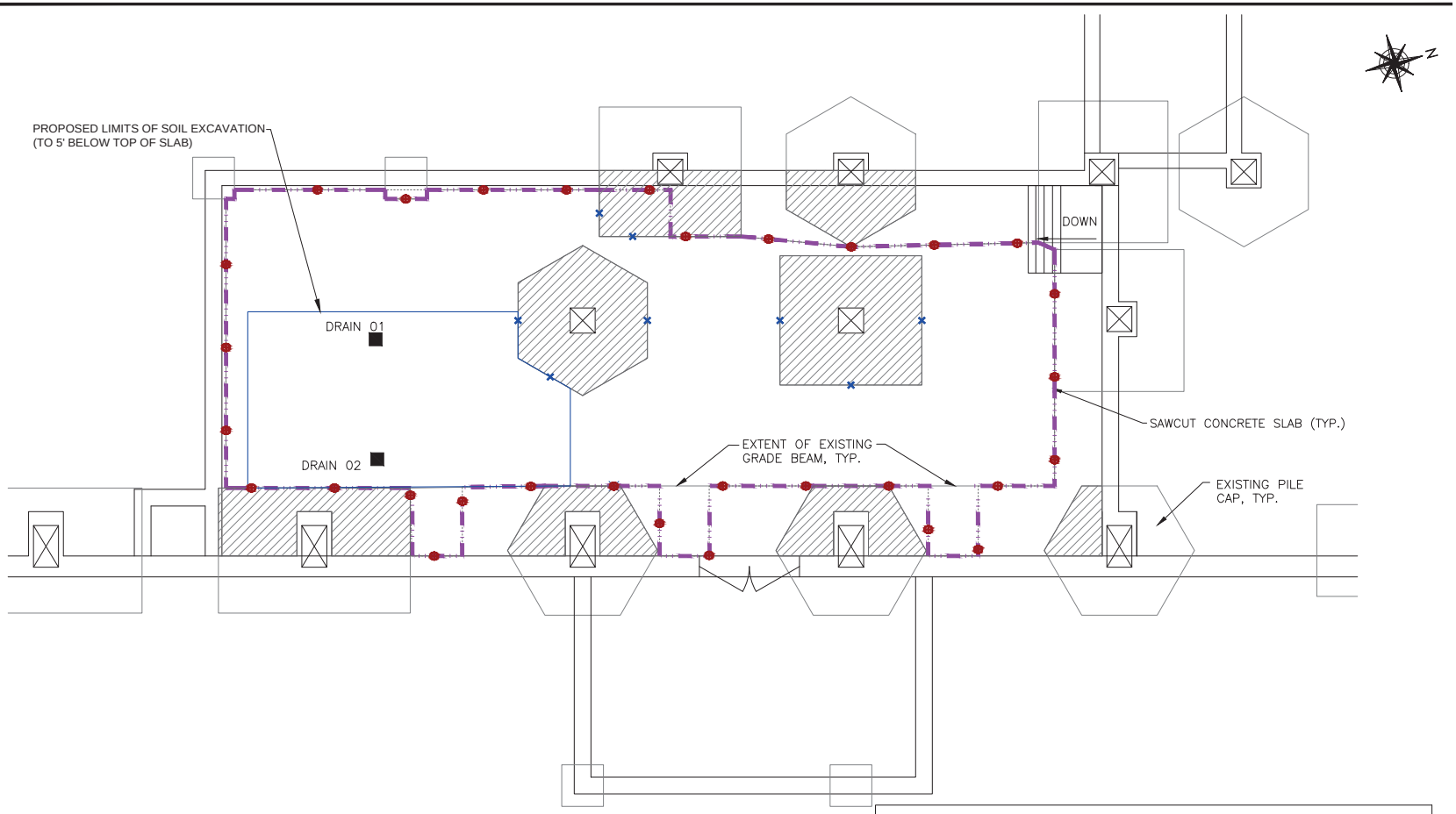
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FS/HD	AS	9/22/2025

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DASNY Project No. 3393409999

FIGURE 10

Drawing 10 of 12



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Post Remediation Concrete (Floor Slab) Sample Location
- Post Remediation Concrete (Concrete Footing) Sample Location
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

NOTES:

1. All locations are approximate.
2. Concrete Samples will be collected at 1/2-inch depth intervals. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes (10 grams (20 mL) of powder) for a PCB determination. Concrete sampling will be conducted following removal of the concrete slab as shown in Figure 8.
3. Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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ENVIRONMENTAL CONSULTANT:
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REVISIONS

No	Description	Date:

Client: NYS OFFICE OF MENTAL HEALTH
INFORMATION, OPERATIONS AND MAINTENANCE
ADMINISTRATIVE SUPPORT SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PSYCHIATRIC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 2 - POST REMEDIATION CONCRETE SAMPLE LOCATIONS

Phase: 100% SUBMISSION

Drawn By:	Checked By:	Date:
FS/HD	AS	9/22/2025

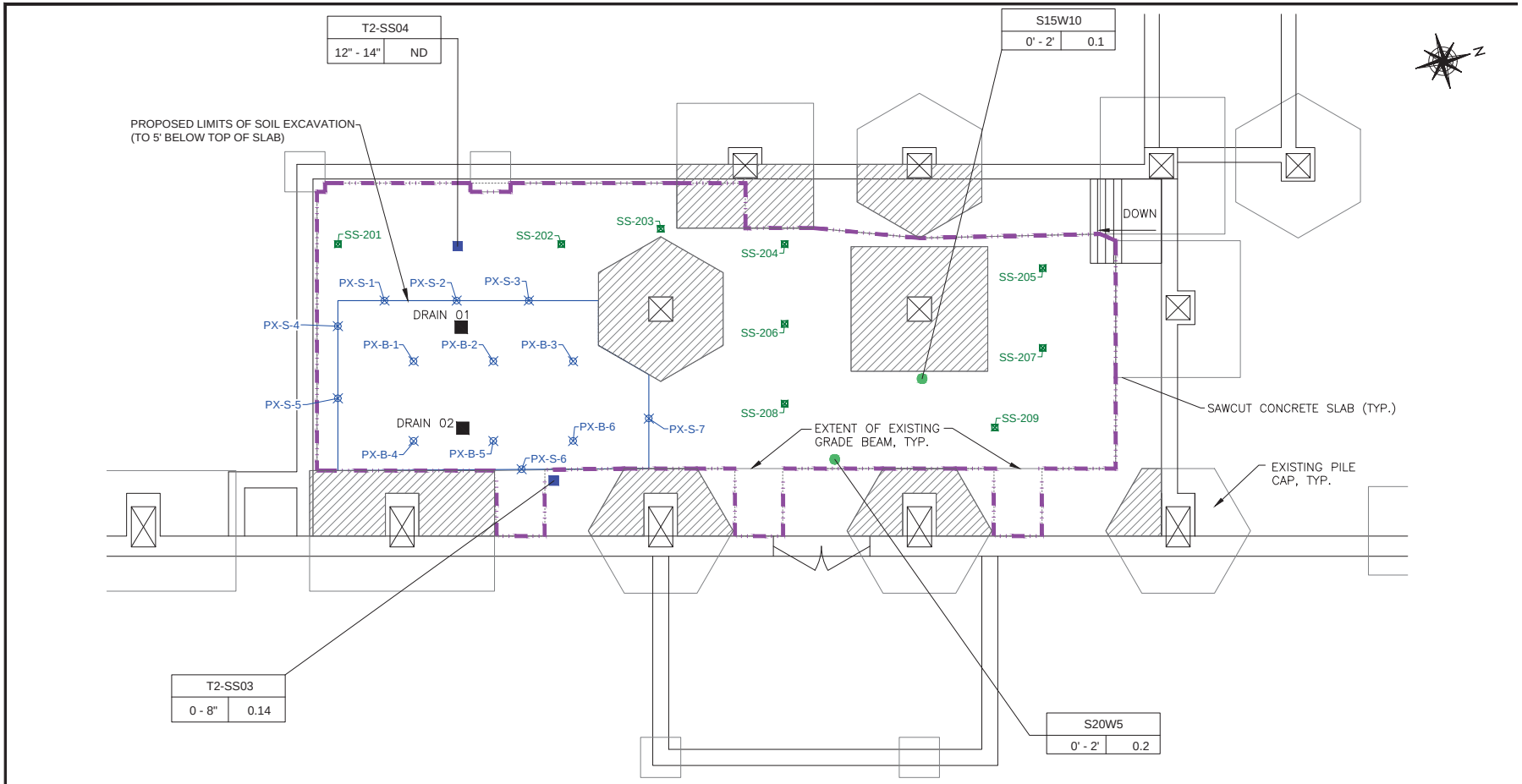
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DASNY Project No.: 3393409999

FIGURE 11

Drawing 11 of 12

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Historic Soil Sample Location
- Floor Slab Removal (Estimated)
- Post Excavation Sample Location and Identification Number (PX-B-# B - Bottom, S - Sidewall; PX-S-# S - Sidewall)
- SS-20# Soil Sample Location and Identification Number (to be collected beneath concrete slab following removal)
- Areas hatched in grey indicate subsurface concrete footing is present immediately beneath the slab

NOTES:
1. All locations are approximate. All soil sample identifications will contain the prefix ("RM-2") for sample collection (I.E., RM-2-PX-B-1).
2. Soil sampling will be conducted following excavation below the concrete pad. Soil sampling will be conducted following the excavation of soil shown in Figure 8. Please note that only historic soil sample locations outside of the limits of soil excavation are shown.
3. Two distinct sidewall soil samples (I.E. PX-S-#(1') and PX-S-# (5')) will be collected at each sidewall location (at approximate 1 foot below top of slab and 5' below the top of slab).
4. Source: Figures 1-6, Prepared by URS Corporation, February 2018, included in the Record of Decision for Bronx Psychiatric Center State Superfund Project Site No. 203005, dated March 2019, prepared by Division of Remediation New York State Department of Environmental Conservation (NYSDEC).

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BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

No	Description	Date:

Client: NYS OFFICE OF MENTAL HEALTH
INFORMATION, OPERATIONS AND MAINTENANCE
ADMINISTRATIVE SERVICES GROUP
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX PC MEDICAL SURGICAL BUILDING 100
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 2 - POST REMEDIATION SOIL SAMPLE LOCATIONS

Phase: 100% SUBMISSION
Drawn By: FS/HD | Checked By: AS | Date: 9/22/2025
Seal & Signature
DASNY Project No. 3393409999
FIGURE 12
Drawing 12 of 12

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am

APPENDIX 1

QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN

This Quality Assurance Project Plan (QAPP) presents the organization, objectives, planned activities, and specific quality assurance/quality control (QA/QC) procedures associated with the field activities described in the Remedial Work Plan (RWP). The QAPP also describes specific protocols for field sampling, sample handling and storage, and laboratory analysis. The data generated from the analysis of samples will be used to document the waste characterization of materials to be removed during remedial activities.

Project Organization and Responsibility

A qualified person will coordinate and manage the sampling and analysis program, data reduction, QA/QC, data validation, analysis, and reporting. TRC will direct the sampling activities and coordinate laboratory and remedial investigation activities. The TRC Project Quality Assurance (QA) Officer will be Elizabeth Denly and will report directly to the Project Manager, Anthony Sigona.

A qualified person will ensure that the QAPP is implemented and will oversee data validation. A qualified person will provide oversight and technical support for the sampling and analytical procedures followed in this project. This individual has the broad authority to approve or disapprove project plans, specific analyses, and final reports. The Project QA Officer is independent from the data generation activities. In general, the QA officer will be responsible for reviewing and advising on all QA/QC aspects of this program.

Data validation will be performed for the waste characterization building material, sediment, and liquid sample analytical data. The results of the data validation will be summarized in Data Usability Summary Reports (DUSRs). Nancy Weaver of Environmental Data Services, Inc. is the proposed data validator for this project. Resumes of key personnel, including the Project QA Officer, Project Manager, and Data Validator are provided in *Appendix 2* of the RWP.

Laboratories used will be New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratories. The proposed laboratories for this project are Pace Analytical Services, LLC in Westborough, Massachusetts (ELAP Certification No. 11148), EMSL Laboratory and Atlas Environmental Lab Corporation in New York, New York (ELAP Certification No. 11999). Atlas Laboratory will be the primary laboratory for asbestos and lead paint analyses. QA/QC samples for asbestos will be submitted to EMSL. The laboratories will communicate directly with the Project Manager regarding the analytical results and reporting and will be responsible for providing all labels, sample containers, temperature blanks, shipping coolers, and laboratory documentation.

QA Objectives for Data Management

New York State Analytical Services Protocol (ASP) Category B laboratory packages will be provided by the laboratory.

All analytical measurements will be made so that the results are representative of the media sampled and the conditions measured. Data will be reported in consistent dry weight units for solid samples (i.e., µg/kg and/or mg/kg). Table 1A presents the proposed samples, sampling and analytical parameters, analytical methods, sample preservation requirements, containers, and QA/QC samples.

Quantitation Limits (QLs) are laboratory-specific and reflect those values achievable by the laboratory performing the analyses.

Data Quality Levels (DQLs) are those reporting limits required to meet the objectives of the program (i.e., program action levels, cleanup standards, etc.).

Data Quality Objectives (DQOs) define the quality of data and documentation required to support decisions made in the various phases of the data collection activities. The DQOs are dependent on the end uses of the data to be collected and are also expressed in terms of objectives for precision, accuracy, representativeness, completeness, and comparability.

The analytical methods to be used at this site provide the highest level of data quality and can be used for purposes of risk assessment, evaluation of remedial alternatives and verification that cleanup standards have been met. However, in order to ensure that the analytical methodologies are capable of achieving the DQOs, measurement performance criteria have been set for the analytical measurements in terms of accuracy and precision.

The overall QA objective is to develop and implement procedures for field sampling, chain-of-custody, laboratory analysis, and reporting which will provide results that are scientifically valid, and the levels of which are sufficient to meet DQOs.

All on-site soils which exceed restricted-residential soil cleanup objectives (SCOs) for PCBs (1 ppm) in shallow soil (0-2 feet) and 10 ppm in subsurface soil (greater than 2 feet), as set forth in NYSDEC's CP-51 and Part 375-6.8, will be excavated and transported off-site for disposal.

The QA objectives are defined as follows:

- ***Accuracy*** is the closeness of agreement between an observed value and an accepted reference value. The difference between the observed value and the reference value includes components of both systematic error (bias) and random error.

  Accuracy in the field is assessed through the adherence to all field instrument calibration procedures, sample handling, preservation, and holding time requirements.

  The laboratory will assess the overall accuracy of their instruments and analytical methods (independent of sample or matrix effects) through the measurement of "standards," materials of accepted reference value. Accuracy will vary from analysis to analysis because of individual sample and matrix effects. In an individual analysis, accuracy will be measured in terms of blank results, the percent recovery (%R) of surrogate compounds in organic analyses and/or laboratory control samples (LCSs). This gives an indication of expected recovery for analytes tending to behave chemically like the spiked or surrogate compounds.

- ***Precision*** is the agreement among a set of replicate measurements without consideration of the "true" or accurate value: i.e., variability between measurements of the same material for the same analyte. Precision is measured in a variety of ways including statistically, such as calculating variance or standard deviation.

Precision will be measured through the calculation of relative percent differences (RPDs). The resulting information will be used to assess sampling and analytical variability. These criteria apply only if the sample and/or duplicate results are >5x the quantitation limit; if both results are < 5x the quantitation limit, the criterion will be doubled.

Precision in the laboratory is assessed through the calculation of RPD for duplicate samples. For organic soil and groundwater analyses, laboratory precision will be assessed through the analysis of field duplicates.

- ***Completeness*** is a measure of the number of valid data obtained from a measurement system compared to the amount that was expected to be obtained under normal conditions. "Normal conditions" are defined as the conditions expected if the sampling plan was implemented as planned.

  Field completeness is a measure of the number of (1) valid measurements obtained from all the measurements taken in the project and (2) valid samples collected. The field completeness objective is greater than 90 percent.

  Laboratory completeness is a measure of the number of valid measurements obtained from all valid samples submitted to the laboratory. The laboratory completeness objective is greater than 95 percent.

- ***Representativeness*** is a qualitative parameter that expresses the degree to which data accurately and precisely represents either a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition within a defined spatial and/or temporal boundary. To ensure representativeness, the sampling locations have been selected to provide coverage over a wide area and to highlight potential trends in the data. In addition, field duplicate samples will provide an additional measure of representativeness at a given location.

  Representativeness is dependent upon the proper design of the sampling program and will be satisfied by ensuring that the Remedial Work Plan is followed, and that proper sampling, sample handling, and sample preservation techniques are used.

  Representativeness in the laboratory is ensured by using the proper analytical procedures, appropriate methods, and meeting sample holding times.

- ***Comparability*** expresses the confidence with which one data set can be compared to another. Comparability is dependent upon the proper design of the sampling program and will be satisfied by ensuring that the Work Plan are followed and that proper sampling techniques are used. Maximization of comparability with previous data sets is expected because the sampling design and field protocols are consistent with those previously used.

  Comparability is dependent on the use of recognized United Stated Environmental Protection Agency (USEPA) or equivalent analytical methods and the reporting of data in standardized units. Laboratory procedures are consistent with those used for previous sampling efforts.

Table 1A
Analytical Parameters, Methods, Preservation, Holding Time, and Container Requirements for Building Materials and Transformer Samples

Sample Matrix	Analytical Parameter	Sample Type	Estimated No. of Samples[1]	No. of QA/QC Samples	EPA Analytical Method	Sample Preservation	Holding Time[2]	Sample Container
Surfacing Materials	Asbestos	Grab	6-12	3	NYS PLM Method 198.1/198.8	NA	NA	Laboratory provided bags
Thermal System Insulation (TSI)	Asbestos	Grab	6-12	3	New York State PLM Method 198.1	NA	NA	Laboratory provided bags
Miscellaneous Materials	Asbestos	Grab	25-75	3-12	New York State PLM Method 198.1, NOB Method 198.4 or TEM Method 198.6, as applicable.	NA	NA	Laboratory provided bags
Non-Porous Surfaces	Polychlorinated Biphenyls (PCBs)	Wipe	12	2 (Blanks)	SW846 Method 3540C and SW846 Method 8082A	1:4 Acetone-Hexane	365 days	Glass 120ml/4oz w/ 1:4 Acetone: Hexane
Transformer Oil	PCBs	Grab	8-12	4	SW846 Method 3580A and SW846 Method 8082A	None	365 days	Glass 60mL/2oz unpreserved
Paint (e.g., floor epoxy and other paint)	Lead	Grab	10-20	0	NIOSH 7082	None	365 days	Glass 60mL/2oz unpreserved
Porous Floor Debris & Non-Metallic (Non-Recyclable) Materials	TCLP RCRA 8 Metals	Composite	2	0	6010D/7470	None	180 days except mercury which is 28 days	Glass 250mL/8oz unpreserved
Concrete	PCBs	Grab	50-100	0	SW846 Method 3540C and SW846 Method 8082A	None	365 days	Glass 250mL/8oz unpreserved
Manufactured Materials	PCBs	Grab	10-15	0	SW846 Method 3540C and SW846 Method 8082A	None	365 days	Glass 250mL/8oz unpreserved

[1] Actual number of samples may vary depending on field conditions, sample material availability, and field observations.
[2] From date and time of sample collection
PLM - Polarized Light Microscopy; NOB - Non-friable organically bound; TEM - Transmission electron microscopy; TCLP - Toxicity Characteristic Leaching Procedure; RCRA - Resource Conservation and Recovery Act.
Samples submitted to the laboratory for RCRA Metals & PCB analysis will be transported to the laboratory in a cooler with ice.

Table 1B
Analytical Parameters, Methods, Preservation, Holding Time, and Container Requirements for Liquid and Sediment Samples

Sample Matrix	Analytical Parameter	Sample Type	No. of Samples[1]	No. of QA/QC Samples	EPA Analytical Method	Sample Preservation	Holding Time[2]	Sample Container
Sediment	PCBs	Grab	2-6	1	SW846 Method 3540C and SW846 Method 8082A	None	365 days	Glass 250ml/8oz unpreserved
Aqueous Liquid	PCBs	Grab	2-6	1	SW846 Method 3510C and SW846 Method 8082A	None	365 days	2-Amber 1-L glass unpreserved
Non-Aqueous Liquid	PCBs	Grab	2-6	1	SW846 Method 3580A and SW846 Method 8082A	None	365 days	Glass 60mL/2oz unpreserved

[1] Actual number of samples may vary depending on field conditions, sample material availability, and field observations.
[2] From date and time of sample collection

Table 1C
Analytical Parameters, Methods, Preservation, Holding Time, and Container Requirements for Soil Samples

Sample Matrix	Analytical Parameter	Sample Type	No. of Samples[1]	No. of QA/QC Samples	EPA Analytical Method	Sample Preservation	Holding Time[2]	Sample Container
Soil	PCBs	Grab	60-128	1 per 20 samples submitted to the laboratory	SW846 Method 3540C and SW846 Method 8082A	None	365 days	Glass 250ml/8oz unpreserved

[1] Actual number of samples may vary depending on field conditions, sample material availability, and field observations.
[2] From date and time of sample collection

Project Goals

The principal objectives of the Remedial Work Plan (RWP) sampling program are to provide a limited waste characterization analysis of the vandalized transformer room materials and building materials to be removed during remedial activities, analysis of the concrete and subsurface soils beneath the concrete slabs to achieve re-classification of the Site from a Class 3 to Class 4 Inactive Hazardous Waste Disposal Site, and analysis of groundwater samples for New York City Department of Environmental Protection (NYCDEP) dewatering permits.

Sampling Plan

Environmental sampling will include building materials, oils, liquids, sediment, and soil as shown in Tables 1A through 1C. All samples will be collected using disposable sampling equipment. Samplers will wear phthalate-free gloves such as neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) shall be always used when handling PCB samples. Only clean or disposal instruments will be allowed to touch the sample to the extent practicable.

Soil and Sediment Sampling

Soil and sediment samples will be collected as per procedures in RWP in 2-ounce sterile scoops and placed in the sample bottles. Discrete sediment samples will be collected using a dedicated disposable Teflon scoop or other similar device depending on the sample matrix for each liquid and/or sediment sample. Samples will be placed directly into pre-cleaned and labeled containers for transport and delivery to laboratory for PCB analysis using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A.

Liquid and Aqueous Sampling

Collecting aqueous and liquid samples involves a standardized process to ensure accurate analysis. This includes proper sample collection, preservation, and transportation to a lab for analysis. A general approach involves using sterile, rinsed collection bottles, filling them to a specific level, for transport to the laboratory for analysis for USEPA SW846 Method 8082A.

Concrete Sampling

Concrete samples will be collected utilizing approximately 1-inch diameter carbide drill bit with an impact hammer drill. Drill bits will be decontaminated between sampling locations. For easy identification, sample locations will be pre-marked using a marker or paint. Any debris will be removed with a clean brush or cloth prior to drilling.

Samples will be collected at 1/2·inch depth intervals. Thus, the initial surface sample will be collected from 0 - 0.5 inches. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes (10 grams (20 mL) of powder) for a PCB determination. Samples will be placed directly into pre-cleaned and labeled containers for transport and delivery to laboratory for PCB analysis using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A.

PCB Manufactured Building Materials

Bulk Samples will be collected at no more than 1/2-inch depth intervals using a metal chisel or sharp cutting knife. Thus, the initial surface sample should be collected from 0 - 0.5 inches. For porous surfaces, such as caulking and rubber, a representative sample can be collected using a metal chisel or sharp cutting knife. A minimum sample size of the bulk materials will be weighed in the field to achieve at least 10 grams for analysis. Samples will be placed directly into pre-cleaned and labeled containers for transport and delivery to laboratory for PCB analysis using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A.

PCB Wipe Sampling

Wipe Samples will be collected in accordance with 40 CFR 761.3 and 761.123. PCB-free gauze wipes will be wetted with hexane to collect surface wipe samples. Wipe sampling will be performed using a 10 cm by 10 cm template consistent with American Society for Testing and Materials *Standard Practice for Field Collection of Organic Compounds from Surfaces Using Wipe Sampling.* Each wipe sample will be collected in a 100-cm^2 area. In cases where the surface area available for wipe sampling is less than 100 cm^2, the actual area wiped will be recorded.

Transfer of PCBs from the surface will occur through physical wiping of the defined surface area while applying moderate pressure. Wipes will be handled using appropriate chemical resistant gloves followed by storage in a clean glass jar having a Teflon-lined cap. The lid should be labelled with the sample identification described above along with an unsampled wipe labelled blank. A wipe sample will be collected from both sampling stations at each sampling event time.

Samples will be analyzed for PCBs using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A. Sample results will be compared to EPA's High Occupancy surface wipe sample criteria of 10 µg/100 cm^2 40 CFR 761.61(a)(4)(ii) and NYSDEC 6 NYCRR 371.4(e).

Lead-Based Paint Sampling

TRC will inspect the Transformer Rooms for lead based paint (LBP), utilizing a USEPA Certified Lead-Based Paint Professional. Paint chip samples will be collected in glass 60mL/2oz unpreserved jars and submitted for lead analysis via NIOSH 7082 to a laboratory accredited by American Industrial Hygiene Association (AIHA), Environmental Lead Laboratory Accreditation Program (ELLAP), and the NYSDOH.

Asbestos-Containing Material Sampling

TRC will conduct a survey of the portions of the Transformer Room anticipated to be affected by the renovation scope. The survey will be performed by licensed NYSDOL asbestos inspectors and New York City Department of Environmental Protection (NYCDEP) investigators. Suspect homogeneous materials are defined as those materials that are visually similar in color, appearance and texture and show evidence of being installed at the same general time.

A minimum of three (3) samples of thermal system insulation (e.g., boiler, pipe, pipefitting, and tank insulation) and two (2) samples of miscellaneous materials (e.g., ceiling tile, floor tile, window caulking, wallboard, and roofing materials) will be collected from each homogeneous material. These samples will be collected from discrete and different locations of the material so that samples are collected in a random

manner from well-distributed locations. If multiple pieces of equipment (e.g., boilers, water tanks, condensate tanks) appear to be insulated with the same material (under any protective coverings), the material may have been considered a homogeneous material. If it is apparent that repairs have been made using a different material, samples would have been collected of each material.

For surfacing materials (e.g., spray-applied insulation) a minimum of three (3) bulk samples will be collected from each homogeneous area that measures 1,000 square feet or less, five (5) bulk samples from each homogeneous area that measures greater than 1,000 square feet but less than 5,000 square feet, and seven (7) bulk samples from each homogeneous area that measures greater than 5,000 square feet.

Following the identification of suspect homogeneous materials, representative samples will be collected. Multiple bulk samples will be collected from each suspect homogeneous material in accordance with the Asbestos Hazard Emergency Response Act (AHERA) requirements. A unique sample identification number was assigned incrementally for each sample. These samples will be placed in containers and delivered to the laboratory following proper chain-of-custody procedures. The samples will be submitted to ELAP certified Labs.

Measurement Quality Objectives
The measurement quality objectives associated with the field investigation are presented below.

Accuracy

Field Accuracy Objectives
Accuracy in the field is assessed through the adherence to all field instrument calibration procedures, sample handling, preservation, and holding time requirements. Accuracy will also be evaluated using field blanks, cooler temperature blanks, media certification checks, breakthrough checks, field surrogates, and field spikes.

Field blanks will be submitted with wipe matrices and will consist of clean sample media that accompany samples to and from the site in the same cooler or shipping container. Field blanks will be used to ensure that there is no contamination as a result of the shipment/transportation/on-site storage activities. Field blanks will be collected at a frequency of one per sampling event for all parameters associated with the wipe samples.

QC Sample Collection
QC samples will include field duplicates for samples. Refer to Table 1A-1B for a summary of QC sample preservation and container requirements.

Field duplicates are an additional aliquot of the same sample submitted for the same parameters as the original sample. Field duplicates will be used to assess the sampling and analytical reproducibility. Field duplicates will be collected by alternately filling sample bottles from the source being sampled. Refer to Table 1A-1B for a summary of QC sample preservation and container requirements.

Sample Preservation and Containerization
The analytical laboratory will supply the containers for analytical samples. These containers will be cleaned by the manufacturer to meet or exceed all analyte specifications established in the latest USEPA's Specifications and Guidance for Contaminant-Free Sample Containers. Certificates of analysis are

provided with each bottle lot and maintained on file to document conformance to USEPA specifications. Soil samples will be placed in chilled coolers immediately after collection.

Equipment Decontamination
Since disposable sampling equipment will be utilized, equipment decontamination procedures are not included in this QAPP.

Field Custody Procedures
Sample chain-of-custody and packaging procedures are summarized below. These procedures are intended to ensure that the samples will arrive at the laboratory with the chain-of-custody intact.

- The field sampler is personally responsible for the care and custody of the samples until they are transferred or dispatched properly. Field procedures have been designed such that as few people as possible will handle the samples.

- All bottles will be identified by the use of sample labels with sample numbers, sampling locations, date/time of sample collection, and type of analysis.

- Sample labels will be completed for each sample using waterproof ink unless prohibited by weather conditions. For example, a logbook notation would explain that a pencil was used to fill out the sample label because the pen would not function in wet weather.

- Samples will be accompanied by a properly completed chain-of-custody form. The sample numbers and locations will be listed on the chain-of-custody form. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents the transfer of custody of samples from the sampler to another person, to a mobile laboratory, to the permanent laboratory, or to/from a secure storage location.

- All shipments will be accompanied by the chain-of-custody record identifying the contents. The original record will accompany the shipment, and copies will be retained by the sampler and placed in the project files.

- Samples will be properly packaged for shipment and dispatched to the appropriate laboratory for analysis, with a separate signed custody record enclosed in and secured to the inside top of each sample box or cooler. Shipping containers will be secured with strapping tape and custody seals for shipment to the laboratory. The custody seals will be attached to the front right and back left of the cooler and covered with clear plastic tape after being signed by field personnel. The cooler will be strapped shut with strapping tape in at least two locations.

- If the samples are sent by common carrier, the air bill will be used. Air bills will be retained as part of the permanent documentation. Commercial carriers are not required to sign off on the custody forms since the custody forms will be sealed inside the sample cooler and the custody seals will remain intact.

- Samples remain in the custody of the sampler until transfer of custody is completed. This consists of delivery of samples to the laboratory sample custodian, and signature of the laboratory sample

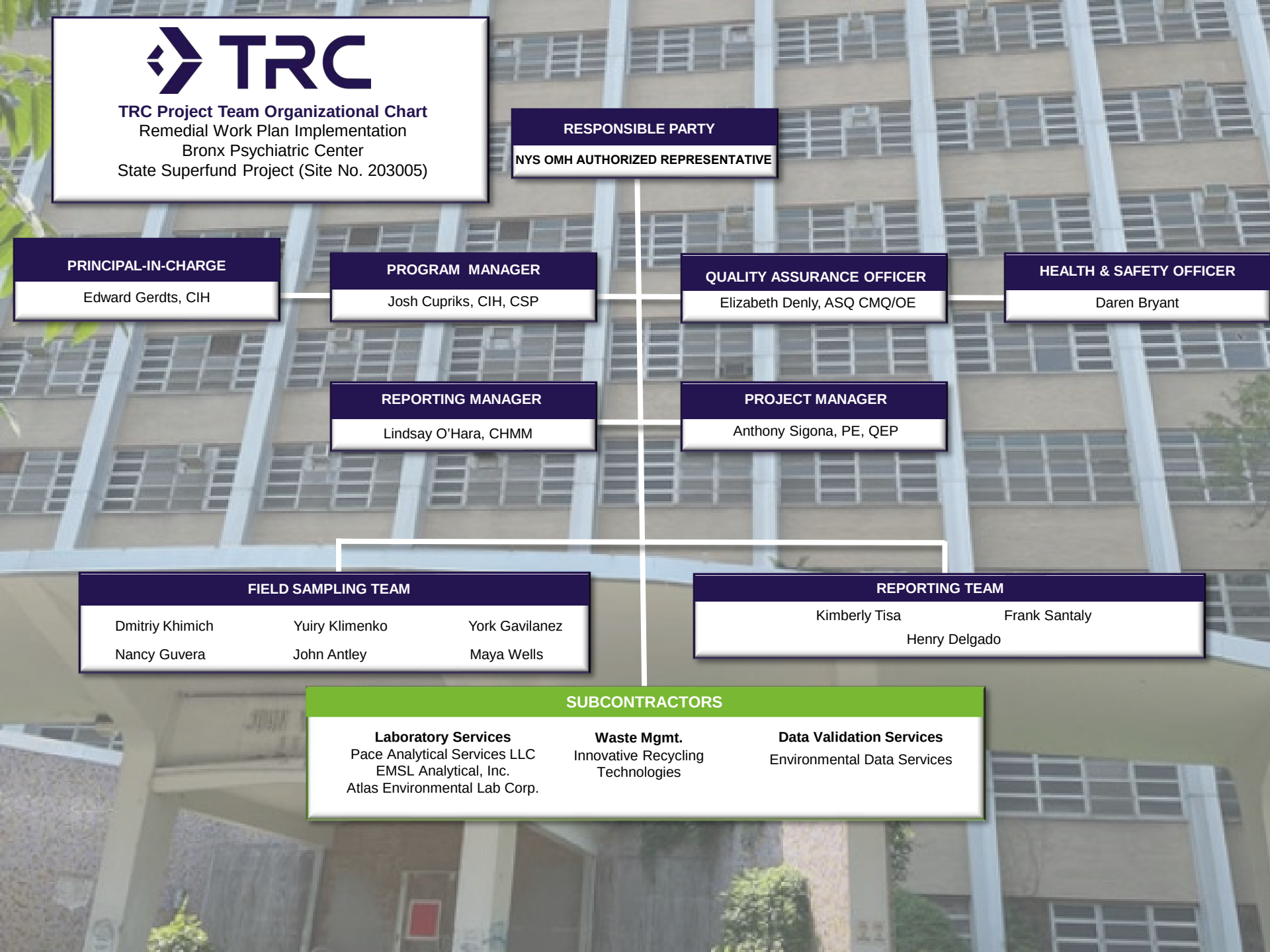
custodian on chain-of-custody document as receiving the samples and signature of sampler as relinquishing samples.

Data Management and Reporting

ASP Category B Laboratory Packages will undergo data validation. A NYSDEC Data Usability Summary Report (DUSR) will be prepared for each laboratory package.

APPENDIX 2

PROJECT PERSONNEL ORGANIZATION CHART AND RESUMES


TRC
TRC Project Team Organizational Chart
Remedial Work Plan Implementation
Bronx Psychiatric Center
State Superfund Project (Site No. 203005)
RESPONSIBLE PARTY
NYS OMH AUTHORIZED REPRESENTATIVE
PRINCIPAL-IN-CHARGE
Edward Gerdts, CIH
PROGRAM MANAGER
Josh Cupriks, CIH, CSP
QUALITY ASSURANCE OFFICER
Elizabeth Denly, ASQ CMQ/OE
HEALTH & SAFETY OFFICER
Daren Bryant
REPORTING MANAGER
Lindsay O'Hara, CHMM
PROJECT MANAGER
Anthony Sigona, PE, QEP
FIELD SAMPLING TEAM
Dmitriy Khimich
Yuiry Klimenko
York Gavilanez
Nancy Guvera
John Antley
Maya Wells
REPORTING TEAM
Kimberly Tisa
Frank Santaly
Henry Delgado
SUBCONTRACTORS
Laboratory Services
Pace Analytical Services LLC
EMSL Analytical, Inc.
Atlas Environmental Lab Corp.
Waste Mgmt.
Innovative Recycling Technologies
Data Validation Services
Environmental Data Services

JOHN ANTLEY

EDUCATION

B.S. Environmental Science, Minor in Chemistry, New Jersey Institute of Technology (NJIT), May 2020.

AREAS OF EXPERTISE

John Antley has technical experience in the following general areas:

- Field Instrument Calibration & Operation
- Collection of Soil, Groundwater, and Air Samples
- Resource Recovery/Solid Waste Management
- Overburden Well Installation Oversight
- Field Work Oversight
- Data Usability/Data Analysis
- Report Preparation
- Environmental Compliance

REPRESENTATIVE EXPERIENCE

John Antley possesses over 3 years of experience in the environmental field, with knowledge in areas of site investigation, waste management, soil and ground water sampling, oversight of field crews, and coordinating field events.

New York City Department of Parks and Recreation, Multiple Sites, Environmental Scientist – Multiple Sites, New York

Mr. Antley serves as an Environmental Scientist performing environmental, geotechnical, and permeability investigations at New York City parks as part of investigations for capital projects. Mr. Antley's responsibilities included providing direction to the geophysical and drilling subcontractors and calibrating and utilizing field instrumentation including a PID during subsurface investigation. Mr. Antley documented soil characteristics and permeability parameters, collected soil samples for laboratory analysis, completed chain-of-custody (COC) forms, and followed standard COC procedures.

New York State Department of Environmental Conservation, Vibracore Sediment Sampling, Environmental Scientist – Newtown Creek, Brooklyn, New York

Mr. Antley served as the lead Environmental Scientist performing sediment sampling in Newtown Creek in Brooklyn, NY. Mr. Antley's responsibilities included oversight of contractors, collection of vibracore sediment samples, characterization of sediments, and collection of sediment samples. Mr. Antley was responsible for ensuring all environmental standards and guidelines were followed for this project.

Transmission Developers Inc., Champaign-Hudson Power Express, Community Air Monitoring, Environmental Scientist – Queens, New York

Mr. Antley serves as the lead Environmental Scientist performing air monitoring and construction inspection services at the Champaign-Hudson Power Express in Queens, NY. Mr. Antley's responsibilities include calibration and use of field instrumentation including a photoionization detector (PID) and DuskTrak II Monitors to implement the Community Air Monitoring Plan (CAMP). Mr. Antley prepares daily reports summarizing the community air monitoring data and construction activities. Mr. Antley oversees the maintenance of all equipment and telemetric systems for this project.

PSEG, LLS., Sand Hills Substation, Resource Recovery, Environmental Scientist – Sandhills, New Jersey

Mr. Antley serves as the lead resource recovery personnel at the Sandhills substation in Sandhills, NJ during the construction of a new substation. Mr. Antley was responsible for managing the solid waste manifests for all the soil excavated from the Site. Approximately 25 truckloads of soil were transported off-Site daily. Mr. Antley frequently acted as the liaison between the construction crew advancing the excavations, contracted waste-haulers, and the client. He also conducted environmental compliance inspections daily.

New York City School Construction Authority, Environmental Scientist – Multiple Sites, New York

Mr. Antley serves as an environmental scientist performing site assessments and investigation for new construction and renovation of New York City public schools. Responsibilities include preparation and review of Phase I Environmental Site Assessments (ESAs), Phase II Environmental Site Investigation (ESI) scopes of work, and Phase II ESIs. In preparation of Phase I ESAs, Mr. Antley has reviewed and summarized prior investigation reports of New York State Department of Environmental Conservation (NYSDEC) Brownfield Sites, Restrictive Declarations on facilities with NYC Department of Environmental Protection (NYCDEP) and/or NYC Mayor's Office of Environmental Remediation (NYCOER) oversight, and other pertinent documents.

Parkway Generation, Bergen Generating Station Acid Spill Investigation, Environmental Scientist – New York

Mr. Antley performed continuous soil sampling, logged soil characteristics analyzed soil acidity levels using mobile lab equipment, and selected and submitted soil samples to the laboratory for analysis under standard COC procedures as part of investigation activities following a 200-gallon release of sulfuric acid at the Bergen Generating station. Mr. Antley provided oversight of the subcontractor during remedial activities and organized a field event which included soil sampling, groundwater sampling, and temporary and permanent well instillations.

SPECIALIZED TRAINING

- OSHA 10-Hour Construction Industry Training
- OSHA 40-Hour Hazardous Waste Operations (HAZWOPER) TrainingPROFESSIONAL AFFILIATIONS

SELECTED PUBLICATIONS AND PRESENTATIONS

Khalizov, A. F., Guzman, F. J., Cooper, M., Mao, N., Antley, J., & Bozzelli, J. (2020). Direct detection of gas-phase mercuric chloride by ion drift - Chemical ionization mass spectrometry. Atmospheric Environment, 238, [117687]. https://doi.org/10.1016/j.atmosenv.2020.117687

DAREN J. BRYANT
PROGRAM MANAGER – TRC NYC OFFICE SAFETY COORDINATOR

EDUCATION

B.S., Environmental Science, University at Buffalo, NY, Phi Beta Kappa, magna cum laude, 1997

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

USEPA Lead-Based Paint Risk Assessor

AMPP C-3/C-5 Supervisor/Competent Person for Deleading of Industrial Structures

NYCDEP Asbestos Investigator

NYSDOL Asbestos Inspector, Management Planner, Project Designer, Project Monitor, and Air Sampling Technician, Mold Assessor

AREAS OF EXPERTISE

Mr. Daren J. Bryant has project and quality management experience in the following general areas:

- Asbestos/Lead-Based Paint Survey/Design and Abatement Oversight
- USEPA/NYSDOH Asbestos & Lead-Based Paint Training Accreditation & Certification
- Environmental Health & Safety Management
- OSHA Compliance
- Indoor Air Quality Assessments
- Industrial Hygiene Exposure Assessments

REPRESENTATIVE EXPERIENCE

Mr. Bryant has over 24 years of experience and progressive responsibility in environmental consulting and training. His qualifications include extensive hands-on planning, field investigations and site management, design, permitting, cost estimating, and project management. Mr. Bryant's background includes extensive service to public and private-sector clientele including Metro North Railroad, the New York Power Authority, the New York City School Construction Authority, the New York City Transit Authority, and New York University.

New York City School Construction Authority, Program Manager, New York, NY (2011 - Present)

Mr. Bryant has served as Project Manager with responsibility for the asbestos/lead- based paint/polychlorinated biphenyl survey and design as well as abatement oversight for various schools across the five boroughs of New York City. Responsibilities included detailed document and construction drawing review, field survey scheduling and sampling, quality control reviews, personnel management, technical report and specification writing, cost estimation, design drawing, and final report submittal.

Asbestos, Lead, and Testing - Metro North Railroad, Program Manager, New York, NY (2018-Current)

Mr. Bryant currently is currently working on asbestos, lead-based paint, and industrial hygiene/indoor air quality consulting projects for the Metro North Railroad Company for various work in Grand Central Terminal as well as for the structures and train lines along the various train lines in New York, New Jersey, and Connecticut. His main responsibilities include technical expertise in all facets of compliance

work for asbestos and lead under the USEPA, NYSDOL, and OSHA. Mr. Bryant also plays a role in the management of all indoor air quality assessments, industrial hygiene exposure monitoring, and personal air sampling under the direction of a Certified Industrial Hygienist (CIH).

New York Power Authority, Safety Officer/Senior Project Manager, New York, NY (2013-2015)

Mr. Bryant served as Site Safety Officer and Senior Project Manager with responsibility for the on-site asbestos abatement at the deconstruction of the Charles Poletti Power Plant in Astoria, NY. As Safety Officer, Mr. Bryant reviewed and prepared Job Safety Briefings, Job Hazard Analyses, and work plans during the demolition of the power plant. Responsibilities also included site-specific compliance with NYSDOL asbestos abatement requirements, adherence to the 02081 asbestos specifications, review and interpretation of all sample results, field personnel management, and daily documentation and coordination with the general contractor, abatement contractors, and construction management team.

Lead-Based Paint Inspection Services Contract / Healthy Homes - New York City Housing Authority (NYCHA), Project QA/QC Task Manager (2019-current)

Project QA/QC Task Manager for residential unit lead inspection services task order contract to NYCHA, the largest public housing authority in the U.S. with over 140,000 apartment units. Mr. Bryant provides overall QA/QC of team conducting HUD based lead paint assessments throughout client's properties in the five boroughs of New York City. Contract includes coordinated residential unit access to fulfill lead-based paint inspection and reporting requirements on a unit-by-unit basis. Inspections include XRF evaluations and paint chip as one of seven contracts awarded by the public agency to support their goal of testing over 135,000 residential apartments, starting in April, 2019. Mr. Bryant was part of the team managing field and office teams utilizing TRC's Mobile Data Solutions platform to automate an efficient reporting structure with high quality assurance. Residential lead-based paint inspections were conducted in over 3,000 apartment units in the first one year of contract services. Currently over 23,000 apartments have been successfully inspected and reported.

Asbestos, Lead-Based Paint and Environmental Consulting Services - New York City Build-it-Back, Senior Project Manager, Queens, NY (2016-2019)

Mr. Bryant was responsible for providing environmental support services to the New York City Mayor's Office of Housing Recovery Operations (NYCHRO) and the Build it Back Program administered by the New York City Department of Design & Construction (NYCDDC). As prime consultant for Tishman Construction Corp. of New York (Tishman), Mr. Bryant has been responsible for all environmental and hazardous material testing for homes within the borough of Queens, NY, which sustained a large volume of homes damaged by Hurricane Sandy due to its large residential coastline. Mr. Bryant, along with representatives from Tishman, their parent company AECOM, and NYCDDC, provided initial inspection and design services for properties accepted into the program, with TRC's role primarily as construction and renovation phases, Mr. Bryant also provided support services for inspection work for Tishman for additional hazardous materials identified, such as damage from water intrusion and/or microbial growth, underground storage tank inspection and removal, groundwater and soil testing for potentially hazardous waste characterization and disposal, and the installation of monitoring wells for the New York City Department of Environmental Protection and/or the New York State Department of Environmental Conservation in areas where wetlands permits are in place.

New York University, Project Manager, 370 Jay Street, Brooklyn, NY (2014-Current)

Mr. Bryant is currently responsible for the environmental oversight of the abatement and gut renovation of the former Metropolitan Transit Authority (MTA) headquarters which is currently in the process of

becoming New York University's Center for Urban Studies and Planning. Mr. Bryant has been responsible for leading an experienced field team to perform a detailed site assessment using previous survey documents as well as extensive sampling for various environmental contaminants. Mr. Bryant also served as Project Designer for this large-scale abatement and is currently managing the abatement oversight and monitoring, taking this project from start to finish for New York University. Mr. Bryant also managed and submitted all polychlorinated biphenyl (PCB) testing, remediation, and document submittals to the United States Environmental Protection Agency Region 2.

New York City Transit Authority, Project Manager, New York, NY (2012- 2013)

Mr. Bryant served as Project Manager with responsibility for the asbestos abatement and deleading of industrial structures for various facilities across the five boroughs of New York City. Responsibilities included detailed document and construction drawing review, field survey scheduling and sampling, quality control reviews, personnel management, technical report writing, project initiation, and compliance with the Office of System Safety and NYSDOL system-wide variances.

Various Clients, Training Manager, New York, NY (2008-2011)

Mr. Bryant served as Training Manager with responsibility for the accreditation of NYSDOH-approved asbestos safety training courses as well as USEPA-approved lead-based paint training courses. His main duties were the development, implementation, scheduling, instruction, and NYSDOH and USEPA document submittal for various public and private students seeking certification training for various asbestos and lead-based paint disciplines.

City of Phoenix, Project Manager, Phoenix, AZ (2001-2006)

Mr. Bryant served as Project Manager with responsibility for the management of all field inspections and technical report and specification writing for the City of Phoenix Lead Hazard Control Program. His main duties included the scheduling of all properties requiring lead-based paint inspections and risk assessments, interpretation of all sample data, and compliance with USEPA and HUD requirements.

SPECIALIZED TRAINING

- 40-Hour OSHA Hazardous Waste Operations And Emergency Response Training
- 30-Hour OSHA Construction Safety
- 10-Hour OSHA Outreach Training
- X-Ray Fluorescence Analyzer Training
- General Safety For Aerial Lifts Training
- Advanced Fungal Workshop Training
- TRC Excellence In Project Management Training
- MTA Track Training
- Metro North Safety Training
- CSX Railway Training

JOSHUA CUPRIKS, CIH, CSP

EDUCATION

M.S. Environmental Studies/Industrial Hygiene (1998); The University of Rochester School of Medicine & Dentistry

B.S. (Magna Cum Laude) Organismal Biology (1994): SUNY New Paltz

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Certified Industrial Hygienist (CIH) – American Board of Industrial Hygiene

Certified Safety Professional (CSP) – Board of Certified Safety Professionals

NYSDOL Mold Assessor

AREAS OF EXPERTISE

Mr. Joshua Cupriks CIH, CSP has program management and technical experience in the following general areas:

- Extensive classical Industrial Hygiene, Safety and Compliance experience and problem-solving skills;
- National and international experience (Hawaii to Dubai);
- Strong familiarity with and proven success on high profile and mission critical projects;
- Strong Team building and interpersonal skills;
- Strong quality control and client-building/Team marketing skills;
- History using the above to grow EHS divisions and grow the bottom line
- Working knowledge of the transportation, repair/manufacturing, property management, construction, medical, academic and energy sectors

REPRESENTATIVE EXPERIENCE

Mr. Cupriks has 30 years of experience and progressive responsibility in Consulting and Management Services. Regional EHS Manager/Practice Director with proven safety compliance, problem-solving client service management, quality control, business/technical development and National Safety Team/group working experience.

Long Island Railroad (LIRR), Long Island, New York

Project Manager/CIH of record for three consecutive Industrial Hygiene Contracts from 1998 – 2012 and for the current contract. Responsible for efficiently managing and performing a variety of industrial hygiene sampling, safety and environmental assessment surveys in both office, station/track facilities, management office/operational facility space. Work tasks have involved System/Corporate Safety program updates with regards to FRA Standard changes, System/Corporate Safety program reviews and updates, NYS PESH Bureau interpretive support, comprehensive ventilation and Indoor Air Quality (IAQ) surveys, emergency/proactive air quality surveys and exposure assessments (diesel exhaust, chemical, metal [including mercury], silica, man-made vitreous fiber, community/personal noise and EMF). Additionally managed numerous projects related to oil/water separation systems, tank management systems, environmental groundwater and soil investigations, Health & Safety training, scientific (e.g., efficacy of novel chlorine dioxide delivery systems in a train car setting) experimentation and independent

oversight, unknown contaminant testing, toxic metals abatement and historical Industrial Hygiene data management.

Port Authority of New York/New Jersey (PANYNJ) and Port Authority Trans Hudson (PATH) Commuter Facilities, New York, New York

Over the past fifteen years, Mr. Cupriks has served as a defense CIH for PATH/PANYNJ through the law firm of Siegel, McCambridge, Singer & Mahoney (SMSM). In this capacity he has provided key research, report and expert witness services for casework typically involving asbestos, diesel exhaust exposure and rail safety. Work has required a working knowledge of System Safety Program spanning sixty years, including but not limited to training procedures/records, occupational sampling data and interpretation and established employee/union work practices.

Amtrak/New Jersey Portal Bridge Replacement Project

Safety Manager and Inspector for a 3rd Party Team of inspection safety professionals working to identify and address environmental, health & safety concerns for this mission critical $1.6 billion hazardous (COPR-impacted) waste impacted site owned by Glenn Springs Holdings, Inc.

Mr. Cupriks' Team interfaced with the larger project safety on this sixteen-acre site to meet site safety goals, State of New Jersey and Federal/Amtrak safety, procedural requirements.

Metropolitan Transportation Authority (MTA), New York, New York

Mr. Cupriks served in a variety of capacities between approximately 1998 and 2021 for a number of MTA contracts involved with Environmental, Health & Safety including but not limited to:

- More recently, Industrial Hygiene support/management services for on-gong station upgrades. In this capacity, Mr. Cupriks worked with the Contractor of Record and MTA System safety to ensure compliance issues were identified and addressed in dynamic working environments.
- Extensive track walking with MTA System Safety Management to identify asbestos materials (i.e., signal caps, insulation, etc.) and other Environmental Conditions of Concern prior to scheduled track work. Project.
- Project Manager for the MTA Bus Industrial Hygiene Contract.
- Industrial Hygiene/Technical Advisor for the 7-line extension Team.
- Separate, on-call hazard summaries/Safety Data Sheet (SDS) reviews for chemical products prior to and during use as needed.
- Extensive asbestos/air sampling/project monitoring work between 1998 and 2002.

New Jersey Transit (NJT) Light Rail Transit System, Jersey City, NJ and Surrounding Area (1998 – 2002)

Mr. Cupriks served as the lead Project Industrial Hygienist/Environmental Scientist/Safety Specialist assessing and addressing conditions of concerns associated with the Project Management of demolition/decommissioning of structures, construction, storm water management/waterway protection along the full length of the NJT light rail transit corridor. Multiple concurrent goals included protection of workers, the environment and the public within surrounding communities.

Union County, New Jersey

Mr. Cupriks worked closely with County officials to complete this nearly year-long project serving as the Industrial Hygiene Project Manager for the completion of mission critical project Covid-19 prevention programs pertaining to a wide variety of active/mission critical public spaces such as zoos, public parks, prisons, animal/medical support facilities and office buildings. This project took on special urgency due to the designation of Union County as the most-impacted region in the United States at the start of the Covid-19 pandemic. This work involved a dedicated team of industrial hygienists, architects and engineers working together to create comprehensive occupancy/recovery plans and perform county staff/contractor training on a triage basis.

Triborough Bridge and Tunnel Authority (TBTA), New York, New York

Mr. Cupriks served as Project Manager for asbestos air sampling and asbestos bulk sampling services for multiple contracts. The air sampling contract involved the rehabilitation of the Brooklyn Battery Parking Garage. Routine operations included coordination of field staff, laboratory resources, daily contact with client staff and engineers, reporting/interpretation of laboratory data and attending necessary project meetings to meet scope and schedule requirements.

Fire Department of New York (FDNY), New York, New York

Industrial Hygiene/Project Manager for Industrial Hygiene Contract (# 05720060025097). Responsible for working closely with the FDNY OSHA Compliance Unit Management and Project Manager(s) to ensure a high level of technical integrity for a variety of air and potable water quality investigations. This work often involved sampling for potential disease-causing organisms (e.g., parasites and bacteria) in potable water and/or assessing OSHA compliance with regards to potential employee exposure to combustion products (i.e., engine equipment repair activities) associated with well-defined firefighting training activities.

New York City School Construction Authority (NYCSCA), New York

Lead Industrial Hygiene Project Manager/technical lead for a number of community noise and indoor air quality projects related primarily to chemical storage/disposal, indoor air quality, water damage surveys and assessment of toxic mold/microbial growth over several contract periods. These projects were typically conducted on an emergency response basis and involved a variety of microbiological sampling protocols and subsequent interpretation. This data, along with additional types of specialized IAQ sampling, was then used to assess the extent of damage in building materials and harm posed to staff and students. This information was used to address high profile hazard/safety assessment (re-occupancy) and construction/renovation issues for School properties. Based on these experiences, Mr. Cupriks “ghost wrote” NYCSCA Guidelines on microbial abatement/design at the time. This included additional guideline documentation regarding the best building and building practices for construction management.

General Services Administration (GSA), New York, New York

Project Manager for Industrial Hygiene and related engineering services on an as-needed basis. Worked closely with GSA Project Management in order to provide technical oversight and support services for both cutting edge comprehensive IAQ investigations (e.g., involving probability analysis), potable water system (e.g., lead, legionella sp.) and routine asbestos (e.g., weekly) air/bulk sampling projects. As these projects often involved high public visibility, a strong understanding of the New York City Building Code,

occupational/environmental Standards and Guidelines and current general industry practices and sampling data interpretation was mandatory.

New Jersey Department of Environmental Protection (NJ DEP), Kiddie Kollege Daycare Center (Former Accutherm Site), Franklinville, New Jersey

Mr. Cupriks provided Industrial Hygiene/Project Management services for this former preschool center which had become heavily contaminated with mercury and mercury vapors during historic thermometer manufacturing activities. A detailed site investigation of the facility was performed to assess ambient levels of mercury vapor within each level of the unoccupied structure to determine both the source and recovery/abatement potential. Ambient air quality screening was performed in conjunction with extensive bulk sampling analysis of representative building materials. Real time air and bulk sampling results were summarized to provide a comprehensive three-dimensional (3D) map of mercury contamination by level which aided the New Jersey Department of Health in formulating their risk assessment. Due to the extensive nature of mercury contamination within porous building materials, it was determined that rehabilitation of the building was not possible and that demolition as per Local, Federal and State of New Jersey laws would be required. This project also provided oversight and review of the on-site Health & Safety Plan which covered soil and ground water investigation activities.

Federal Bureau of Prisons (FBOP)/UNICOR E-Waste Recycling Facilities, Nationwide

Represented the Federal Government as the CIH of Record in a Union arbitration lawsuit involving heavy metal exposure. This case involved an extensive review of historical and current Health & safety policy with respect to engineering controls, employee/working inmate PPE and potential for heavy metal exposures associated with e-waste recycling operations.

Federal Prison Industries, Inc. (UNICOR), Nationwide

Project/Industrial Hygiene Project Manager for a wide variety of environmental and industrial hygiene analysis within numerous low to high security prison settings. Notable projects include the research and design of industrial hygiene sampling intended to assess the occupational noise and breathing hazards associated with a novel large scale solar cell assembly plant located FCI Otisville, in addition to traditional metal, noise, solvent and dust exposures associated with electronics reclamation, vehicle upfitting/manufacture, steel, and traditional furniture making operations in various Federal Correctional and Penitentiary Institutes.

Federal Bureau of Prisons (FBOP), Northeast and Mid-Atlantic Territory Project

Industrial Hygiene Manager for a wide variety of environmental and industrial hygiene analysis within numerous low to high security prison settings. Two notable projects include annual re-certification of the ventilation system servicing the Brooklyn Minimum Detention Center Tuberculosis Ward as per Centers for Disease Control (CDC) criteria, and completion of a comprehensive tunnel baseline inspection for industrial hygiene (e.g., worker/inmate health & safety requirements and precautions) and soil/groundwater environmental contamination (e.g., septic water, lead paint, PCBs, PAHs, metals, pesticides, airborne and surface microbial growth). This latter work was performed to determine what safety and material handling and disposal requirements, if any, would be required during the clean up a service tunnel spanning the perimeter of the FCI Danbury facility.

Turner Construction, New York City Metropolitan Area

Industrial Hygiene Project Manager and lead technical resource for a wide range of industrial hygiene, safety and Indoor Air Quality (IAQ) needs associated with new major construction and/or renovation projects. Work has involved assessment of and disposal requirements for hazardous/flammable chemicals, authoring of work procedures during use of potentially hazardous/flammable chemicals, authoring of mitigation plans for microbial growth/water damage, post-flood and fire damage assessments, permit required confined space/confined space support, HASP/Work Plan implementation and construction oversight monitoring. More notable project locations include a three-year renovation of Madison Square Garden, construction of the New York City Police Training Academy in Flushing, NY, renovation of the Museum of Modern Art of East 47th Street in Manhattan and the recently completed Memorial Sloan Kettering flagship hospital located on East 74th Street in Manhattan.

The Address Downtown, Dubai UAE

Principal investigator and Industrial Hygiene Project Manager for a forensic team dedicated to the largest insurance claim (*$1 billion*) in the world following a New Year's Eve fire event in 2016. This work involved extensive investigations to the structure to define pre-existing damage conditions relative to those caused by the fire event. Competing interests included the King of Dubai and insurance firms of record.

Lower Manhattan Development Corporation (LMDC), New York, New York

Project/Industrial Hygiene Team Manager for the successful implementation of bulk dust sampling for PAHs, PCBs, dioxins, metals, and silica within a high- profile office building impacted by the events of September 11. This project required working with client management to establish an effective sampling strategy and close communication with field staff to ensure proper execution. Performed similar work for exposed concrete (bathtub) surfaces on existing construction adjacent to this Site as part of structural engineering planning requirements. These results were compared to USEPA background criteria for New York City and nationally recognized toxicological references, where appropriate

SPECIALIZED TRAINING

- American Industrial Hygiene Association (National and Metropolitan New York Chapters)
- American Academy of Industrial Hygiene

PROFESSIONAL AFFILIATIONS

Chi Epsilon, Honorary Civil Engineering Society

American Society of Civil Engineers

PATENTS

"Method for Improving Data Transfer Efficiency," U.S. Patent No. 1234567, issued January 1, 2024.

"Improved Method for Filtering Noisy Data," U.S. Patent No. 9876543, issued July 5, 2023. (Lead Inventor)

LANGUAGES

- Fluent French

AWARDS

- Award, Awarding Entity, Date

SELECTED PUBLICATIONS AND PRESENTATIONS

Last, F. M. 2003. “Indoor Air Quality in New York City.” Presented at IAQA 2003, International Air Quality Association. August 15, 2003. New York, New York.

EXPERT TESTIMONY

Deposition testimony on behalf of W. R. Grace in a case involving insurance coverage in the matter of Hatco Corp. vs. W. R. Grace et. al. (Civil Action No. 89-1031) United States District Court for the District of New Jersey. June 1996. Case settled September 1996.

LEGISLATIVE TESTIMONY

"Testimony on Oil Spill Prevention Legislation.” Presented at Joint Hearing of the New Jersey Senate Energy and Environment Committee and the Assembly Environmental Quality Committee. February 6, 1990.

HENRY DELGADO

YEARS OF ENVIRONMENTAL CONSULTING EXPERIENCE: 17

EDUCATION

A.A.S., Applied Scienced, Bergen Community College, 2006

AREAS OF EXPERTISE

Mr. Henry Delgado has more than 17 years of experience in the following general areas:

- Drafting and design technology
- AutoCAD Civil 3D design
- Implementation of AutoCAD Civil 3D concepts
- Drafting Design Standardization
- Preparation of Site and floor plans, elevations, sections and details
- Environmental consulting drawings and graphic deliverables including contaminant distribution, groundwater flow maps, investigation sampling plans, civil design plans, and remedial design plans

Mr. Delgado, based in TRC's NYC office, has experience and has assumed progressively increasing responsibility as senior computer-aided drafting and design operator within TRC's Engineering, Construction and Remediation (ECR) Practice, where his responsibilities include preparing drawings in support of environmental investigation and design projects and reports and graphic support services for environmental investigation and remediation projects. His qualifications include extensive use of AutoCAD 2006 through 2025, Civil 3D, and as well as Microsoft Office suite of software.

REPRESENTATIVE EXPERIENCE (Descriptions marked with an asterisk (*) undertaken within the past three years)

New York City School Construction Authority, CADD Technician – Multiple Sites, New York City*

Mr. Delgado has been responsible for the preparation of detailed design drawings in AutoCAD for construction of sub-slab depressurization systems (SSDS) and gas vapor barriers for over 30 New York City public schools (e.g., X096, Q315, M868, K511, Q298, Curtis High School, K338, Beacon High School, Q335, Q050, X226, Q125, M323, etc.). Mr. Delgado has been responsible for coordinating the drawing format with the architects who are responsible for the overall project design. The drawing sets prepared by Mr. Delgado have been integrated into the publicly bid contract documents for the new schools. For public schools in remedial programs (Q315, X096, K671, and K710), following construction, Mr. Delgado prepared as-built drawings of engineering control systems (i.e., SSDS, gas vapor barrier, and composite cover system) for submission to NYSDEC. In addition, as part of projects publicly bid by the NYCSCA, Mr. Delgado has been responsible for the preparation of design drawings showing environmental remediation requirements for New York City school sites.

Mr. Delgado has also been responsible for the preparation of figures for due diligence reports, remedial investigation reports, remedial action work plans, final engineering reports and site management plans for over 250 New York City public school sites. Drawings prepared by Mr. Delgado included site location maps, site plans, sample location plans, site plans showing contaminant concentrations, geologic cross-sections, groundwater surface elevation contour maps, and contaminant plume maps.

Furthermore, at the request of IEH Division, Mr. Delgado prepared the HazMap, which contains the locations of all schools within the five boroughs where environmental work has occurred. The HazMap operates as an environmental database and is used as a reference for the IEH Division.

Finally, Mr. Delgado contributed to the creation of posters displaying flow-charts with dynamic visuals to present at the NYCSCA exhibit during career day.

NYSDEC STANDBY ENGINEERING SERVICES CONTRACT – MULTIPLE SITES, NEW YORK*

Mr. Delgado has served as the CAD Designer for a majority of TRC's work assignments (WA) under the Standby Engineering Services Contract for State Superfund Sites, among which include the following sites:

- Bridge Cleaners Offsite (Site No. 241127 OU2) Remedial Investigation (RI) WA
- Monroe Electronices (Site No. 837013) Remedial Investigation (RI)/Feasibility Study (FS) WA
- Fashion Care Cleaning (Site No. 442044) RI/FS WA
- Katzman Recycling (Site No. 558035) Remedial Design (RD) WA
- Solvent Finishers (Site No. 130172) RD WA
- Cross-Country Sanitary/Kessman Landfill (Site No. 340011) RD /Remedial Action (RA) WA
- Pall Corporation (Site No. 130053B) RA/Site Management (SM) WA
- Photocircuits Corporation (Site No. 130009) RA/SM WA

Mr. Delgado prepared the figures for the RI/FS Reports including Site plans, sample location plans, geologic cross sections, groundwater surface elevation contour maps, and three conceptual designs for remedial alternatives, showing horizontal extents of groundwater contamination. Mr. Delgado has provided CAD support in all aspects of the Design Phase Submittals from 30%, 95%, and Final Design stages. Preparation of Remedial Design and details include Excavation Area Plans and Site Restoration Plans. In addition, Mr. Delgado is responsible for preparation of figures included in Site Management Plans (SMP) and Final Engineering Reports (FERs), including site plans, sample location plans, proposed injection and monitoring well locations, groundwater surface elevation contour maps, and chlorinated volatile organic compound (CVOC) iso-concentration maps.

NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION ENVIRONMENTAL SERVICES CONTRACT – MULTIPLE SITES, NEW YORK*

Mr. Delgado prepared drawings and figures associated with the investigation and design plans for the redevelopment of multiple sites in New York City into public parks. Specifically, Mr. Delgado prepared soil sampling plans, site plans showing soil concentrations, and conceptual remedial design plans and details.

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY, BULK AND SATELLITE FUEL FARMS – JOHN F. KENNEDY INTERNATIONAL AIRPORT, JAMAICA, NEW YORK

Mr. Delgado prepared contract design drawings for environmental, electrical and mechanical disciplines for upgrades to two dual phase extraction remediation systems. Upgrades to the remediation systems included removal of existing remediation equipment and replacement with new remediation equipment, including an oil-water separator, an air stripper, granular activated carbon units, air diaphragm pumps, etc. The contract drawings included details of specific replacement equipment and clearly depict the work (environmental, electrical, and mechanical) to be performed by the contractor. The drawings sets

prepared by Mr. Delgado were integrated into the publicly bid contract documents for the remediation system upgrades. Additionally, the contract drawings were prepared in accordance with The Port Authority of New York and New Jersey (Port Authority) AutoCAD standards. The contract drawings were reviewed by the Port Authority AutoCAD department and passed, therefore, complying with the Port Authority standards.

ELIZABETH A. DENLY, ASQ CMQ/OE
PROGRAM DIRECTOR – PFAS GROUP

EDUCATION

B.A., Chemistry, University of New Hampshire

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Certified Manager of Quality/Organizational Excellence, American Society of Quality

PROFESSIONAL THOUGHT/LEADERSHIP:

- Currently serving on the Interstate Technology and Regulatory Council (ITRC) PFAS team. Led the development of the Naming Conventions & Physical/Chemical Properties fact sheet; led the development of the section on PFAS data evaluation for the Technical/Regulatory guidance document; Ms. Denly won the 2017 ITRC Industry Affiliates Program Award for her contributions to the ITRC PFAS team.
- Currently serving on the ITRC 1,4-Dioxane team. Co-leading the Sampling & Analysis sub-team for the development of fact sheet and chapter in the Technical/Regulatory guidance document.
- Leader in TRC's Center of Research and Expertise (CORE) PFAS team. Ms. Denly educates representatives of regulatory agencies, attorneys, and clients about chemistry, data evaluation/interpretation, investigation, fate and transport, and remediation of PFAS. In addition, Ms. Denly leads a team of TRC scientists to stay informed of current PFAS issues and science.

AREAS OF EXPERTISE

Ms. Elizabeth Denly, has experience in the following general areas:

- Data Evaluation/Data Validation
- Emerging Contaminants
- Quality Assurance Project Plans
- Data Usability Assessments
- Quality Assurance Management
- Field and Laboratory Audits
- Procedures for Peer Review of Deliverables
- Consultant for Regulatory Agencies

REPRESENTATIVE EXPERIENCE

Ms. Denly serves as TRC's Quality Assurance (QA) & Chemistry Director. She is also the PFAS Group Program Director. As a chemistry director at TRC, Ms. Denly is responsible for providing QA/quality control (QC) oversight, developing data quality objectives, and data interpretation in support of a variety of environmental investigations, including risk-based soil cleanups, remediation programs, delineation, contaminant ambient air monitoring, and human health and ecological risk assessments. Ms. Denly has provided this oversight under different regulatory programs.

As QA director at TRC, Ms. Denly is responsible for the creation and implementation of the Quality Management Plan and standard operating procedures (SOPs) for field sampling and documentation

protocols. Ms. Denly also leads Quality Coordinator networks, which are responsible for the development and communication of quality initiatives within the organization.

PROJECT QA EXPERIENCE

Ms. Denly routinely performs or provides oversight of data usability assessments or data validation for a variety of analytical parameters, including volatile organic compounds (VOCs); semivolatile organic compounds (SVOCs); pesticides; polychlorinated biphenyl (PCB) Aroclors; metals; wet chemistry; PCB homologues/congeners; dioxins; specialty analyses, including gas chromatography/mass spectrometry/selective ion monitoring (GC/MS/SIM); and various air analyses. Data usability assessments and data validation have been performed under several different regulatory programs including NYSDEC, MassDEP, CTDEEP, NJDEP, TCEQ, and EPA.

Preparation of Project-specific QAPPs

Ms. Denly provides consultation on proper sampling procedures, analytical method selection, and quality control requirements, and has prepared QAPPs for a wide body of regulatory programs, including NYSDEC, New York City Department of Environmental Protection (NYCDEP), and USEPA Regions 1 and 2. This experience includes the more detailed format in the Uniform Federal Policy for QAPPs, currently required by many of the USEPA Regions. In addition, Brownfields QAPPs are routinely prepared using Quality Assurance Guidance for Conducting Brownfields Site Assessments, September 1998, EPA 540-R-98-038 in EPA Regions I, II, and III.

2010-Present: Compendium of Analytical Methods Q&A

Massachusetts Department of Environmental Protection (MassDEP) has generated a compendium of specific quality control and reporting requirements for many of the commonly-used SW-846 methods in order to promote inter-laboratory consistency and to also be able to provide the regulators with a greater degree of certainty regarding the quality of the data. All questions received by MassDEP in reference to this compendium of analytical methods are forwarded to Ms. Denly. Ms. Denly is responsible for generating a response to each question on behalf of MassDEP and for tracking all questions and answers for subsequent posting on the MassDEP web site.

MassDEP Data Audit Project

Ms. Denly was responsible for performing review/evaluation of data packages for 1,4-dioxane, extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), air-phase petroleum hydrocarbons (APH), and TO-15 analyses from laboratories selected by MassDEP as part of a Data Audit project to ensure compliance with the methods and MassDEP's Compendium of Analytical Methods. As part of the evaluation, all raw data were reviewed. She developed worksheets that can be used in the future by MassDEP auditors for 1,4-dioxane, EPH, VPH, APH, and TO-15 data. In addition, Ms. Denly provided MassDEP with a detailed final report summarizing critical flaws in laboratory procedures which led to the regeneration of results from the subject laboratories.

Analytical Laboratory Audits

In order to ensure that analytical laboratories are capable of producing data of the quality needed to meet the objectives of most methodologies, Ms. Denly typically performs a very detailed on-site laboratory audit prior to contracting with our laboratories. Ms. Denly has developed internal audit checklists for an extensive list of preparation and analytical methods (including the most commonly used SW-846 methods

and USEPA air methods) as well as general QA laboratory procedures (i.e., sample receiving, glassware washing, bottle preparation, data management, SOPs, and performance evaluation studies).

Selection of Appropriate Analytical Methodologies

In order to ensure the objectives of the project are met, Ms. Denly is responsible for working with the project team and laboratories to ensure the selected methodologies will achieve the desired regulatory standards. Ms. Denly has extensive experience with when it is necessary to request method modifications (i.e., decreasing final extract or digestate volumes) or specialized analyses (i.e., SIM, PCB homologue analyses) that can be performed to increase the sensitivity of various analytes.

2010-Present: VPH by GC/MS

Ms. Denly provided assistance to MassDEP for the development of a protocol for the analysis of VPH by GC/MS. Ms. Denly also assisted MassDEP with the implementation and development of a multi-laboratory round-robin performance evaluation study for the final VPH by GC/MS methodology and the development of a subsequent report for this study. She also assisted MassDEP with training for laboratories interested in implementing this method

GLX Constructors

Ms. Denly serves as the Quality Manager for a large MBTA rail extension program in Massachusetts. She has trained staff on project-specific quality peer review procedures to ensure the proper level of review is occurring on all deliverables. Ms. Denly has participated in project-specific audits performed by the client and successfully shown demonstration of TRC's adherence to project-specific quality policies in engineering, construction, and design associated with this program. She also is responsible for the assessment of analytical data generated under this program to ensure it is defensible and meets the requirements of MassDEP CAM protocols.

Vieques Island, Environmental Cleanup Oversight

Ms. Denly provides technical and regulatory compliance oversight to the Commonwealth of Puerto Rico and the Puerto Rico Department of Natural and Environmental Resources (PRDNER) regarding the investigation, assessment, and remediation of contamination on Vieques Island by the U.S. Navy in support of the property's transfer to the Commonwealth of Puerto Rico. Ms. Denly conducts technical and regulatory reviews pertaining to analytical methods and QA/QC issues of the documents prepared by Navy subcontractors including work plans, field sampling plans, investigation results, technical memoranda, feasibility studies, and remedial designs.

PROFESSIONAL AFFILIATIONS

Licensed Site Professional Association, Massachusetts, Associate Member (LSPA)

American Chemical Society (ACS)

American Society for Quality (ASQ)

SELECTED PUBLICATIONS AND PRESENTATIONS

Technical Presenter for ITRC, History & Use and Sampling & Analysis, 1,4-Dioxane Workshop, AEHS East Coast Conference, Amherst, MA, October, 2019.

Denly, E., Panel member on discussion of PFAS Chemistry and Analytics, PFAS Experts Symposium, Nathan, Remediation Journal, Arlington, VA, May 2019.

Denly, E., PFAS Analysis: What to Expect and How to Evaluate the Data, AEHS Platform Presentation, March 2019.

Denly, E., Occhialini, J., Potential for PFAS Cross-Contamination from Sampling Equipment, Clothing, and Personal Care Products, AEHS East Coast Conference, Amherst, MA, October 2017 and October 2018.

Denly, E., LOQ, LOD, DL, RL, QL, SQL, MDL, PQL: What the "L"? Presented at Thirty-first Annual International Conference on Soils, Sediments, Waters, and Energy, Amherst, MA. 2015.

Denly, E., Laboratory Report Review, MassDEP Petroleum Analytical Methods: VPH, EPH, and APH, AEHS East Coast Conference, Amherst, MA, October 2014 and October 2015

Denly, E., Overview of QC Requirements for Organic and Inorganic CAM Protocols and New CAM Protocols: APH, TO-15, Perchlorate, Massachusetts Licensed Site Professional Association, 2010.

Denly, E. Chapnick, S., "Is Presumptive Certainty Generating Usable Data for Massachusetts Contingency Plan (MCP) Decisions?" Paper presented at Twentieth Annual Conference on Contaminated Soils, Sediments and Waters, Amherst, MA. 2004.

Publications:

Denly E, Occhialini J, Bassignani P, Eberle M, Rabah N. Per- and polyfluoroalkyl substances in environmental sampling products: Fact or fiction? Remediation. 2019; 29:65–76.

Simon JA, Abrams S, Bradburne T, et al. PFAS Experts Symposium: Statements on regulatory policy, chemistry and analytics, toxicology, transport/fate, and remediation for per- and polyfluoroalkyl substances (PFAS) contamination issues. Remediation. 2019; 29:31–48.

Eberle M, Edelman M, Denly E, Rabah N. Evaluation of the effects of PFAS soil adsorption and transformation in the presence of divalent cations under ambient conditions. Remediation. 2019;30:15–25.

NANCY GUEVARA

EDUCATION

B.A. Engineering Sciences, Dartmouth College, 2013

B.E. Environmental Engineering, Thayer School of Engineering at Dartmouth College, 2014

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

OSHA 40 Hour 29 CFR 1910.120

OSHA 30 Hour Construction Industry

NYSDOL Mold Assessor

NYSDOL/USEPA Asbestos Inspector, Project Monitor, Project Designer and Air Sampling Technician

USEPA Lead Paint Inspector and Risk Assessor

OSHA 2264: Permit-Required Confined Space Entry Training

REPRESENTATIVE EXPERIENCE

Ms. Nancy Guevara has seven years of environmental consulting and management experience focusing on Regulatory Compliance and Due Diligence, Industrial Hygiene, Health and Safety, and Material Science Services for public and private sector clients including financial institutions, developers, transportation authorities, telecommunication firms, and commercial and residential management firms.

Ms. Guevara's project experience in due diligence includes Property Condition Assessments (ASTM Standard Practice E2018-15 and Fannie Mae Multifamily), Zoning Reports and Phase I Environmental Site Assessments (ASTM E1527-13 Standard). In addition, she has experience writing and implementing Spill Prevention Control and Countermeasure Plans (SPCCs), Storm Water Pollution Prevention Plans (SWPPPs) and Risk Management Plans.

Ms. Guevara also has six years of experience coordinating project activities for asbestos and lead paint projects, industrial hygiene projects including mold and moisture, indoor air quality assessments, abatement and remediation cost estimates, contractor selection, and oversight.

Property Condition Assessments (PCA) and Phase I Environmental Site Assessments (ESA), Commercial Properties – Massachusetts and Connecticut

Project Manager responsible for on-call basis property condition and environmental assessment services for four corporate commercial office developments including one free-standing parking structure located in three parcels totaling 18.159 acres and over 400,000 square feet of rentable area. Tasks involve site scheduling and surveying, review of associated construction records, municipal records, technical documents, capital expenditure history, maintenance records, term table and report generation.

Property Condition Assessments (PCA) and Phase I Environmental Site Assessments (ESA), Storage Facilities – Smithfield Rhode Island

Project Manager responsible for on-call basis property condition and environmental assessment services for a self-storage facility consisting of one, one-story office building and 10, one-story storage buildings located within two parcels totaling 9.6 acres. Tasks involve site scheduling and surveying, review of associated construction records, municipal records, technical documents, capital expenditure history, maintenance records, term table and report generation.

Due Diligence and Regulatory Compliance Assessments for Multiple Projects

Project Manager responsible for on-call basis Due Diligence and Regulatory Compliance Assessment services of retail/commercial developments including hotels, shopping centers, warehouses, storage facilities, gasoline stations and industrial buildings. Tasks involve site scheduling and surveying, employee training, review of associated technical documents, review of regulatory history and permits, conducting permit renewals, and development of SPCC, SWPPP and RMP reports, as applicable.

Phase I Environmental Site Assessments (7 Years ESA) - Multiple clients - National Level

Site inspector assisting in coordinating all aspects of Phase I ESA portfolios for commercial and retail property lending and financing transactions. Project activities include hazardous material inspections and photographic documentation as part of Phase I ESA, background research including staff interviews, document review, determination of environmental RECs, CRECs and HRECs for the sites and final reporting.

Spill Prevention Control and Countermeasure Plan (SPCC) and Storm Water Pollution Prevention Plan (SWPPP) Preparation - Northeast Region

Northeast Team Leader responsible for coordinating all efforts for SPCC and SWPP Plan preparation for 20 plus sites in the northeast, as required by the United States Environmental Protection Agency (EPA) Oil Pollution Prevention regulation (40 CFR §112). Responsible for preparation of SWPP Plans for sites seeking to obtain Pollutant Discharge Elimination System (NPDES) permit coverage. Tasks involve conducting site inspections of facilities in New York, New Jersey and Puerto Rico, U.S. Virgin Islands, interviewing facility personnel, reviewing site documents to evaluate petroleum storage, conducting storm water sampling to maintain (NPDES) permit coverage, and training facility staff on spill response procedures and best management practices.

EPCRA Tier II, RMP Support - New York

Project Manager responsible for completing and filing Risk Management Plans (RMPs) at multiple commercial facilities, as required by the New York City Department of Environmental Protection Local Law 92 of 1993. Tasks involve site inspection and coordination with facilities, review of EPCRA Tier II reports, associated technical documents, RMP preparation and filing with NYCDEP.

Post-Remediation Oversight - New York

Project Manager responsible for providing continual environmental oversight, support and reporting services to 75 schools and overseeing the implementation of Remedial Action Work Plans and Site Management Plans at each site. Tasks include oversight of contractors, inspection of sub-slab depressurization systems, collaborating with government agencies including the NYSDEC and NYC school authorities to ensure timely and efficient completion of the projects and development of client reports.

Emergency Response, Water Intrusion and Microbial Management Services - Puerto Rico

Project Manager responsible for field operations including sampling protocols, reporting and staffing for the investigation and clean-up of seven shopping plazas, over 300 tenant spaces inspected for mold and moisture. Site activities included inspection, development of remediation work plans, remediation cost estimating, contractor oversight and clearance sampling.

Indoor Air Quality and Microbial Management Services - Multiple Clients - New York

Project Manager responsible for on-call basis industrial hygiene services in the greater NY area. Responsible for responding to client requests for viral, fungal and bacterial sampling, mold sampling and moisture mapping projects, respirable dust, crystalline silica and metal dust sampling.

Responsible for communicating with clients, preparing proposals, coordinating field operations and staffing, implementing sampling protocols, ordering equipment and sampling media from laboratories, and preparing client reports, remediation work plans and remediation cost estimates.

OSHA Fit Testing and Management Services - New York

Project Manager responsible for coordinating and conducting fit testing services of N95, half-face and full-face respirator in accordance with OSHA's §1910.134 - Respiratory Protection Program.

Asbestos and Lead Management Services - New York and New Jersey

Project Manager responsible for on-call basis asbestos and lead paint compliance and management services. Tasks involve communicating with clients, preparing proposals, coordinating staffing and field inspections, cost estimating and completing required client deliverables.

DMITRIY KHIMICH

EDUCATION

Technical College, Nijniy Novgorod, Russia

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Asbestos Investigator, City of New York, NYCDEP

Accredited AHERA Inspector, U.S. EPA

Certified Asbestos Inspector, NYSDOL

Certified Asbestos Project Monitor, NYSDOL

Certified Asbestos Air Sampling Technician, NYSDOL

Asbestos Investigator City of Philadelphia

Asbestos Inspector, PA

Asbestos Safety Technician, NJ

LBP Risk Assessor/Inspector, EPA

LBP Risk Assessor/Inspector, NY

LBP Risk Assessor/Inspector, NJ

LBP Risk Assessor/Inspector, PA

Niton XRF Analyzer Certificate

RMD XRF Analyzer Certificate

40 Hours Hazwoper Certificate

10 Hours OSHA Certificate

AREAS OF EXPERTISE

Mr. Khimich has experience in the following general areas:

- Asbestos Investigations
- Asbestos Surveys
- Asbestos Inspections
- Asbestos Project Monitor
- Asbestos Air Sampling
- LBP Risk Assessments
- LBP Inspections
- LBP Visual Assessments
- LBP Clearances
- Polychlorinated Biphenyls (PCBs) Bulk Sampling
- Man-Made Vitreous Fibers (MMVF) Wipe Sampling
- Indoor Air Quality (IAQ)
- Noise Dosimetry Assessments
- Mold Determination Investigations

REPRESENTATIVE EXPERIENCE

Mr. Khimich has over 22 years of experience in Asbestos field work and over 9 years in Lead Base Paint field work, also familiar with Man-Made Vitreous Fibers (MMVF) wipe sampling, Polychlorinated Biphenyls (PCBs) sampling, Noise Dosimetry Assessments, Indoor Air Quality (IAQ) and Microbial/Mold field work.

- Lead Based Paint Risk Assessments and Inspections including XRF testing using Niton and RMD Radiation Sours Instruments, XRF data report preparation, paint chips collection, visual inspections, scope of work inspections, Risk Assessment and final dust wipes sampling.
- Asbestos Investigations, Surveys and Inspections work including bulk sampling, drawings preparation with sample locations, pictures, final report preparation and providing NYC ACP5 form.
- Asbestos Abatement Project Monitoring and Air Sampling including managing and overseeing the job site; Background, Preparation, During and Final air sampling; OSHA Personal Sampling; editing of log books, time sheets, roster forms, chain of custodies and other forms related to asbestos abatement.
- Polychlorinated Biphenyls (PCBs) Bulk Sampling
- Man-Made Vitreous Fibers (MMVF) Wipe Sampling
- Indoor Air Quality (IAQ)
- Noise Dosimetry Assessments
- Mold Determination & Post-Remediation include mold/moisture investigations; technical reporting; visual inspections; drawings and pictures log with affected areas; abatement oversight; air-o-cell and swab sampling; final visual inspections.

Lead-Based Paint Services

- NYC Built It Back - Various Properties in NY
- New York State Rising - Various Properties in NY
- AIMCO – Various Properties in NY, PA & NJ
- New York University – Various Properties in NY
- NYC School Construction Authority – Various Properties in NY
- New York City Economic Development Corporation – Various Properties in NY
- National September 11 Memorial & Museum – Various Locations in NY
- National Grid PLC– Northport Power Plant, Port Jefferson Power Plant,
- E. F. Barrett Power Station, Glenwood Power Plant

Asbestos Services

- New York City Built It Back - Various Properties in NY
- New York State Rising - Various Properties in NY
- AIMCO – Various Properties in NY
- World Trade Center 9/11 Project
- NYC Housing Authority – Various Properties in NYC
- NYC School Construction Authority – Various Properties in NYC
- NYC Board of Education – Various Properties in NYC
- Con Edison – Various Properties in NYC
- Keyspan Energy – Various Properties in NYS
- Columbia University – Various Properties in NYC
- New York Medical College – Various Properties in NYS
- New York University – Various Properties in NYC
- Hospital for Special Surgery – Various Properties in NY

- Dormitory Authority of the State of New York – Various Properties in NY
- New York City Economic Development Corporation – Various Properties in NY
- National September 11 Memorial & Museum – Various Locations in NY
- National Grid PLC – Northport Power Plant, Port Jefferson Power Plant,
- E. F. Barrett Power Station, Glenwood Power Plant
- Wal-Mart Stores, Inc. – National Properties
- Simon Property Group – Various Properties in NY
- Regeneron Pharmaceutical, Inc. – Various Properties in NY

Polychlorinated Biphenyls (PCBs) Bulk Sampling

- NYC School Construction Authority – Various Properties in NYC
- AIMCO – Various Properties in NY
- Dormitory Authority of the State of New York – Various Properties in NY
- National Grid PLC – Northport Power Plant, Port Jefferson Power Plant,
- E. F. Barrett Power Station, Glenwood Power Plant

Man-Made Vitreous Fibers (MMVF) Wipe Sampling

- National September 11 Memorial & Museum – Various Locations in NY

Microbial/Mold Indoor Air Quality Services

- AIMCO – Various Properties in NY
- Wachovia Bank – 2 North Avenue W Cranford, NJ 07016
- Bank of America – 639 Route 18 & Arthur Street, East Brunswick, NJ 08816
- Deptford Mall – Hollister Co. #486 1750 Deptford Center Rd. Deptford, NJ 08096
- Cobblestone Court Mall – Road 96, Victor, NY 14564
- The Peninsula of New York Hotel - 700 5th Ave, New York, NY 10019

Noise Dosimetry Assessments

- Con Edison - Various Properties in NYC

SPECIALIZED TRAINING

- NYS DOH Asbestos Building Inspector
- NYS DOH Asbestos Project Monitor
- NYS DOH Asbestos Air Sampling Technician
- NJ DCA Asbestos Safety Technician
- EPA LBP Risk Assessor
- Niton XRF Analyzer Training
- RMD XRF Analyzer Training
- 40 Hours Hazwoper Training
- 10 Hours OSHA Training

KIMBERLY N. TISA

EDUCATION

M.B.A., Anna Maria College, Paxton, Massachusetts

M.S., Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia

B.S., Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia

AREAS OF EXPERTISE

Kimberly N. Tisa has program management and technical experience in the following general areas:

- Federal Polychlorinated Biphenyl (PCB) regulations under the Toxic Substances Control Act (TSCA)
- Remediation of PCBs in environmental media, building materials and air
- PCB analytics and data analysis
- Public speaking and community communications

REPRESENTATIVE EXPERIENCE

Kimberly N. Tisa has over 35 years in the environmental field and is an expert in the federal polychlorinated biphenyl (PCB) regulations under the Toxic Substances Control Act (TSCA). Ms. Tisa has an extensive background with PCB remediation in soil, groundwater, sediment, and building materials, and has been involved in complex remedial investigations and remedial actions at hundreds of sites within New England. Ms. Tisa served as the lead U.S. Environmental Protection Agency (USEPA) regional contact for review and approval of PCB storage, disposal, treatment, and other PCB-permitting issues in the EPA New England region. She also served as an EPA expert witness on PCB-related matters. She has a strong background and experience in laboratory analysis of PCBs in environmental media, building materials, and indoor air. She has provided numerous informational and training presentations on TSCA PCB policies and regulations at local, regional and national conferences as well as to the Massachusetts BAR Association.

Confidential Industrial Client – Lawrence, Massachusetts (Project Manager)

$100MM PCB cleanup project that included the demolition of manufacturing buildings, and remediation of PCBs in soil, water, and bedrock. Provided guidance to property owner, City and state agencies in developing an implementable approach to address historical PCB contamination from manufacturing activities. The project was successfully completed.

CSX-Brockton Yard, Massachusetts (Project Manager)

Provided technical review of the CSX plan to address PCB contamination at this former rail yard to support an accelerated cleanup and closure under the state regulations and requirements while pursuing a separate closure under the federal PCB regulations. This alternative approach resulted in expedited PCB risk reduction (high PCB-contaminated soil was removed and disposed of at a secure facility) and avoided penalties from the state. Federal approval of the plan without any further remedial work is expected.

Confidential Municipal Client – New Bedford, MA (Project Manager)

Provided technical guidance to support remediation at a 104-acre historical fill site that included three school properties, athletic fields, wetlands, and private residential properties. PCBs and other contaminants were identified in soil and sediments and in manufactured building materials.

Confidential Municipal Client – Somerville, MA (Project Manager)

Provided technical guidance to support the investigation and successful remediation of a former manufacturing facility property. The property has been divided and is currently under redevelopment for mixed use by private parties.

Confidential Power Plant Client – MA, CT, and ME (Project Manager)

Provided technical guidance to support remediation of PCBs at three nuclear power plants. PCBs were identified in manufactured building products which also contaminated the surrounding environment. PCBs were remediated to support decommissioning activities.

Confidential Utility Client – RI (Project Manager)

Provided technical guidance for the investigation and remediation of PCBs when contamination was discovered in a utility gas distribution system. A methodical investigation and remediation of all lines leading into commercial and private properties was successfully completed.

AWARDS

- Environmental Business Council – 2022 Paul G. Keough Award for Government Leadership in recognition of exceptional knowledge, guidance and leadership in the assessment, remediation and decontamination of PCB compounds in New England.
- USEPA National Notable Achievement Award for Brownfields and Land Revitalization – Team Award
- USEPA National Notable Achievement Award for Brownfields – Team Award
- USEPA National Notable Achievement Award for RCRA Corrective Action Outstanding Use of Innovative Approaches to Advance the PCB Disposal and Cleanup Program – Team Award
- USEPA Gold Medal for Exceptional Service in the cleanup and disposal of PCBs and for national leadership in the emerging issue of PCBs in caulk and other building materials
- USEPA Bronze Medal for Commendable Service PCBs in Building Materials Workgroup

LINDSAY O'HARA, CHMM

EDUCATION

B.A., Environmental Studies, Union College

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Certified Hazardous Materials Manager, February 2015

AREAS OF EXPERTISE

Ms. O'Hara possesses over 16 years of environmental consulting experience, primarily in connection with projects in New York State, encompassing:

- Project Management
- Environmental Site Assessments, Investigations and Audits
- Soil and Groundwater Investigation and Remediation
- Indoor Air Quality Assessments
- Feasibility Studies
- Ambient and Community Air Monitoring
- Remedial Activity Oversight and Management
- Hazardous Materials Building Inspections
- Regulatory Compliance

REPRESENTATIVE EXPERIENCE

Ms. O'Hara's experience includes: Project management, comprehensive due diligence investigations and assessments, polychlorinated biphenyls (PCB) soil investigations and remediation, hazardous materials building assessments, remediation oversight, LNAPL remediation systems installation oversight and operation, groundwater monitoring well sampling, monitoring well/product gauging and LNAPL extraction, monitoring well installation oversight, soil sampling, development and implementation of community air monitoring plans (CAMP), and fuel release investigations.

New York City School Construction Authority

Ms. O'Hara serves as a project manager performing site assessments in support of new construction and renovations of New York City public schools. Responsibilities include Phase I Environmental Site Assessments, Phase II Environmental Site Investigations, Indoor Air Quality Investigations, and Outdoor Air Assessments. Ms. O'Hara's responsibilities have included all aspects of preparation of reports and all elements of field investigations, subcontractor supervision, and report preparation associated with completion of due diligence assessments. In this capacity, Ms. O'Hara has been the primary author of over 75 Phase I ESAs for the NYCSCA. Additionally, Ms. O'Hara served as the TRC lead for the Universal Pre-Kindergarten due diligence investigations in the borough of Queens and the Universal 3-K due diligence investigations in the borough of Brooklyn.

Ms. O'Hara serves as Project Manager for tasks relating to investigation and remediation of a Brownfield Cleanup Program (BCP) site in Brooklyn, New York. Prior to preparation of the BCP Application, Ms. O'Hara managed the implementation of an Interim Remedial Measure consisting of excavation of over 350 tons of contaminated soil for off-Site disposal, post-excavation soil sampling and backfilling of the

excavation with clean fill material. Ms. O'Hara attended the pre-application meeting at the NYSDEC Region 2 office, prepared the BCP Application and RI Work Plan for the site for submission to the NYSDEC. Following acceptance of the Site into the BCP, Ms. O'Hara prepared the Citizen Participation Plan and managed the implementation of the Remedial Investigation (RI) which consisted of advancement of soil borings, installation and development of monitoring wells, installation of soil vapor points and collection and laboratory analysis of soil, groundwater and soil vapor samples, performance of a Site survey and preparation of an RI Report. Following NYSDEC approval of the RI Report, Ms. O'Hara provided a presentation to the NYSDEC of the Site history, results of the RI and proposed remedial actions for the Site. Based on the results of the meeting, the Remedial Action Work Plan was prepared for submission to NYSDEC and the remedial action is ongoing.

United States Postal Service – New York

Ms. O'Hara serves as Project Manager for tasks relating to environmental due diligence and indoor air quality investigations for USPS sites throughout New York State. Ms. O'Hara's responsibilities have included management of field staff and report preparation associated with completion of Phase I ESAs and Phase II ESIs. Additionally, Ms. O'Hara serves as Project Manager for tasks relating to spill case closure, including management of monitoring well installation, quarterly groundwater sampling, product removal activities, and reporting.

The City of New York Department of Parks and Recreation – New York City

Ms. O'Hara serves as a Project Manager providing consulting services in connection with the construction and reconstruction of park facilities in New York City. Specifically, Ms. O'Hara serves as Project Manager for the Former Bayside Fuel Oil Depot Site in Williamsburg, Brooklyn, New York, which will be developed as part of Bushwick Inlet Park. Responsibilities include consulting services related to closure of the Major Oil Storage Facility (MOSF) license including preparation of a Site investigation plan, consulting services in support of closure of the State Pollution Discharge Elimination System (SPDES) permit and management for review of contract drawings and specifications for demolition activities. Responsibilities include all aspects of scope of work and cost estimate preparation, client consultation, staff supervision, subcontractor supervision and work plan preparation and report writing including development of conclusions and recommendations.

The Port Authority of New York and New Jersey - Howland Hook Marine Terminal – Port Ivory Facility – Staten Island, New York

Ms. O'Hara serves as Project Manager for environmental tasks associated with three sites formerly in the Voluntary Cleanup Program (VCP) at the Howland Hook Marine Terminal (HHMT) – Port Ivory Facility (VCP Site No. V00615-2 (Site 1), VCP Site No. V00674-2 (Site 2) and VCP Site No. V00675-2 (Site 3)). Ms. O'Hara was responsible for remedial construction oversight during implementation of the Interim Remedial Work Plan for Site 3 which included excavation of petroleum-contaminated soil, the collection of post-excavation soil samples, post-excavation soil sampling, implementation of the CAMP, bi-weekly gauging activities including product removal, Site inspections, and annual landfill inspections. Additionally, Ms. O'Hara assisted the Port Authority's legal department by filing the required deed restrictions for Sites 1 and 2. Ms. O'Hara assumed responsibilities in connection with preparation of several reports for this Site, including the final Site Management Plans for Sites 1 and 2, the Final Engineering Reports for Sites 1 and 2, the Periodic Review Reports for Sites 1 and 2, the Interim Remedial Measure Work Plan and Remedial Action Work Plan for Site 3, Landfill Monitoring Summary Reports, and monthly progress

reports. Additionally, in support of termination of the VCP for Site 3, Ms. O'Hara provided a presentation to the NYSDEC at the Region 2 offices which included a summary of the site history, environmental sampling data and completed investigations and remedial actions, and proposed future actions.

New York State Department of Environmental Conservation, State Superfund-Related Projects – New York

Ms. O'Hara assists in the management of site characterizations, remedial investigations, and feasibility studies for sites throughout New York State. Responsibilities include the preparation of work plans, project execution, client interaction, and report preparation.

The Port Authority of New York and New Jersey – Red Hook Container Terminal - Brooklyn, New York

Ms. O'Hara served as Project Manager for closure and removal of four 4,000-gallon underground storage tanks at the Red Hook Container Terminal in Brooklyn. Responsibilities included management of soil and groundwater sampling, contractor oversight, communication with NYSDEC Project Managers, and preparation of a UST Closure Report and a Remedial Action Work Plan to address the residual petroleum impacts to soil and groundwater. Additionally, Ms. O'Hara manages the remediation at this property, which includes the implementation of focused vacuum truck extraction and sulfate injection events, groundwater monitoring and analytical groundwater data management and review.

SPECIALIZED TRAINING

- OSHA 40-Hour HAZWOPER Training and 8-hour Refresher
- OSHA 10-Hour Construction Safety Training

Nancy Weaver

Senior Chemist

EXPERIENCE OVERVIEW

Ms. Weaver has over thirty years combined laboratory, data validation and project management experience. She is the President and co-founder of EDS and is responsible for the technical data review and validation of laboratory data. Ms. Weaver has performed data validation on thousands of data validation projects. She has extensive knowledge in applying the various regional and project specific data validation guidelines and QAPPs. Her experience also includes writing Quality Assurance Project Plans (QAPPs), managing subcontracted analytical laboratories, performing laboratory audits, participating in field sampling activities and analyzing samples in a laboratory.

EDUCATION

Degree, University, Year

B.S., Chemistry, University of Colorado, Denver, Colorado

CERTIFICATIONS AND TRAINING

Certification, Year Received

State of New York Department of Environmental Conservation certified Asbestos Inspector
40-Hour OSHA Hazardous Waste Training
8-Hour Health and Safety Supervisor Training for Hazardous Waste Operations

PROJECT EXPERIENCE

Principal/Senior Chemist, Environmental Data Services, Inc., August 1994 - Present

As the Principal Chemist at Environmental Data Services, Inc., Ms. Weaver has provided Level IV, M3 and IM2 data review on more than 6000 Sample Delivery Groups (SDGs) generated through site investigations and/or remediations. These SDGs have included every analytical fraction possible including VOC, SVOC, pesticides, PCBs, herbicides, DRO, GRO, dioxin/furans, PCB congeners, metals, wet chemistry and radiological parameters. Sample matrices include water, soil, sediment, wipe, concrete and air. The SDGs have included CLP data packages produced under the CLP SOWs and CLP-like data packages with samples analyzed under SW-864 methodologies. Sample quantities validated may reach upwards of 120,000 per fraction over the past 20 years. Ms. Weaver has been using the Region III Modifications to the National Functional Guidelines since 1997 and has provided M2, M3, and IM-2 validation. Ms. Weaver has been using the National Functional Guidelines since 1993 and has provided both Level III and IV validation.

Chemist-Analyst Specialist, City & County of Denver, June 1992 - August 1994

As a Chemist-Analyst Specialist for the City and County of Denver, Ms. Weaver supervised performance and compliance sampling for O & M requirements at groundwater treatment facility. She provided assessment of analytical data for quarterly reports to local regulatory agencies. She also acted as liaison between the technical group and laboratory to coordinate sampling events and resolve problems with analyses. While in this capacity, she performed data validation for organic, inorganic and radiological analyses. Ms. Weaver reviewed over 2000 VOC, SVOC, pesticide, PCB, TPH, metals and wet chemistry samples. Ms. Weaver managed the database for groundwater and treatment plant sampling events and performed environmental site assessments for commercial and residential properties. She provided

technical review and recommendations of Phase I and Phase II site investigations performed by outside consultants. She also analyzed policy and interpreted city, state and federal environmental regulations.

Data Validation Specialist, C.C. Johnson & Malhotra, January 1990 to June 1992
While a Data Validation Specialist at C.C. Johnson & Malhorta, Ms. Weaver performed data validation and interpretation of organic analytical data generated from the EPA Contract Laboratory Program (CLP). Data analysis included VOC, SVOC, pesticides, PCBs, metals and wet chemistry. Ms. Weaver reviewed more than 600 SDGs and 9000 samples. She interpreted gas chromatograms, gas chromatography/mass spectral data and verified mathematical calculations.

Environmental Chemist, The Anschutz Corporation - SP Environmental Systems, Inc., July 1990 to January 1992
As an Environmental Chemist for The Anschutz Corporation - SP Environmental Systems, Inc., Ms. Weaver assisted in the management of site investigations and remediation for Southern Pacific Transportation Company properties. In this capacity, she performed environmental audits and site assessments and conducted site investigations at potential Superfund sites with state and federal agencies. She researched and prepared responses to regulatory agencies for non-compliant sites and defined the needs for hazardous waste disposal including the analysis required and disposal. Ms. Weaver also supervised the removal of underground storage tanks and remediation. She prepared closure reports for UST removals, as well as annual waste summary forms for TSD facilities throughout the state of Texas. She also constructed, developed, and sampled groundwater monitoring wells.

Environmental Specialist, Martin Marietta Astronautics Group, January 1988 to January 1990
While with Martin Marietta Astronautics Group as an Environmental Specialist, Ms. Weaver performed organic analysis and sampling of wastewater, groundwater, and drinking water in support of NPDES permit. She operated and maintained laboratory instrumentation including GC and GC/MS for volatile, semi-volatile, and pesticide/PCB analysis. Ms. Weaver also coordinated sample collection and preparation activities, developed and authored standard operating procedures for laboratory analysis, and followed EPA protocol for QA/QC requirements for analysis. She calculated and interpreted data and reported results.

Environmental Chemist, Camp, Dresser, & McKee, April 1986 to October 1987
As an Environmental Chemist with Camp, Dresser, & McKee, Ms. Weaver analyzed water/wastewater for organic compounds. She operated and maintained laboratory instrumentation including GC and infrared spectrophotometer for volatile, pesticide/PCB, and petroleum hydrocarbon analysis. She also calculated and interpreted data and reported results. Ms. Weaver analyzed more than 2000 samples.

EMPLOYMENT HISTORY

Environmental Data Services, Inc.	Principal/Senior Chemist	1994–Present
City & County of Denver	Chemist-Analyst Specialist	1992–1994
C.C. Johnson & Malhorta	Contractor/Data Validation Specialist	1990–1992
The Anschutz Corporation - SP Environmental Systems, Inc.	Environmental Chemist	1990–1992
Martin Marietta Astronautics Group	Environmental Specialist	1988–1990
Camp, Dresser, & McKee	Environmental Chemist	1986–1987

FRANK SANTALY

EDUCATION

B.S., Computer Science, Nassau College

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Asbestos Investigator in the City of New York, Department of Environmental Protection

Accredited AHERA Inspector, U.S. Environmental Protection Agency (EPA) Certified Asbestos

Inspector, New York State Department of Labor (NYSDOL) Accredited AHERA Management Planner, U.S. Environmental Protection Agency (EPA)

Certified Asbestos Management Planner, New York State Department of Labor (NYSDOL)

Accredited AHERA Project Designer, U.S. Environmental Protection Agency (EPA)

Certified Asbestos Project Designer, New York State Department of Labor (NYSDOL)

Certified Mold Assessor, New York State Department of Labor (NYSDOL)

REPRESENTATIVE EXPERIENCE

Frank Santaly has over 36 years of experience and progressive responsibility in Asbestos and Lead Based Paint Consulting and Management Services. He has directed and managed personnel conducting Asbestos Abatement Design and Specification preparation; directed and managed personnel conducting large Asbestos Surveys programs; directed and managed personnel conducting Asbestos Abatement Construction Monitoring activities; directed and managed personnel conducting Asbestos Management Plan preparation; directed and managed personnel preparing lead-based paint inspection reports.

Port Authority of New York and New Jersey (PANYNJ), JFK Expressway to Van Wyck Expressway, Westbound Corridor, Queens, New York

Frank served as the TRC Design Engineer where TRC's Building Sciences and Industrial Hygiene (BSI) group conducted hazardous materials pre-demolition surveys to identify asbestos containing materials, lead paint, PCB containing materials, universal wastes and other hazardous and regulated materials with potential to be impacted by proposed new elevated roadway to be constructed to connect the JFK Expressway with the Van Wyck Expressway. TRC's survey work included investigating existing building structures, power distribution buildings, utility vaults and roadway ramps and bridges including the collection of several pavement cores. TRC developed design documents in strict accordance to PANYNJ's CADD Standards for the proper abatement, transportation, disposal and special handling of hazardous/regulated building materials prior to construction. The project is currently in the process of bidding.

Port Authority of New York and New Jersey (PANYNJ), JFK International Airport Buildings New Ground Transportation Center with Roadways and Utilities, Queens, New York

Frank served as the TRC Design Engineer where TRC's Building Sciences and Industrial Hygiene (BSI) group conducted hazardous materials pre-demolition surveys to identify asbestos containing materials, lead paint, PCB containing materials, universal wastes and other hazardous and regulated materials with potential to be impacted by proposed new Ground Transportation Center and associated utility systems required to service the new structures. TRC's survey work included investigating existing

building structures, power distribution buildings, utility vaults and roadway ramps and bridges including the collection of several pavement cores. TRC developed design documents in strict accordance to PANYNJ's CADD Standards for the proper abatement, transportation, disposal and special handling of hazardous/regulated building materials prior to construction. The project is currently under construction.

Port Authority of New York and New Jersey (PANYNJ), JFK International Airport Buildings Cooling Tower and Materials Management Area Demolition, Queens, New York

Frank served as the TRC Design Engineer where TRC's Building Sciences and Industrial Hygiene (BSI) group conducted hazardous materials pre-demolition surveys to identify asbestos containing materials, lead paint, PCB containing materials, universal wastes and other hazardous and regulated materials with potential to be impacted by proposed building demolitions on the site. Included on the site was an abandoned Cooling Tower structure of approximately 75 feet in height. TRC developed design documents in strict accordance to PANYNJ's CADD Standards for the proper abatement, transportation, disposal and special handling of hazardous/regulated building materials prior to demolition. The Cooling Tower structure was condemned and demolished with asbestos-containing transite side panels in place in accordance with NY State Regulations. The structure was successfully demolished without any change orders related to TRC's survey and design work.

Port Authority of New York and New Jersey (PANYNJ), JFK International Airport Farmers Electrical Substation Replacement, Queens, New York

Frank served as the TRC Design Engineer where TRC's Building Sciences and Industrial Hygiene (BSI) group conducted hazardous materials pre-demolition surveys to identify asbestos containing materials, lead paint, PCB containing materials, universal wastes and other hazardous and regulated materials with potential to be impacted by proposed replacement of the Farmers.

Port Authority of New York and New Jersey (PANYNJ), Electrical Substation at JFK International Airport, Queens, New York

TRC's survey work included investigating existing building structures, power distribution buildings, utility vaults and electrical transformers. TRC is coordinating with PANYNJ and Con Edison as part of the project to have removed the existing electrical transformers, which contain PCBs.

Dormitory Authority State of New York (DASNY), Queensborough Community College, 222-15 56th Avenue, Bayside, New York

Frank managed a project specific survey, preparation of an abatement design and performance of abatement project and air monitoring for the Science Building courtyard enclosure project. The survey and design were coordinated with the DASNY Architect and Engineer to determine the presence, quantity and condition of suspect asbestos-containing materials (ACM), hazardous materials and universal waste to be impacted by the project. The project involves the removal of asbestos containing plaster, sprayed on fireproofing, floor tile and window glazing compound.

Dormitory Authority State of New York (DASNY), Hostos Community College, 500 Grand Concourse, Bronx, New York

Frank managed a project specific survey, preparation of an abatement design and performance of abatement project and air monitoring for the roof, fifth floor, fourth floor and bathroom renovation projects. The survey and design were coordinated with the DASNY Architect and Engineer to determine the

presence, quantity and condition of suspect asbestos-containing materials (ACM), hazardous materials and universal waste to be impacted by the project. The project involves abatement of asbestos containing fireproofing, pipe insulation, floor tile and roofing as well as PCB containing caulking and the removal of universal waste.

Dormitory Authority State of New York (DASNY), Bronx Psychiatric Center, Waters Place, Bronx, New York

Frank managed a project specific survey, preparation of an abatement design and performed abatement project and air monitoring for the Clinic B and Food Services building demolition to facilitate construction of the new Adult Residence Building. The survey and design were coordinated with the DASNY Architect and Engineer to determine the presence, quantity and condition of suspect asbestos-containing materials (ACM), hazardous materials and universal waste to be impacted by the project. The project involved the abatement of asbestos containing ceiling plaster, floor tile, pipe insulation roofing and PCB window caulking.

New York State Office of Parks, Recreation and Historic Preservation (OPR&HP) - Environmental Remediation at Nissequogue River State Park, New York

Frank served as senior project/contract manager to provide asbestos, lead, and environmental consulting services associated with the former Kings Park Psychiatric Center. The facility contains over 50 abandoned buildings and associated structures (e.g., tanks, railroad piers, smokestack) and approximately 5 miles of underground steam tunnels that are in various states of disrepair. Managed tasks for the project including, but not limited to:

- Conducted asbestos, lead, and hazardous material assessments at over 50 Buildings and approximately 5 miles of Underground Steam Tunnels;
- Prepared remediation cost estimates for hazardous material abatement at Buildings and Underground Steam Tunnels;
- Prepared demolition cost estimates for Building and Underground Steam Tunnels;
- Prepared bid documents for the abatement of asbestos, lead, PCBs and other hazardous materials in buildings prior to demolition;
- Provided Project Management, Oversight and Project and Air Monitoring for the removal and abatement of hazardous materials prior to demolition; and
- Monitored Demolition with asbestos in place as well as “clean” demolitions.

SPECIALIZED TRAINING

- Project Manager Certification Program, PSI
- Occupational Respiratory Protection, EOHSI
- NIOSH 582, ATC Environmental, Inc.
- 40 Hour HAZWOPER OSHA 29 CFR 1910.120(e)(3), BAOS
- 30 Hour OSHA Construction Safety and Health, HIS

ANTHONY SIGONA, PE, CIH, CSP, WELL AP & LEED AP BD+C

EDUCATION

B.E., Chemical Engineering, Manhattan College School of Engineering

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Professional Engineer and Land Surveyor, NY (#73727), NJ (#GE52670) CO (#PE.0064497)

National Council of Examiners for Engineers & Surveyors (#18343)

Certified Industrial Hygienist, American Board of Industrial Hygiene Certificate (#12248)

Certified Safety Professional, Board of Certified Safety Professionals (#24654)

LEED AP BD+C (#10929132) & WELL-AP-0000165757

NYSDOL/USEPA Asbestos Project Designer, Inspector

NYCDEP Asbestos Investigator (#123175)

NYSDOL Mold Assessor Certificate (#MA00960)

NJDOH Lead (#029743) Supervisor, Commercial Buildings & Superstructures

NJDEP Radon Measurement Specialist (MES15789)

OSHA §1910.120 40-Hour USEPA Sponsored Training, 1988

NYS Fire Prevention Hazardous Material Fires Level I & II, 1988

OSHA HAZWOPER Supervisor and Annual Fresher Training, 1989 to Present

OSHA §1926 30-Hour Training, Construction Safety & Health, 2011

AREAS OF EXPERTISE

Mr. Anthony Sigona has extensive management and technical expertise in the following areas:

- Asbestos and Lead Surveying, Monitoring, and Design
- PCB Building Materials Investigation, Assessment, and Remediation
- Environmental Health and Safety Planning
- Indoor Air Quality Investigations
- Phase I Environmental Site Assessments (ESAs)
- Phase II Environmental Site Investigations (ESIs)
- Environmental Assessments and Audits
- State and Local Environmental Permits and Regulatory Processes
- Hazardous Materials and Waste Management
- Petroleum and Chemical Bulk Storage Design and Construction

REPRESENTATIVE EXPERIENCE

Anthony Sigona is a Senior Project Manager in TRC's New York City office with responsibility for health and safety, quality assurance and control, technical report deliverables, and supervision of field activities. He has over 37 years of experience in environmental and chemical engineering. Mr. Sigona manages and supervised projects with significant interaction with leading public agencies and utilities, such as New York City Economic Development Corporation (NYCEDC), Dormitory Authority of the State of New York (DASNY), Port Authority of New York & New Jersey, NYC School Construction Authority, New York City Parks Department, and NYS Department of Environmental Conservation.

New York City Economic Development Corporation (NYCEDC) From 2012 to Present

Project management of survey and design services for asbestos and other regulated materials, such as lead-based paint, PCB caulk and lighting fixture ballasts. Development of environmental assessment reports and comprehensive abatement design plans and bid specifications in support of renovations of buildings, piers and wharfs at the South Street Seaport, Brooklyn Navy Yard, Bush Terminals and Brooklyn Army Terminal. Developed and implemented soil sampling plans for waste characterization for PCB Transformers and disposal operations. Preparation and review of NYSPE certified abatement design plans, certified workplace safety plans (WPSP), Asbestos variance permits, ACP-5, ACP-7, ACP-21 Reports, certified safety final inspections for NYC Department of Environmental Protection.

Dormitory Authority of the State of New York (DASNY) & Architectural Design Firms (2013 to Present)

Management of various environmental consulting services for its various client facilities throughout New York State in the investigation of suspect asbestos containing materials (ACM), polychlorinated biphenyls (PCB's) in caulking, lead paint, suspected microbial growth (mold), universal and hazardous waste impacting various construction projects. Developed and implemented soil sampling plans for waste characterization for hazardous material and soil waste excavation and disposal operations. Preparation and review of NYSPE certified abatement design plans, certified workplace safety plans (WPSP), certified safety final inspections for NYC Department of Buildings and Department of Environmental Protection.

Key DASNY projects: El Regreso Men's Residence Addition & Alterations, Lehman College, Bronx Community College, Hostos Community College, Brooklyn & Queensborough Community Colleges, and Rockland Psychiatric Center

Port Authority of New York & New Jersey (2012 to Present)

Airport Redevelopment at LaGuardia and John F. Kennedy Airports, World Trade Center – New York, NY

- Management of various asbestos and environmental consulting services for its Airport Redevelopment at LaGuardia and John F. Kennedy Airports in the investigation of suspect asbestos containing materials (ACM), polychlorinated biphenyls (PCB's) in caulking, lead paint, suspected microbial growth (mold), universal and hazardous waste impacting various construction projects. At the request of The Port Authority of NY & NJ, conducted investigation of J.F.K. Redevelopment Project, L.G.A. Airport Police & Security Buildings and prepared NYSPE certified abatement design plans and cost estimates for bid packages.
- Performed oversight of Hurricane Sandy Restoration at National September 11 Memorial and Museum, Tower No. 4, Parking and Retail Space, Vehicle Security Center, Transportation Hubs, and Fan Plants. Managed execution of restoration cleaning and sampling protocols for all affected areas, along with post-remediation decontamination for mold/bacterial impacts.

New York City School Construction Authority (NYCSCA) From 2012 to Present

Project Management of the USEPA-approved pilot study, which involved implementation of a plan to eliminate or control the airborne presence of PCBs in five select New York City public schools. Supervised Project Monitors overseeing abatement projects and technicians performing air, wipe and bulk sampling events.

New York City Parks Department (NYCPD) From 2018 to Present

Project management for oversight of asbestos, polychlorinated biphenyl (PCB), and lead testing for alterations at multiple comfort stations and recreational facilities stations.

U.S. Department of Veterans Affairs (2011-2012)

Green Environmental Management Services (GEMS) coordinator for environmental projects at Northport Veterans Affairs Medical Center for oversight of a Class IIB groundwater supply, fuel storage tanks, emergency generators, sewage treatment plant, power plant and air pollution controls, hazardous and nonhazardous waste streams, pharmaceutical, medical waste, and recycling programs.

New York City Design and Construction (2010-2011)

Project Manager for Asbestos, Lead and Mold Abatement, Phase I & II, Geotechnical Design and Investigation at City owned facilities. Review of Surveys, Project Design Drawings, Phase I ESA, Phase II ESI, Asbestos, Lead and Mold Inspection & Testing for various New York City facilities such as the Queens Botanical Gardens, Staten Island Children's Museum, New York City Fire Department Communications Center, and Manhattan and Queens Public Library Branches.

Government, Municipal Agencies and Other Private Clients (2004 to 2010)

Environmental Services Manager for a remediation contractor to ExxonMobil, National Grid, Suffolk and Nassau County Public Works, New York City Department of Environmental Protection (NYCDEP) and New York State Department of Environmental Conservation (NYSDEC), MTA Transit and Long Island Rail-Road and supervised the following activities:

- Waste Management/Fuel Storage Tank Management
- Professional Consulting Services
- Environmental Remediation
- Construction
- Compliance Management
- Emergency Response

New York State Department of Environmental Conservation (1988-2004)

Project Manager for Petroleum Bulk Storage and Spill investigation at various private and municipal transportation and housing facilities, major on-shore storage, and utility companies. Review and approval of engineering design plans and permits for substantial modifications of tanks, piping and equipment at Major Onshore Storage Facilities (MOSFs).

PROFESSIONAL AFFILIATIONS

American Society of Safety Professionals (ASSP)
American Industrial Hygiene Association (AIHA) (National and Metropolitan New York Chapters)

MAYA WELLS

EDUCATION

B.S., Environmental Resources Engineering, Minor in Computer and Information Technology, SUNY College of Environmental Science and Forestry, Syracuse, NY, May 2022

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

40-Hour OSHA HAZWOPER Training

30-Hour OSHA Construction Safety Training

8-Hour OSHA Annual Refresher Training

Certified Profession in Erosion and Sediment Control-In Training (CPESC-IT)

NYSDEC 4-Hour Erosion and Sediment Control Training

Long Island Rail Road Roadway Worker Construction Training

AREAS OF EXPERTISE

Ms. Wells has technical experience in the following general areas:

- Environmental Media Sampling (Soil, Soil Vapor, Groundwater, Air)
- Waste Characterization
- Field Work Oversight/Monitoring
- Calibration and Use of Field Instruments
- Environmental Site Assessments and Investigations
- Environmental Regulatory Compliance
- Report Preparation
- Stormwater Pollution Prevention Plan Inspections
- Laboratory Data Analysis and Interpretation

REPRESENTATIVE EXPERIENCE

Ms. Wells serves as an Environmental Engineer based in TRC's Engineering, Construction and Remediation (ECR) Practice in midtown Manhattan and has over two (2) years of environmental consulting experience. Ms. Wells' experience includes preparation of Phase I Environmental Site Assessments (ESAs), performance of Phase II Environmental Site Investigations (ESIs) and environmental regulatory compliance monitoring including soil, groundwater, and soil vapor sampling, periodic review reporting, inspection of engineering controls and stormwater best management practices, data analysis and report preparation.

New York State Department of Environmental Conservation (NYSDEC), Standby State Superfund Contract, Environmental Engineer – New York, NY

Ms. Wells serves as an Environmental Consultant for the New York State Department of Environmental Conservation (NYSDEC) at 10 project NYSDEC State Superfund Sites in various stages of remediation.

Her responsibilities include scheduling and conducting compliance groundwater monitoring/sampling; site-wide inspection of engineering controls; soil vapor intrusion investigation; oversight of operation, monitoring, and maintenance activities for on-site soil vapor extraction (SVE) and sub-slab depressurization (SSD) systems. Additionally, Ms. Wells coordinates with field staff and call-out contractors regarding field work preparation and scheduling. Ms. Wells provides office support in the

preparation of periodic review reports; work plans and completion reports for the evaluation of SVE system effectiveness assessments; and post-remediation site characterization plans and reports in support of SVE system shut down.

Enbridge, Stormwater Pollution Prevention Plan (SWPPP) Inspections, Environmental Inspector – Westchester and Putnam County, NY

Ms. Wells serves as an Environmental Inspector for monthly and biweekly SWPPP inspections of construction projects to maintain compliance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharge from Construction Activity. Her responsibilities included inspecting soil erosion and sediment control measures and preparing associated reports.

Long Island Rail Road, Environmental Compliance, Project Engineer – Long Island, NY

Ms. Wells serves as a Project Engineer for the Long Island Rail Road (LIRR) Port Jefferson Train Yard project to assist with environmental compliance violation response in relation to a stormwater/wash water treatment system. The scope of work includes treatment system evaluation, oversight of operation and maintenance, Best Management Practices (BMP) and compliance sampling standard operating procedure (SOP) recommendations, and system sampling in relation State Pollutant Discharge Elimination System (SPDES) compliance work. Under management of a Professional Engineer, Ms. Wells prepared a Health and Safety Plan (HASP); BMP memorandum summarizing field activities, assessments, conclusions, and recommendations; and site-specific standard operation procedure (SOP) for SPDES compliance sampling.

The City of New York Department of Parks and Recreation, FY23 Sub-Surface Investigations for Capital Projects, Environmental Scientist – Multiple Sites, NY

Ms. Wells served as an Environmental Scientist performing oversight of excavation and backfilling activities and collecting post removal verification soil sampling for analysis of PCB. Ms. Wells provided detailed field documentation of sample locations and soil description and prepared a Post Removal Verification Soil Sampling Report for the client documenting all Site activities and final results/conclusions.

Ms. Wells also served to implement a Community Air Monitoring Program (CAMP) during the remediation and reconstruction of several ballfields under the direction of the USEPA located within the 57-acre Red Hook Recreation Area in Brooklyn, NY. Ms. Wells calibrated and utilized field instrumentation, including a photoionization detector (PID) and DustTrak, to monitor organic vapors and particulates. Ms. Wells observed construction activities to document and ensure proper use of personal protection equipment and appropriate work practices by site workers while conducting activities that produced potentially fugitive dust. In addition, Ms. Wells prepared daily reports summarizing the community air monitoring data and construction activities.

John F. Kennedy International Airport Bergen Electrical Substation, Waste Characterization, Environmental Scientist – New York, NY

Ms. Wells served as an Environmental Scientist during the performance of a waste characterization investigation at JFK Bergen Electrical Substation in Queens, NY. Ms. Wells inspected soil stockpiles for indications of contamination and collected composite and discrete soil samples for laboratory analyses for waste characteristics parameters to assess compliance with disposal facility requirements. Ms. Wells utilized appropriate field instruments to measure organic vapor content of the stockpiles and recorded

GPS coordinates of soil sampling locations. Ms. Wells also followed standard chain-of-custody procedures.

New York University Langone Health, Indoor Air Sampling, Environmental Scientist – New York, NY

Ms. Wells served as an Environmental Scientist for a Phase II Environmental Site Investigation (ESI) to support environmental due diligence related to the potential property transfer of a commercial/industrial facility located in Brooklyn, NY. Ms. Wells was responsible for the calibration and use of field instruments to screen the indoor and ambient air for organic vapors and collect indoor air quality (IAQ) samples for laboratory analysis. Prior to the IAQ sampling, Ms. Wells performed a building inspection and presampling chemical inventory in accordance with New York State Department of Health (NYSDOH) requirements. Additionally, Ms. Wells was responsible for quality assurance/quality control of the laboratory analytical data summary tables associated with the Phase II ESI report.

YORK GAVILANEZ

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

NYS DOL Air Sampling Technician (DOL Cert. # 24-6LQC3-SHAB)

NYS DOL Asbestos Project Monitor (DOL Cert. # 24-6LQC3-SHAB)

NYS DOL Asbestos Inspector (DOL Cert. # 24-6LQC3-SHAB)

NYS DOL Mold Assessor (DOL Cert. # MA02323)

NYS DEC Resource Conservation and Recovery Act (RCRA)

NYC DEP Asbestos Investigator (DEP Cert # 161376)

OSHA 10 Hour Construction Safety and Health (OSHA Cert # 36-005782672)

OSHA 30 Hour Construction Safety and Health (OSHA Cert # 21-602026108)

OSHA 40 Hour CSREGS HAZWOPER

OSHA CSREGS Confined Space Entry – General Industry

OSHA CSREGS Confined Spaces - Permit Required

OSHA CSREGS Radiation Safety

OSHA CSREGS IATA-Dangerous Goods Transportation

OSHA CSREGS Ionizing Radiation

DOT CSREGS Hazmat Transportation

EPA Lead-Based Paint Inspector (EPA Cert # LBP-I-I206043-1)

AREAS OF EXPERTISE

Mr. York Gavilanez has over eighteen (18) years' experience encompassing:

- Asbestos Services
- Microbial/Indoor/Outdoor Air Quality Services
- Industrial Hygiene Services
- Environmental Sampling
- Regulatory Compliance
- OSHA

REPRESENTATIVE EXPERIENCE

Mr. Gavilanez is an Environmental Scientist in the Building Science/Industrial Hygiene Practice at TRC. He has been employed at TRC since 2016. Mr. Gavilanez is a State of New York licensed asbestos inspector, air sampling technician and project monitor.

Mr. Gavilanez has conducted building assessments for the presence of asbestos and other hazardous materials. Further, he has also conducted numerous projects monitoring oversight during asbestos abatement and building demolition. His responsibilities include on-site project oversight, air sampling/analysis clearance inspections, and technical report writing.

Mr. Gavilanez also has extensive experience in working closely with such regulatory agencies as the NYSDOL, EPA, and the NYCDEP.

Unilever, 800 Sylvan Ave, Englewood Cliffs, NJ (Project Scientist: 04/29/2007 – 02/1/2008)

Mr. Gavilanez was responsible for the air sampling of abatement work areas. He was also responsible for ensuring that the work being performed by the contractor is compliant with the guidelines set forth by regulatory agencies.

Renovation 737 Park Avenue – New York, NY (Project Scientist: 8/18/2011 – 6/25/2012)

Mr. Gavilanez was responsible for the air sampling of abatement work areas. He was also responsible for ensuring that the work being performed by the contractor is compliant with the guidelines set forth by regulatory agencies. Enforced DEP and DOL rules, documented job/on-site activities (legal Documents) with attention to detail, punctuality, studying all DEP guidelines and making sure the abatement stayed on schedule and performed to the letter of the law.

Nissequogue River State Park, 799 St, Johnland Rd, Kings Park, New York (Project Scientist: 03/9/2016 –Present)

Mr. Gavilanez was responsible for the air sampling of backgrounds in Kings Park. He was also responsible for ensuring that the work being performed by the guidelines set forth by regulatory agencies.

Rockefeller University, 1230 York Avenue, New York, NY (Project Scientist: 04/29/2011 – 06/01/2011)

Mr. Gavilanez was responsible for the air sampling of abatement work areas. He was also responsible for ensuring that the work being performed by the contractor is compliant with the guidelines set forth by regulatory agencies.

DASNY, 300 Jay Street (NYC Tech-Namm Building), Brooklyn, NY (Project Scientist: 05/12/2016 – 05/14/2016)

Mr. Gavilanez was responsible for the air sampling of abatement work areas. He was also responsible for ensuring that the work being performed by the contractor is compliant with the guidelines set forth by regulatory agencies.

EPA, 245 Huntington Avenue (Growanus Canal Superfund Site), Brooklyn, NY (Project Scientist: 05/2021 - Present)

Mr. Gavilanez is responsible for assisting with CAMP monitoring implemented during the excavation and removal of soils from the proximity of the site providing a measure of protection for the downwind community, more specifically off-site receptors including residents and workers, from potential airborne contaminant releases as a result of remedial work activities performed at the site.

NYCHA, Lead Inspections, New York, NY (Project Scientist: 09/2020 – Present)

Mr. Gavilanez is responsible for lead inspections using special equipment known as an XRF analyzer to determine if the paint has lead. Inspections may also involve taking paint chip samples, which are sent to a lab for analysis.

Fort Meade, Mold Inspections, Brooklyn, NY (Project Scientist: 02/2019 – 06/2019)

Mr. Gavilanez was responsible for mold inspections to find all the places where mold and moisture have invaded military homes in order to come up with a comprehensive plan to fix the problem.

YURIY KLIMENKO

EDUCATION

Kingsborough Community College, Brooklyn NY

Associate Degree in Applied Science.

Professional Secondary School, Voronezh, Russia

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

NYCDEP Asbestos Investigator

NYSDOL Asbestos Project Monitor/Inspector/Air Sampling Technician

NYSDOL Mold Assessor

USEPA Lead-Based Paint Risk Assessor

NJDEP Asbestos Safety Technician

SSPC C3/C5 Competent Person for Deleading of Industrial Structures

AREAS OF EXPERTISE

Mr. Klimenko has technical experience in the following general areas:

- Corporate environmental health and safety
- Asbestos Abatement Project Monitoring
- Asbestos Air Sampling
- Ambient Air Monitoring
- Asbestos Surveys
- Asbestos Inspections
- Lead-Based Paint Risk Assessments
- Lead-Based Paint Inspection and Clearance

REPRESENTATIVE EXPERIENCE

Mr. Klimenko has more than 16 years of experience and progressive responsibility in consulting. His qualifications include:

- Maintained detailed records of work preformed;
- Compiled and organized all necessary documentation for various reports;
- Conducted and maintained detailed logs;
- Managed the records of numerous projects conducted by TRC;
- Conducted and maintained/organized records of correspondence between TRC and clients, including, but not limited to, submittal of logs, email communications, and organized field notes;
- Managed and maintained all necessary equipment;
- Implemented various types of sampling for hazardous materials;
- Conducted visual inspections;
- Oversaw various hazardous material surveys throughout NYC schools; and
- Performed various types of sampling throughout NYC schools.

Mr. Klimenko's background includes extensive service to public and private-sector clients, including the NYCSCA, NYSDOT, DASNY, NYPA, MTA, and a wide range of private/commercial clients.

SPECIALIZED TRAINING

- 10 Hour OSHA

- 30 Hour OSHA
- 40 Hour OSHA HAZWOPER

APPENDIX 3

SPECIFICATIONS

SECTION 02 82 00

ASBESTOS REMOVAL

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This asbestos abatement Project will consist of the removal and disposal of asbestos-containing materials (ACMs) and presumed asbestos-containing materials (PACMs) as regulated asbestos-containing material (RACM) at Bronx Psychiatric Center, Building 1, 1500 Waters Place, Bronx, NY, DASNY Project Number 3816609999.

B. The work shall include but not be limited to the removal of the following materials:

Floor/level /location	Work Area Designation	Description of Asbestos Materials	Removal Method(s)	Approximate Quantity (SF/Unit)	Approximate Quantity (LF/Unit)
1st Floor	Transformer Room #1	To Be Determined Miscellaneous Damaged Equipment and Debris	To Be Determined	To Be Determined	To Be Determined
1st Floor	Transformer Room #2	To Be Determined Miscellaneous Damaged Equipment and Debris	To Be Determined	To Be Determined	To Be Determined
Total Quantity (SF/LF/Units)					

C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. Working hours shall be as required and approved by the Owner or Owner's representative. Asbestos abatement activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions, including Variances obtained by the Owner or Owner's representative, are described below:
(Describe in detail or indicate "None") If trace asbestos materials were identified, indicate such with a reference to the pertinent asbestos survey and include what trade(s) is responsible for any disturbance to these regulated trace asbestos materials as per OSHA requirements. Identify how survey can be obtained.

1.03 PERMITS AND COMPLIANCE

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.

B. Perform asbestos related Work in accordance with New York State Industrial Code Rule 56 (herein referred to as Code Rule 56), New York City Department of Environmental Protection Asbestos Control Program Title 15, Chapter 1 of the Rules of New York City (herein referred to as NYC DEP regulations), 40 CFR 61, and 29 CFR 1926. Where more stringent requirements are specified, adhere to the more stringent requirements.

C. The Contractor is responsible for providing the Asbestos Inspection Report (ACP7) filing to NYC DEP as well as all Asbestos Abatement Permit applications with supporting documentation, including the Work Place Safety Plan (WPSP) and any other applicable documents as may be required by NYC DEP, if applicable.

D. If applicable, the Contractor is responsible for obtaining any Asbestos Project Conditional Completion (ACP20) forms upon completion of each phase of asbestos abatement or as otherwise may be required during the course of the project as well as the Asbestos Project Completion (ACP21) form and any other applicable documents as may be required by NYC DEP. Owner or Owner's representative's Design Professional shall be responsible to submit the A-TR1 form to NYC DEP.

E. The Contractor must maintain current licenses pursuant to New York State Department of Labor, New York City Department of Environmental Protection Asbestos Control Program, New York City Department of Sanitation, and New York State Department of Environmental Conservation for all Work related to this Project, including the removal, handling, transport, and disposal of asbestos-containing materials.

F. The Contractor must have and submit proof upon request that any persons employed by the Contractor to engage in or supervise Work on any asbestos Project have valid NYS and NYC asbestos handling and supervisor certificates pursuant to Code Rule 56 and NYC DEP regulations.

G. The Contractor shall comply fully with any existing or new Variance secured from regulatory agencies by the owner or Owners Representative in the performance of the Work. Any Variance applications previously submitted are included as an appendix of this specification.

H. The Contractor shall be responsible for obtaining all other Variances as may be required for the Project or as requested by the Owner's representative, including variances necessary to obtain NYC Department of Buildings Work Permits prior to completion of all asbestos abatement activities. Approval of Owner or Owner's representative is required prior to submission of a Variance application to any regulatory agency. Failure to obtain Owner or Owner's representative's approval may result in Owner or Owner's representative's not permitting variance to be used on the Project.

I. The Contractor shall be responsible for compliance with The New York State Uniform Fire Prevention and Building Code, or the New York City Building Code, as applicable, or its successor during all Work at the site.

J. Failure to adhere to the Project Documents shall constitute a breach of the Contract and Owner or Owner's representative shall have the right to and may terminate the Contract provided,

however, the failure of Owner or Owner's representative to so terminate shall not relieve the Contractor from future compliance.

1.04 SUBMITTALS

A. Pre-Work Submittals: Within seven (7) days prior to the pre-construction conference, the Contractor shall submit an electronic copy of the documents listed below to the Owner or Owner's representative's Project Manager and the Environmental Consultant for review and approval prior to the commencement of asbestos abatement activities:

1. Contractor license issued by New York State Department of Labor.
2. A list of Projects performed within the past two (2) years and include the dollar value of all Projects. Provide Project references to include owner, Environmental Consultant, and air monitoring firm's name, contact persons, address, and phone number.
3. Progress Schedule:
   a. Show the complete sequence of abatement activities for each work area and the sequencing of Work within each building or building section listed in the contract.
   b. Show the dates and hours of work for the beginning and completion of each major element of Work for all work areas including substantial completion dates for each Work Area, building, or phase.
4. Project Notifications (original and all amendments in chronological order): As required by Federal, State, and NYC DEP (ACP-7) regulatory agencies together with proof of transmittal (i.e. certified mail return receipts). NYS DOL Site Specific Variance or Applicable Variance, if applicable.
5. Building Occupant Notification: Provide the following information, as required by regulatory agencies:
   a. Owner, Project Number, Site Name and Address, Building, Asbestos Project Location at Building, Start and End Dates.
   b. Quantity and type of material to be removed.
   c. Asbestos Contractor Name, Address, Contact Name and Phone Number, NYSDOL License Number.
   d. Third Party Air Monitor Name, Address, Contact Name and Phone Number, NYSDOL License Number.
   e. Air Monitoring Laboratory Name, Address, Contact Name and Phone Number, New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) Number.
   f. NYSDOL Regional Office Phone Number.
   g. Owner or Owner's representative Project Manager Name and Phone Number.
   h. General Contractor Project Manager Name and Phone Number, if applicable
6. Abatement Work Plan and Drawing(s): Provide a written work plan description of work and drawing(s) that clearly indicates the following:
   a. All work areas/containments numbered sequentially.
   b. Locations and types of all decontamination enclosures for each work area.
   c. Entrances and exits to each work area/containment.
   d. Type of abatement activity/technique for each work area/containment.
   e. Number and location of negative air units and exhaust for each work area, when applicable. Also provide calculations for determining number of negative air pressure units.
   f. Proposed location and construction of storage facilities and field office.
   g. Location of water and electrical connections to building services for each work area/containment.
   h. Waste transport routes through the building, or exterior to the waste storage container for each work area/containment.
7. Disposal Site/Landfill Permit from applicable regulatory agency.
8. Transfer Facility Permit (if used) from applicable regulatory agency.

9. Valid Waste Transporter NYS DEC Part 364 permit for all transporters.
10. Valid State Waste Transport vehicle number / permit for all transporters for each State the waste is being transported through to reach the Disposal Facility/Landfill.
11. Valid US DOT vehicle permits for all Transporters.
12. Special Waste Characterization Profile, if required by the disposal site/landfill.
13. Current ELAP Certificate for laboratory performing analysis of OSHA personal air monitoring samples. Refer to Section 1.09.
14. Approved NYC DEP Asbestos Abatement Permits and Variances (ACP8, ACP9 and backup documentation [submitted Phasing Plan/Variance, Owners Hardship Letters, etc.], V2, V5, ACP-13, and WPSP), if applicable.

B. On-Site Submittals: Refer to Part 3.01.B, C, D and E for all submittals, documentation, and postings required to be maintained on-site during abatement activities.

C. Project Close-out Submittals: Within 30 days of the completion of each abatement phase, the **Abatement Contractor** shall submit an electronic copy of the documents listed below to the Owner or Owner's representative and the Environmental Consultant for review. Original fully executed waste records, original signed notarized Contractor's Acknowledgement Statements and any other original signed notarized documents required must be sent to the Owner or Owner's representative prior to final approval. Once the Environmental Consultant approves the close-out submittal, the Contractor shall provide 3 hard copy sets of the approved close-out documents (double-sided and bound) to the Owner or Owner's representative and Project Management for appropriate distribution, including 1 set to be distributed to the facility, prior to Contractor's final payment.
1. All Waste Shipment Records and Waste Shipment Record Logs (**Original** Waste Shipment Record(s) shall be sent to the Owner or Owner's representative).
2. OSHA compliance air monitoring records (laboratory reports and chain of custodies) conducted during the Work (compiled in chronological order).
3. Daily progress log, and the Work Area entry/exit log (s).
4. Contractor's Acknowledgement Statement (Appendix C) that lists all Workers used in the performance of the Project, including name, NYS DOL and NYC DEP certification numbers and type of certification (i.e. supervisor, asbestos handler, etc.). The Statement shall be notarized (**Original** notarized statement shall be sent to the Owner or Owner's representative).
5. Supervisor and Handlers/Workers NYS DOL and NYC DEP Asbestos (current at time of asbestos abatement) Certifications.
6. Contractor licensed issued by New York State Department of Labor.
7. Disposal Site/Landfill Permit from applicable regulatory agency.
8. Transfer Facility Permit (if used) from applicable regulatory agency.
9. Valid Waste Transporter NYS Part 364 permit for all transporters.
10. Valid State Waste Transport vehicle permit for all transporters for each State the waste is being transported through to reach the Disposal Facility/Landfill.
11. Valid US DOT vehicle permits for all Transporters.
12. Special Waste Characterization Profile, if required by the disposal site/landfill.
13. Current ELAP Certificate for laboratory performing analysis of OSHA personal air monitoring samples. Refer to Section 1.09.
14. EPA, NYS DOL & NYCDEP Regulatory Project notifications and amended notifications, along with proof of transmittals, and NYS DOL Site-Specific Variances/Applicable Variances, if applicable. If required, NYC DEP Asbestos Abatement Permits and Variances (ACP7, ACP8, ACP9 and backup documentation [submitted Phasing Plan/Variance, owner's hardship letters, etc.], V2, V5, ACP13, ACP15, Work Place Safety Plan (stamped received by the DEP), Asbestos Project

Conditional Completion (ACP20) forms and/or Asbestos Project Completion (ACP21) form and fully executed ATR-1.

D. Project Close-out Submittals: Within 30 days of the completion of the abatement phase, the **Environmental Consultant** shall submit 1 electronic copy of the closure report, including the documents listed below to the Owner or Owner's representative for review and approval. Once approved the final closeout submittals, the Environmental Consultant shall provide 3 hard copy sets of the approved submittals (double-sided and bound) to the Owner or Owner's representative.

1. Upon completion of the Project, the Environmental Consultant shall certify to Owner or Owner's representative, in writing, that the work is complete, acceptable and was performed in compliance with the Project Documents and all Local, State and Federal Regulations in an Executive Summary of the work.
2. The Environmental Consultant shall review and approve or disapprove all necessary guarantees, certificates of compliance, and all other close-out documentation, which the Asbestos Contractor is required to submit.
3. The Environmental Consultant shall provide to Owner or Owner's representative the final/closeout project report which must include
    a. Consultant license issued by New York State Department of Labor.
    b. Project Monitor(s) Certificate issued by New York State Department of Labor.
    c. All daily logs and daily worker/handler rosters.
    d. Summary of all visual inspections with the date of inspection and the date of signoff on the supervisor's log.
    e. Air sampling logs, final lab reports (no drafts-must be signed by analyst and reviewer), chain of custody forms, and sample location plans.
    f. Copies of Waste Shipment Records and Waste Shipment Record Logs.
    g. EPA, NYS DOL & NYCDEP Regulatory Project notifications, amended notifications, along with proof of transmittals and NYS DOL Site-Specific Variances/Applicable Variances, if applicable. If required, NYC DEP Asbestos Abatement Permits and Variances (ACP7, ACP8, ACP9 and backup documentation [submitted Phasing Plan/Variance, owner's hardship letters, etc.], V2, V5, ACP13, ACP15, Work Place Safety Plan (stamped received by the DEP), Asbestos Project Conditional Completion (ACP20) forms and/or Asbestos Project Completion (ACP21) form, and fully executed ATR-1.
    h. All pertinent correspondence related to the Project, including re-occupancy letters and elevated air results submission to NYS DOL documentation per 56-4.10 (a).

1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by Owner or Owner's representative, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:

1. Contractor's scope of Work, Work plan, and schedule to include number of workers and shifts.
2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
3. Environmental Consultant's duties, functions, and authority.
4. Contractor's Work procedures including:
    a. Methods of job site preparation and removal methods.
    b. Respiratory protection.
    c. Disposal procedures.
    d. Cleanup procedures.

e. Fire exits and emergency procedures.

5. Contractor’s required pre-work and on-site submittals, documentation, and postings.
6. Contractor's plan for twenty-four (24) hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.
7. Temporary utilities.
8. Handling of furniture and other movable objects.
9. Storage of removed asbestos-containing materials.
10. Waste disposal requirements and procedures, including use of Owner’s Representative supplied Waste Shipment Record, if applicable, and Waste Shipment Record Log.

C. In conjunction with the conference the Contractor shall accompany Owner or Owner’s representative and Environmental Consultant on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

1.06 APPLICABLE STANDARDS AND REGULATIONS

A. The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

B. Federal Regulations:

1. 29 CFR 1910.1001, "Asbestos" (OSHA)
2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
5. 29 CFR 1926, "Construction Industry" (OSHA)
6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)
7. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
8. 40 CFR 61, Subpart A, "General Provisions" (EPA)
9. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)
10. 49 CFR 171-172, Transportation Standards (DOT)

C. New York State Regulations:

1. 12 NYCRR, Part 56, "Asbestos", Industrial Code Rule 56 (DOL) (amended March 21, 2007).
2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)

D. Local Regulations:

1. New York City Department of Environmental Protection Asbestos Control Program Title 15, Chapter 1 of the Rules of New York City
2. New York City Department of Sanitation Title 16, Chapter 8 of the Rules of New York City

E. Standards and Guidance Documents:

1. American National Standards Institute (ANSI) Z88.2, Practices for Respiratory Protection
2. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
3. EPA 560/585-024, Guidance for Controlling Asbestos-containing Materials in Buildings (Purple Book)
4. EPA 530-SW-85-007, Asbestos Waste Management Guidance
5. ASTM Standard E1368 “Standard Practice for Visual Inspection of Asbestos Abatement Projects.”

1.07 NOTICES

A. The Contractor shall provide notification of intent to commence asbestos abatement activities as indicated below.

1. At least ten (10) Working days prior to beginning abatement activities, send written notification to:

U.S. Environmental Protection Agency Region 2
National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Coordinator
Air Branch
290 Broadway, 21st Floor
New York, NY 10007-1866

2. At least ten (10) calendar days prior to beginning abatement activities send written notification to:

New York State Department of Labor
Division of Safety and Health, Asbestos Control Program
State Office Campus
Building 12 - Room 161B
Albany, NY 12240

3. At least seven (7) days prior to beginning abatement activities provide an electronic Asbestos Project Notification (ACP7) to New York City Department of Environmental Protection Asbestos Control Program in accordance with NYC DEP regulations.

B. The Contractor is required to send notifications to U.S. Environmental Protection Agency and New York State Department of Labor via mail or package delivery service that will provide proof of delivery and receipt.

C. The Contractor shall be responsible for maintaining current project filings with regulatory agencies for the duration of the project.

D. The Contractor shall post and/or provide Building Occupant Notification at least 10 calendar days prior to beginning abatement activities as required by Code Rule 56.

E. The Contractor shall post a floor plan as required by NYC DEP regulations, if applicable.

1.08 PROJECT MONITORING AND AIR SAMPLING

A. Owner or Owner's representative shall engage the services of an Environmental Consultant who shall serve as Owner's third party oversight in regard to the performance of the asbestos abatement Project and provide direction as required throughout the entire abatement Project period. The Environmental Consultant and all subconsultants shall not have any contractual relationship with the Contractor for the duration of the asbestos project.

B. The Contractor is required to ensure cooperation of its personnel with the Environmental Consultant for the air sampling and Project monitoring functions described in this section. The Contractor shall comply with all direction given by the Environmental Consultant during the course of the Project.

C. The Environmental Consultant shall provide the following administrative services:
1. Review and approve or disapprove all submittals, shop drawings, schedules, and samples.
2. Assure that all notifications to governmental agencies by the Contractor are submitted in a timely manner and are correct in content.

D. The Environmental Consultant shall staff the Project with a trained and certified person(s) to act on Owner's behalf at the job site. This individual shall be designated as the Abatement Project Monitor (APM).

1. The APM shall be on-site at all times the Contractor is on-site. The Contractor shall not be permitted to conduct any Work unless the APM is on-site (except for inspection of barriers and negative air system during non-working days).
2. The APM shall have the authority to direct the actions of the Contractor verbally and in writing to ensure compliance with the Project documents and all regulations. The APM shall have the authority to Stop Work when gross Work practice deficiencies or unsafe practices are observed, or when ambient fiber concentrations outside the removal area are equal to or greater than 0.01 f/cc or background level, whichever is greater.
    a. Such Stop Work order shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been corrected.
    b. Standby time, re-cleaning time, and air sample collection time and analysis cost required to resolve the situation shall be at the Contractor's expense.
    c. The APM shall track and provide a summary of standby, re-cleaning, and/or air sampling time to achieve satisfactory clearance, as well as a summary of any equipment used. These summaries shall be provided to the Owner or Owner's representative Project Manager.
3. The APM shall provide the following services:
    a. Inspection of the Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications including provisions required by Variances, the Work Place Safety Plan and Asbestos Work Permit.
    b. Provide abatement Project air sampling as required by applicable regulations and Owner or Owner's representative. Sampling will include background, work area preparation, asbestos handling, final cleaning and aggressive clearance air sampling.
    c. Verify daily that all Workers used in the performance of the Project are certified by the appropriate regulatory agency and include a worker roster in the daily log.
    d. Monitor the progress of the Contractor's work and report any deviations from the schedule to the Owner or Owner's representative.
    e. Monitor, verify, and document all waste load-out operations.
    f. Verify that the Contractor is performing personal air monitoring daily, and that results are being returned and posted at the site as required.
    g. The APM shall maintain a daily log on site that documents all project related and APM and Contractor actions, activities, and occurrences.
    h. Verify landfill to be used for waste disposal with waste transporter (driver) and Contractor prior to waste trailer/hardtop dumpster leaving site. Confirm the waste transporter firm and landfill are listed on the regulatory notifications for the project and the waste transport vehicle license number is listed on the current NYS DEC Waste Transporter permit.

4. The following minimum inspections shall be conducted by the APM, accompanied by the Contractor's supervisor. Additional inspections shall be conducted as required by Project conditions and/or at Owner or Owner's representative's direction. Progression from one (1) phase of Work to the next by the Contractor is only permitted with the written approval of the APM.
    a. Pre-Construction Inspection: The purpose of this inspection is to verify the existing conditions of the Work Areas and to document these conditions.
    b. Pre-Commencement Inspection: The purpose of this inspection is to verify the integrity of each containment system prior to disturbance of any asbestos-

containing material. This inspection shall take place only after the Work Area is fully prepped for removal.

c. Work Inspections: The purpose of this inspection is to monitor the Work practices and procedures employed on the Project and to monitor the continued integrity of the containment system. Inspections within the removal areas shall be conducted by the APM during all preparation, removal, and cleaning activities at least twice every Work shift. Additional inspections shall be conducted as warranted.

d. Pre-Encapsulation Inspection: The purpose of this inspection is to ensure the complete removal of Asbestos-Containing Material (ACM), from all surfaces in the Work Area prior to encapsulation.

e. Visual Clearance Inspection: The purpose of this inspection is to verify that: all materials in the scope of work have been properly removed; no visible asbestos debris/residue remains; no pools of liquid or condensation remains; and all required cleanings are complete. This inspection shall be conducted before final air clearance testing.

f. Post-Clearance Inspection: The purpose of this inspection is to ensure the complete removal of ACM, including debris, from the Work Area after satisfactory final clearance sampling and removal of all isolation and critical barriers and equipment from the Work Area.

g. Punch List Inspection: The purpose of this inspection is to verify the Contractor's certification that all Work has been completed as contracted and the existing condition of the area prior to its release to the Owner or Owner's representative.

E. The APM shall provide abatement Project air sampling and analysis as required by applicable regulations. Sampling will include, but is not limited to, background, work area preparation, asbestos handling, and final cleaning and clearance air sampling.

1. Unless otherwise required by applicable regulations, the APM shall have samples analyzed by Phase Contrast Microscopy (PCM). Results shall be available at the Project site within 24 hours of completion of sampling.
2. Samples shall be collected as required by applicable regulations and these specifications. Transmission Electron Microscopy (TEM) clearance air samples are required for work areas with abatement equal to or greater than 10,000 sq.ft./lin. ft. of ACM. If TEM clearance air sampling is utilized by owner or owner's representative, the clearance criteria and sampling protocols must be in compliance with AHERA. If PCM air sample analysis results exceed the satisfactory clearance criteria, then TEM analysis of the entire set of clearance air samples may be used, provided that a standard NIOSH/ELAP accepted laboratory analysis method is utilized that shall report each air sample result in fibers per cubic centimeter.
3. If the air sampling during any phase of the abatement project reveals airborne fiber levels at or above 0.01 fibers/cc or the established background level, whichever is greater, outside the regulated Work Area, Work shall stop immediately and corrective measures required by applicable regulations shall be initiated. Notify the Owner or Owner's representative project personnel, as well as all employers and occupants in adjacent areas. The Contractor shall bear the burden of any and all costs incurred by this delay.
4. The APM shall submit copies of all elevated air sampling results collected during abatement and all elevated final air clearance results to the Commissioner of Labor, as required by regulation.
5. At the completion of each abatement phase, the APM shall provide the ACP15 Project Monitors Report to DEP, if applicable
6. A minimum of 1,200 Liters for PCM air samples or 1,300 Liters for TEM air samples (whichever is applicable) shall be collected at a flow rate between 2 and 16 liters per minute (L/min) for PCM samples and a flow rate of between 2 and 10 L/min for TEM

AHERA air samples, as necessary to achieve proper sample collection and work practice duration.

1.09 CONTRACTOR AIR SAMPLING

A. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring **every Work shift in each Work Area** during which abatement activities occur in order to determine that appropriate respiratory protection is adequate and is being worn and utilized. **Negative Exposure Assessments are not allowed to be used in lieu of personal air monitoring.**

B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term excursion level exposures to indicate compliance with the OSHA Permissible Exposure Limits (PELs).

C. The Contractor's laboratory analysis of air samples shall be conducted by a NYS DOH ELAP approved laboratory. The Environmental Consultant shall not collect, ship, transport or analyze the Contractor's air samples.

D. Results of personal air sample analyses shall be available, verbally, within twenty-four 24 hours of sampling and results with associated chains of custody shall be posted upon receipt and documented in the supervisor's daily log book. Written laboratory reports shall be delivered and posted at the Work site within five (5) days. Failure to comply with these requirements may result in all work being stopped until compliance is achieved.

1.10 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
   1. The Project Supervisor shall hold New York State DOL and New York City DEP certification as an Asbestos Supervisor.
   2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one (1) year experience as a supervisor.
   3. The Project Supervisor must be able to speak, read, and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner or Owner's representative and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by owner or owner's representative.

C. The Project Supervisor shall maintain the bound Daily Project Log and separate work area entry/exit logs for each work area, as required by applicable regulations and section 2.03 of the specifications and the Waste Shipment Record Log required by section 4.03 of the specifications.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Abatement Project Monitor.

1.11 MEDICAL REQUIREMENTS

A. Before exposure to airborne asbestos fibers, provide Workers with a comprehensive medical examination as required by 29 CFR 1910.1001, and 29 CFR 1926.1101.
   1. This examination is not required if adequate records show the employee has been examined as required by 29 CFR 1910.1001, and 29 CFR 1926.1101 within the past year.
   2. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within thirty 30 calendar days before or after the termination of employment in such occupations.

1.12 TRAINING

A. As required by applicable regulations, prior to assignment to asbestos Work instruct each employee with regard to the hazards of asbestos, safety and health precautions, and the use and requirements of protective clothing and equipment.

B. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134, and 29 CFR 1926.1101. Provide respirator training and fit testing.

1.13 RESPIRATORY PROTECTION

A. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH).

B. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist on a yearly basis. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual. Fit-test records shall be maintained on site for each employee.

C. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators (PAPRs) are the minimum allowable respiratory protection permitted to be utilized during gross removal operations of OSHA Class I or OSHA Class II friable ACM.

D. No respirators shall be issued to personnel without such personnel participating in a respirator training program.

E. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134 and 29 CFR 1926.1101.

F. A storage area for respirators shall be provided by the Contractor in the clean room side of the personal decontamination enclosure where they will be kept in a clean environment.

G. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters will be removed and discarded during the decontamination process. Filters cannot be reused. Filters must be changed if breathing becomes difficult.

H. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day. Any loose respirator filters found within the regulated area, must be disposed of as RACM asbestos waste.

I. Any authorized visitor, worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and shall not be permitted to return.

J. The Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the Contractor.

1.14 DELIVERY AND STORAGE

A. Deliver all materials to the job site in original packages with containers bearing manufacturer's name and label.

B. Store all materials at the job site in a suitable and designated area.
   1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
   2. Protect materials from unintended contamination and theft.
   3. Storage areas shall be kept clean and organized.

C. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris as herein specified.

1.15 TEMPORARY UTILITIES

A. Shut down and lock out all electrical power to the asbestos Work Areas, including lighting circuits. Any electrical power passing through the Work Areas that can't be shut down due to health and safety reasons, shall be protected as per the requirements of applicable regulations and shall not be utilized within the work area.

B. Provide temporary 120-240 volt, single phase, three (3) wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCIs) for all electric requirements within the asbestos Work Area.
   1. Where available, obtain from Owner's existing system. Otherwise provide power from other sources (i.e. generator).
   2. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.
   3. Provide wiring and receptacles as required by the APM for air sampling equipment.
   4. All power to the Work Area shall be brought in from outside the area through GFCIs at the source.

C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas including decontamination chambers.
   1. The entire Work Area shall be kept illuminated at all times.
   2. Provide lighting as required by the APM for the purposes of performing required inspections.

D. All temporary devices and wiring used in the Work Area shall be capable of decontamination procedures including HEPA vacuuming and wet-wiping.

E. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PART 2 PRODUCTS

2.01 PROTECTIVE CLOTHING

A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, gloves and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape, or provide disposable coverings with elastic wrists or tops.

B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing abatement Work.

C. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

D. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Work Area.

2.02 SIGNS AND LABELS

A. Provide bilingual (English-Spanish) warning signs and barrier tapes at all approaches to asbestos Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

1. Provide danger signs in vertical format conforming to 29 CFR 1926.1101, minimum 20" x 14" displaying the following legend.

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORY PROTECTION AND
PROTECTIVE CLOTHING IN THIS AREA

2. Provide 3" wide red barrier tape printed with black lettered, "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos Work Area. Install tape 3' to 4' above finished floor (AFF).

B. Provide asbestos danger labels affixed to all asbestos materials, scrap, waste, debris and other products contaminated with asbestos.

1. Provide asbestos danger labels of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

2. Provide the following asbestos labels, of sufficient size to be clearly legible, for display on waste containers (bags or drums) which will be used to transport asbestos contaminated material in accordance with United States Department of Transportation 49 CFR Parts 171 and 172:

3. Generator identification information shall be affixed to each waste container or any packaging used to containerize RACM asbestos waste indicating the following printed in indelible ink:
   Generator Name
   Facility Name
   Facility Address
   Date

2.03 DAILY PROJECT LOG & WORK AREA (Worker Decontamination Unit) ENTRY/EXIT LOG

A. Provide a bound Daily Project Log. The log shall contain on title page the Project name and Owner or Owner's representative project number, name, address and phone number of Owner or Owner's representative; name, address and phone number of Environmental Consultant; name, address and phone number of Abatement Contractor; emergency numbers including, but not limited to local Fire/Rescue department and all other regulatory requirements.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. All persons entering and exiting the Work Area shall sign the Work Area (entry/exit log located in the decontamination unit clean room or airlock to the work area) and include name, certification number, and time.

D. The Project Supervisor shall document all work performed daily and note all regulatory required inspections, maintain entry log records and ensure that they are recorded in accordance with the provisions of all applicable regulations.

2.04 SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. All scaffolding shall be designed and constructed in accordance with OSHA, New York City Building Code, and any other applicable federal, state and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions are applicable.

B. Provide scaffolding and ladders as required by the APM for the purposes of performing required inspections.

2.05 SURFACTANT (AMENDED WATER)

A. Wet all asbestos-containing materials prior to removal with surfactant mixed and applied in accordance with manufacturer's printed instructions.

2.06 ENCAPSULANT

A. Encapsulant shall be tinted or pigmented so that application when dry is readily discernible.

B. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon.

2.07 FOAM/VISCOUS LIQUID

A. Foam or viscous liquid shall be non-toxic, shall not require special respirator protection for handling, and shall not affect the handling and disposal of the asbestos waste.

B. Foam or viscous liquid shall leave an identifiable colored residue when it dissipates.

C. Foam or viscous liquid may be used for non-friable ACM roofing and/or flooring removals consistent with all applicable regulations.

2.08 WASTE DISPOSAL BAGS, DRUMS, AND CONTAINERS

A. Provide 6 mil clear polyethylene disposal bags printed with asbestos caution labels. Bags shall also be imprinted with U.S. Department of Transportation required markings.

B. Provide 30 or 55 gallon capacity fiber, plastic, or metal drums capable of being sealed air and water tight if asbestos waste has the potential to damage or puncture disposal bags. Affix asbestos caution labels on lids and at one-third points around drum circumference to assure ready identification.

C. Containers and bags must be labeled in accordance with 40 CFR Part 61 NESHAPS and applicable regulations. When the bags/containers are moved to the lockable hardtop dumpster from the waste decontamination system washroom, the bags must also be appropriately labeled with the date they are moved on the bag/container in waterproof markings.

D. Labeled ACM waste containers or bags shall not be used for non-ACM waste or trash. Any material placed in labeled containers or any material placed in bags, whether the bag is turned inside out or not, shall be handled and disposed of as RACM waste.

2.09 HEPA VACUUM EQUIPMENT

A. All vacuuming performed under this contract shall be performed with High Efficiency Particulate Air (HEPA) filter equipped industrial vacuums conforming to ANSI Z9.2.

B. Provide tools and specialized equipment including scraping nozzles with integral vacuum hoods connected to a HEPA vacuum with flexible hose.

2.10 POWER TOOLS

A. Any power tools used to drill, cut into, or otherwise disturb asbestos material shall be manufacturer equipped with HEPA filtered local exhaust ventilation

2.11 FIRE RETARDANT POLYETHYLENE SHEETING

A. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, and waste container) shall be at least 6 mil fire retardant sheeting.

B. Decontamination enclosure systems shall utilize at least 6 mil opaque fire retardant plastic sheeting. At least two (2) layers of 6 mil reinforced fire retardant plastic sheeting shall be used for the flooring.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. Should visible emissions or water leaks be observed outside the Work Area, immediately stop Work and institute emergency procedures per applicable regulations. Should there be elevated fiber levels outside the Work Area, immediately stop Work and institute emergency procedures per applicable regulations. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the Contractor, at no additional cost to the Owner.

B. Current medical surveillance approval, fit test reports, Contractor's Worker Acknowledgments, and valid NYS DOL/NYC DEP Asbestos Handler certification cards shall be on site prior to admittance of any Contractor's employees to the asbestos Work Area.

C. Hard Copies of the following submittals, documentation, and postings shall be maintained on-site by the Contractor during abatement activities at a location approved by the Abatement Project Monitor:

1. Valid Contractor license issued by New York State Department of Labor.
2. Certification, Worker Training, Medical Surveillance, Acknowledgment(s):
    a. NYS DOL and NYC DEP Asbestos Handler certification cards for each person employed in the removal, handling, or disturbance of asbestos.
    b. Evidence that Workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
    c. Documentation that Workers have been fit tested specifically for respirators used on the Project.
    d. Contractor's Workers Acknowledgments (Appendix C): Statements listing all the employees and signed by the supervisor stating that the employee has received training in the proper handling of asbestos-containing materials; understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.
3. Daily OSHA personal air monitoring results.
4. NYS Department of Health ELAP certification for the laboratory that will be analyzing the OSHA personal air samples.
5. Disposal Site/Landfill Permit from applicable regulatory agency.
6. Transfer Facility Permit (if used) from applicable regulatory agency.
7. Valid Waste Transporter NYS Part 364 permit for all transporters.
8. Valid State Waste Transport vehicle permit for all transporters for each State the waste is being transported through to reach the Disposal Facility/Landfill.
9. Valid US DOT vehicle permits for all Transporters.
10. Special Waste Characterization Profile, if required by the disposal site/landfill.
11. Regulatory Project notifications and amended notifications.
12. Applicable regulations.
13. Safety Data Sheets of supplies/chemicals used on the Project.
14. Approved Abatement Work Plan.
15. List of emergency telephone numbers.
16. Magnahelic manometer semi-annual calibration certification.
17. Waste Shipment Record Log.
18. Daily Project Log.
19. Work Area Entry/Exit Logs, for each personal decontamination unit.
20. Contract documents (environmental survey report, specifications and drawings).

D. A floor plan showing the areas of the building under abatement and the location of all fire exits in said areas shall be prominently posted in the building lobby or comparable location,

along with a notice stating the location within the building of the negative air cutoff switch required under applicable regulations.

E. Hard Copies of the following documentation shall be maintained on-site by the Abatement Project Monitor during abatement activities:
   1. Valid Contractor license issued by New York State Department of Labor.
   2. Air Sample Log.
   3. Air sample laboratory results with chain of custody and sample location plans.
   4. ACP15 Project Monitors Reports, if applicable.
   5. Project monitor daily log and a daily list of workers/supervisors onsite.
   6. A copy of ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects."
   7. Calibration Chart for rotometer(s) used on-site.
   8. Project documents (environmental survey report, specifications and drawings).

F. The Work Area must be vacated by building occupants prior to decontamination enclosure construction and Work Area preparation.

G. All demolition necessary to access asbestos-containing materials for removal must be conducted within negative pressure enclosures by licensed asbestos handlers. Demolition debris may be disposed of as construction and demolition debris provided the Abatement Project Monitor determines that it is not contaminated with asbestos and there has been no disturbance of ACM within the enclosure. If the demolition debris is determined to be contaminated or ACM has been disturbed, porous materials must be disposed of as RACM asbestos waste. Non-porous items may be cleaned and adequately decontaminated, or disposed of as RACM waste.

3.02 PERSONAL DECONTAMINATION ENCLOSURE

A. Provide personal decontamination enclosure contiguous to the Work Area or as per Variance. The decontamination enclosure shall be attached to the Work Area and not located within it unless isolation barriers are installed. If the decontamination chamber is accessible to the public it shall be fully framed and sheathed to prevent unauthorized entry.

B. Access to the Work Area will be from the clean room through an airlock to the shower and through an airlock to the equipment room. Each airlock shall be a minimum of three (3) feet from door to door. Additional airlocks shall be provided as required by applicable regulations for remote decontamination enclosures.

C. The decontamination enclosure ceiling and walls shall be covered with one (1) layer of opaque 6 mil fire retardant polyethylene sheeting. Two (2) layers of reinforced 6 mil fire retardant polyethylene sheeting shall be used to cover the floor.

D. The entrance to the clean room shall have a lockable door along with adequate small openings for Work Area make-up air. Provide suitable lockers for storage of Worker's street clothes. Storage for respirators along with replacement filters and disposable towels shall also be provided.

E. Provide a temporary shower with individual hot and cold water supplies and faucets. Provide a sufficient supply of soap and shampoo. There shall be one (1) shower for every six Workers. The shower room shall be constructed in such a way so that travel through the shower chamber shall be through the shower. The shower shall not be able to be bypassed.

F. Shower water shall be drained, collected and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller

pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as RACM asbestos waste.

G. The equipment room shall be used for the storage of tools and equipment. A walk-off pan filled with water shall be located in the Work Area outside the equipment room for Workers to clean foot coverings when leaving the Work Area. A labeled 6 mil plastic ACM waste bag for collection of contaminated clothing shall be located in this room.

H. The personal decontamination enclosure shall be cleaned and disinfected minimally at the end of each Work shift and as otherwise directed by the Abatement Project Monitor.

3.03 WASTE DECONTAMINATION ENCLOSURE

A. Provide a waste decontamination enclosure contiguous to the Work area or as per Variance. The decontamination enclosure shall be attached to the Work Area and not located within it unless isolation barriers are installed. If the decontamination chamber is accessible to the public it shall be fully framed and sheathed to prevent unauthorized entry.

B. The waste decontamination enclosure system shall consist of a holding area, airlock and washroom. The airlock shall be a minimum of three (3) feet from door to door. The entrance to the holding area shall have a lockable door.

C. The decontamination enclosure ceiling and walls shall be covered with one (1) layer of opaque 6 mil fire retardant polyethylene sheeting on walls and ceiling. Two (2) layers of reinforced 6 mil fire retardant polyethylene sheeting shall be used to cover the floor.

D. Where there is only one egress from the Work Area, the holding area of the waste decontamination enclosure system may branch off from the personal decontamination enclosure equipment room, which then serves as the waste wash room.

E. The waste wash room water shall be drained, collected, and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as RACM asbestos waste.

F. In small asbestos Projects where only one (1) egress from the Work Area exists, the shower room may be used as a waste washroom. In this instance, the clean room shall not be used for waste storage, but shall be used for waste transfer to carts, which shall immediately be removed from this enclosure.

3.04 WORK AREA ENTRY AND EXIT PROCEDURES

A. Access to and from the asbestos Work Area is permitted only through the personal decontamination enclosure unless otherwise stipulated in a Variance.

B. Workers shall sign the Work Area entry/exit log (located in the decontamination clean room) upon every entry and exit.

C. The following procedures shall be followed when entering the Work Area:
   1. Before entering the Work Area, Workers shall proceed to the clean room, remove all street clothes, and don protective clothing, equipment, and respirators.

2. Workers shall proceed from the clean room through the shower room and the equipment room and into the Work Area.

D. The following procedures shall be followed when exiting the Work Area:
   1. Before leaving the Work Area, gross asbestos contamination will be removed by brushing, wet cleaning and/or HEPA vacuuming.
   2. In the equipment room, Workers shall remove disposable clothing, but not respirators, and shall place clothing in plastic disposal bags for disposal as contaminated debris prior to entering the shower room.
   3. Workers shall shower thoroughly while wearing respirators then wash respirator with soap and water prior to removal.
   4. Upon exiting the shower, Workers shall don new disposable clothing if the Work shift is to continue or street clothes to exit area. Under no circumstances shall Workers enter public non-Work Areas in disposable protective clothing.

E. If remote decontamination enclosures are permitted by applicable regulations or a Variance, workers shall wear two disposable suits for all phases of Work. Workers exiting the work area shall HEPA vacuum the outer suit, enter the airlock, remove the outer suit and then place it back into the Work Area. A clean second suit shall be donned before exiting the airlock and proceeding to the decontamination enclosure or another work area via the designated pathway.

3.05 WORK AREA PREPARATION

A. Asbestos danger signs shall be posted at all approaches to the asbestos Work Area. Post all emergency exits as emergency exits only on the Work Area side; post with asbestos caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the asbestos Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs.

B. Shut down and lock out the building heating, ventilating, and air conditioning (HVAC) systems. Electrical systems and circuits shall also be shut down unless permitted to remain active per applicable regulations and appropriately protected and labeled. Existing lighting sources shall not be utilized. Provide temporary electric power and lighting as specified herein.

C. All non-ACM surfaces and objects within the Work Area shall be pre-cleaned using HEPA vacuuming and/or wet-wiping methods. Dry sweeping and any other methods that raise dust shall be prohibited. ACM shall not be disturbed during pre-cleaning.

D. Movable objects within the Work Area shall be HEPA vacuumed and/or wet-wiped and removed from the Work Area.

E. All non-movable equipment in the Work Area shall be completely covered with two (2) layers of fire retardant polyethylene sheeting, at least 6 mil in thickness, and secured in place with duct tape and/or spray adhesive. Active Fire Protection System components in the Work Area shall not be covered with fire retardant plastic sheeting or any other obstruction.

F. Provide enclosure of the asbestos Work Area necessary to isolate it from unsealed areas of the building in accordance with the approved asbestos Work plan and as specified herein.

G. Provide critical barriers by sealing off all openings including but not limited to windows, diffusers, grills, electrical outlets and boxes, doors, floor drains, and any other penetrations of the Work Area enclosure, using two (2) layers of at least 6 mil fire retardant polyethylene sheeting.

H. Provide isolation barriers by installing temporary framing and sheathing at openings larger than 32 square feet forming the limits of the asbestos Work Area. Sheathing thickness must be a minimum of 3/8 inch and all sheathing shall be caulked and the Work Area side sealed with two (2) layers of 6 mil fire retardant polyethylene sheeting.

I. Isolation barriers shall be installed at all elevator openings in the Work Area. Elevators running through the regulated abatement work area shall be shut down or isolated as per applicable regulations. Elevator controls shall be modified so that elevators bypass the Work Area.

J. Provide two (2) independent layers of 6 mil fire retardant polyethylene sheeting over all floor, wall, and ceiling surfaces. Each sheet/layer shall be individually applied and secured with tape, not folded over. Isolation barriers shall also be covered with two (2) independent layers (for a total of four (4) layers). Sheets shall be secured with duct tape. All joints in fire retardant polyethylene sheeting shall overlap 12" minimum. Carpeting left in place shall be covered with 3/8-inch plywood sheathing prior to plasticizing.

K. Unless otherwise specified for removal, the Contractor shall either protect all fiberglass insulation on piping, ductwork, tanks, etc. in the Work Area using two (2) layers of 6 mil fire retardant polyethylene or remove the insulation as asbestos-containing waste. If the Contractor elects to remove the fiberglass insulation, he/she shall be responsible for reinsulation, if piping is required to be insulated.

L. Frame out emergency exits. Provide double layer 6 mil fire retardant polyethylene sheeting and tape seal opening. Post as emergency exits only and mark with photoluminescent paint or signage. Provide a cutting tool on the Work Area side of exit.

M. Remove all items attached to or in contact with ACM only after the Work Area enclosure is in place. HEPA vacuum and wet wipe with amended water all removed items prior to their removal from the Work Area and before the start of asbestos removal operations.

N. Suspended ceiling tiles shall only be removed after Work Area preparation is complete. If possible, non-contaminated ceiling tiles shall be HEPA vacuumed and removed from the Work Area before asbestos removals begin. Contaminated ceiling tiles and porous ceiling tiles in work areas with ACM debris located above the ceiling shall be disposed of as RACM asbestos waste.

3.06 NEGATIVE AIR PRESSURE FILTRATION SYSTEM

A. Provide a portable asbestos filtration system that develops a minimum pressure differential of negative 0.02 inches of water column within all full enclosure areas relative to adjacent unsealed areas and that provides a minimum of four (4) air changes per hour in the Work Area during abatement and six (6) air changes for non-friable flooring and/or mastic removal.

B. Such filtration systems must be made operational after critical and isolation barriers are installed but before wall, floor, and ceilings are plasticized and shall be operated 24 hours per day during the entire Project until the final cleanup is completed and satisfactory results of the final air samples are received from the laboratory.

C. The system shall include a series of pre-filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. Provide sufficient replacement filters to replace pre-filters every 2 hours, secondary pre-filters every 24 hours, and primary HEPA filters every 600 hours of operation. HEPA filter sides shall be marked with the date of installation during all new HEPA filter installations on the Project.

D. A minimum of one (1) additional filtration unit of at least the same capacity as the primary unit(s) shall be installed and fully functional to be used during primary unit (s) filter changing and in case of primary failure.

E. If the containment area includes either the entire floor of the building or an area greater than 15,000 square feet on any floor, install a negative air cut off switch as required by NYC DEP regulations.

F. Upon electric power failure or shut-down of any filtration unit, all abatement activities shall stop immediately and only resume after power is restored and all filtration units are fully operating. For shut-downs longer than one-half hour, all openings into the Work Area, including the decontamination enclosures, shall be sealed.

G. The Contractor shall provide a manometer to verify negative air pressure. Manometers shall be read twice daily and recorded within the Supervisor's Daily Project Log.

H. There shall be at least a four (4) hour settling period after the Work Area is fully prepared, small and large projects only, as defined by 12 NYCRR Part 56, and the negative filtration units have been started to ensure integrity of the barriers.

I. Once installed and operational, the Contractor's Supervisor shall conduct daily inspections of the Work Area to ensure the airtight integrity of the enclosure and operation of the negative air system. Findings shall be recorded within the Daily Project Log. Inspections shall also be conducted on days when no abatement activities are in progress.

3.07 REMOVAL OF ASBESTOS-CONTAINING MATERIALS

A. If new (previously unidentified) suspect ACM is discovered during the course of a Project, Owner or Owner's Representative shall be notified. The Contractor is prohibited from collecting bulk samples. The Designer of Record shall have bulk samples collected by a dually certified NYS DOL asbestos inspector and NYC DEP asbestos investigator to determine asbestos content.

B. Definition of Substrate – The underlying support, foundation or base (e.g. wood lathe, wire screen, concrete, etc.) to which a single layer or multilayered system (e.g. plaster, roofing, etc.) is applied.

C. Asbestos-containing materials shall be removed in accordance with the Contract Documents and the approved Asbestos Work Plan. Only one (1) type of ACM shall be abated at a time within a Work Area. Where there are multiple types of ACM requiring abatement, applicable regulations procedures for sequential abatement shall be followed.

D. Sufficiently wet asbestos materials with a low pressure, airless fine spray of surfactant to ensure full penetration to substrate prior to material removal. Re-wet material that does not display evidence of saturation.

E. One (1) Worker shall continuously apply amended water while ACM is being removed. All layers of ACM shall be removed to the underlying substrate (e.g. concrete, roof deck, piping, etc.), unless stated otherwise in the contract documents.

F. Perform cutting, drilling, abrading, or any penetration or disturbance of asbestos-containing material in a manner to minimize the dispersal of asbestos fibers into the air. Use equipment and methods specifically designed to limit generation of airborne asbestos particles. All power operated tools used shall be provided with manufacturer equipped HEPA filtered local exhaust ventilation.

G. Upon removal of ACM from the substrate, the newly exposed surfaces shall be HEPA vacuumed and/or wet cleaned. Surfaces must be thoroughly cleaned using necessary methods and any required solvents to completely remove any adhesive, mastic, etc.

H. All removed material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate. ACM is not permitted to lie on the floor for any period of time. Cleanup of accumulations of loose debris or waste shall be performed whenever there is enough accumulation to fill a single bag or container and minimally at the end of each workshift.

I. Large components shall be wrapped in two (2) layers of 6 mil polyethylene sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with sheeting.

J. Power or pressure washers are not permitted for asbestos removal. Power or pressure washers are allowed during clean-up procedures only if stated in an approved Site-Specific Variance and allowed by the Owner or Owner's representative.

K. All open ends of pipe and duct insulation not scheduled for removal shall be encapsulated using lag cloth.

L. All construction and demolition debris determined by the Environmental Consultant to be contaminated with asbestos shall be handled and disposed of as RACM asbestos waste.

M. The use of metal shovels, metal dust pans, etc. are not permitted inside the work area.

3.08 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION AND REMOVAL PROCEDURES

A. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the Work Area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. The persons in the Work Area shall not enter the airlock. No gross removal operations are permitted when waste transfer is in progress.

B. The containers and equipment shall be removed from the airlock by persons stationed in the washroom during waste removal operations. The external surfaces of containers and equipment shall be cleaned a second time by wet cleaning.

C. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated 6 mil plastic bags or sheeting, as the item's physical characteristics demand, and sealed airtight.

D. The clean recontainerized items shall be moved into the airlock that leads to the holding area. Workers in the washroom shall not enter this airlock.

E. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from the holding area.

F. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area until transfer to the waste trailer/container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

G. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

H. Where the waste removal enclosure is part of the personal decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

3.09 WORK AREA DECONTAMINATION, CLEANING, AND CLEARANCE PROCEDURES

A. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed unless modified by a Variance.

B. First Cleaning:
   1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
   2. All surfaces in the Work Area shall be wet cleaned, except active fire protection system components that may be damaged by water. A wet-purpose shop vacuum may be used to pick up excess liquid, and may either be decontaminated prior to removal from the Work Area or disposed of as RACM asbestos waste.
   3. The Abatement Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement and document the results in the project log accordingly.
   4. The Contractor shall then apply a thin coat of encapsulant to all surfaces in the Work Area that were not the subject of removal. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The Abatement Project Monitor shall determine adequacy of coverage.
   5. After the encapsulant has been applied and the required waiting/settling and drying time has elapsed, the first layer of fire retardant polyethylene sheeting shall then be removed and bagged as RACM asbestos waste.

C. Second Cleaning
   1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned. Wet cleaning of active fire protection system components is not necessary if damage may occur.
   2. The Abatement Project Monitor shall conduct a second visual inspection of the Work Area for cleanliness and document the results in the project log accordingly.
   3. After the required waiting/settling and drying time has elapsed, the second layer of fire retardant polyethylene sheeting shall be removed and bagged as RACM asbestos waste.

D. Third Cleaning
   1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned. Wet cleaning of active fire protection system components is not necessary if damage may occur.
   2. After the required waiting/settling and drying time has elapsed, the Abatement Project Monitor shall conduct a third visual inspection of the Work Area for cleanliness and document the results in the project log accordingly.
   3. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the APM provided no visible asbestos debris/residue; pools of liquid, or condensation remains. NOTE: TEM samples should be used vs. PCM if

demolition or other dust-generating evolutions are taking place in adjacent areas, as evident from excessive loading.

4. Upon receipt of satisfactory final clearance air sampling results, the negative air pressure equipment can be shut down and the isolation and critical barriers removed and bagged as RACM asbestos waste.

E. After isolation and critical barriers are removed, the Abatement Project Monitor and Contractor's Supervisor shall inspect the Work Area for cleanliness. If necessary, additional cleaning shall be performed by the Contractor as directed by the Abatement Project Monitor. Following the satisfactory inspections, the decontamination enclosures shall be removed.

F. As a result of any visual inspection by the Abatement Project Monitor or should air sampling results indicate high fiber levels, the Contractor will clean or reclean the affected areas at no additional expense to owner or owner's representative. Clearance air samples shall be collected again if previous results failed, at no additional expense to owner or owner's representative. The Contractor shall be back-charged for the additional clearance air sample collection and analysis.

3.10 TENT ENCLOSURES

A. Tent enclosures may only be used where specifically permitted by applicable regulations following 1-105 Tent Procedures or a Variance.

B. Tent procedures must be limited to the removal of less than 260 linear feet and 160 square feet of ACM on any individual floor and must not result in disturbance of ACM during tent erection.

B. The Contractor shall restrict access to the immediate area where tent removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

C. Personal and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size. Remote personal decontamination enclosure may be allowed by variance.

D. The Work Area shall be precleaned. All objects and equipment that will remain in the restricted area during abatement shall be sealed with two (2) layers of six mil fire retardant polyethylene and tape.

E. The tent shall be a single use barrier constructed with a rigid frame and at least two (2) layers of 6 mil fire retardant polyethylene unless one (1) layer of 6 mil fire retardant polyethylene is otherwise permitted by applicable regulations. All seams shall be sealed airtight using duct tape and/or spray adhesive.

F. The tent shall be constructed with at least one (1) airlock for worker/waste egress.

G. A monometer shall be used for all enclosures.

H. Negative air shall be maintained at four (4) air changes per hour for non-friable and glovebag abatement tent enclosure work areas. Eight (8) air changes shall be maintained for friable gross removal tent enclosure work areas.

I. OSHA compliance air monitoring is required per section 1.09.

J. ACM removal shall follow procedures defined in section 3.07.

K. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed in the wash room and shall then be placed in a second bag/container before being transferred to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts. These carts shall be held in the holding area until transfer to the waste storage container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

L. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
2. All surfaces in the Work Area shall be wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
3. The asbestos supervisor shall perform a visual inspection of the work area(s) followed by the APM prior to applying the encapsulation.
4. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces covered with plastic in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.
5. After the waiting/settling/drying time requirements have elapsed, the Abatement Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
6. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the APM.
7. Upon receipt of satisfactory final clearance air sampling results, the tent shall be collapsed into itself, placed in suitable disposal bags, and transported to the waste decontamination enclosure. Isolation and critical barriers shall then be removed and bagged as RACM asbestos waste followed by satisfactory visual inspections by the project supervisor and the APM for cleanliness.

3.11 GLOVEBAG REMOVAL

A. Glovebag removals may only be used as specifically permitted by applicable regulations or a Variance following 1-105 Glovebag Procedures. Glovebags may only be used on piping.

B. In addition to conformance with applicable regulations and Variances, glovebag removals are only permitted to be conducted within full containments or tent enclosures complying with these specifications.

C. The Contractor shall restrict access to the immediate area where tent/glovebag removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

D. Personal and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size. Remote personal decontamination enclosure may be allowed by variance.

E. Glovebag removals shall utilize commercially available glovebags of at least 6 mil thickness. Use shall be in accordance with the manufacturer's instructions and the following minimum requirements:

1. The sides of the glovebag shall be cut to fit the size pipe being removed. Tools shall be inserted into the attached tool pocket.
2. The glovebag shall be placed around the pipe and the open edges shall be folded and sealed with staples and duct tape. The glovebag shall also be sealed at the pipe to form a tight seal.
3. Openings shall be made in the glovebag for the wetting tube and HEPA vacuum hose. The opening shall be sealed to form a tight seal.
4. All glovebags shall be smoke tested by the Abatement Project Monitor under negative pressure using the HEPA vacuum before removal operations commence. Glovebags that do not pass the smoke test shall be resealed and then retested.
5. After first wetting the materials to be removed, removal may commence. ACM shall be continuously wetted. After removal of the ACM, the piping shall be scrubbed or brushed so that no visible ACM remains. Open ends of pipe insulation shall be encapsulated.
6. After the piping is cleaned, the inside of the glovebag shall be washed down and the wetting tube removed. Using the HEPA vacuum, the glovebag shall be collapsed and then twisted and sealed with tape with the ACM at the bottom of the bag.
7. A disposal bag shall be placed around the glovebag that is then detached from the pipe. The disposal bag is then sealed and transferred through the wash room to the waste storage container.

F. After glovebag removals are complete, containment/tent decontamination procedures shall be followed.

3.12 REMOVALS OF EXTERIOR NON-FRIABLE ACM

A. Except as modified by this section, removal of exterior non-friable ACM shall conform to all provisions of this specification and 1-107 Foam Procedures for Roof Removal .

B. Unless Variances have been otherwise obtained, removals shall be conducted in accordance with the provisions of applicable regulations.

C. Establish and maintain a warning line system and comply with OSHA 29 CFR 1936, Subpart M, Fall Protection, when applicable.

C. The Work Area shall be the area from which ACM materials are being removed and shall extend 25 feet from the perimeter of the removal area.

D. Non-certified Workers are not allowed in the Work Area until the Work Area is cleared by the Abatement Project Monitor.

E. Personal and waste decontamination enclosures shall be constructed at a location in accordance with the approved Work Plan and applicable regulations. Unless located outside the Work Area, decontamination enclosures are not permitted to be constructed on the roof. Remote personal decontamination enclosure may be allowed by variance.

F. All openings (including but not limited to operable windows, doors, hatches, vents, ducts, and grilles) one (1) story above, one (1) story below, and within 25 feet of the work area shall be sealed with two (2) layers of 6 mil fire retardant polyethylene.

G. The removal of the ACM may require the use of scrapers, solvents, mastic removal chemicals, or other methods/procedures to ensure complete removal. Refer to Section 2.10 for other Power tool requirements.

H. The Contractor is required to provide temporary protection of the building (i.e. roof, window openings, construction joints, etc.) at the end of each Work shift so as to maintain the building in a watertight condition.

I. All asbestos waste generated shall be containerized in the work area, prior to transfer to waste storage trailer/container/dumpster. No waste shall remain in the work area at the end of each work shift. All waste shall be disposed of as RACM asbestos waste including projects where waste transfer procedures are modified by Site Specific Variance.

J. Waste Containers used for waste storage shall be lined with two (2) layers of six mil polyethylene and shall have a hard top (fully enclosed). Canvas cover or open topped dumpsters shall not be used to store asbestos waste unless permitted by a Site-Specific Variance.

K. Personal protective equipment, including respirators, shall be utilized and worn during all removal operations until the Work Area is cleared by the Abatement Project Monitor.

L. If air samples collected during abatement indicate any airborne asbestos fiber concentration(s) at or above 0.01 f/cc or the background level, whichever is greater, Work shall be stopped immediately and Work methods shall be altered to reduce the airborne asbestos fiber concentration(s).

M. Abatement will not be performed under bad weather (e.g. precipitation, high winds, temps below 32 degrees Fahrenheit, etc.).

N. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed:
   1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned.
   2. The Abatement Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completeness of abatement, prior to conducting final air clearance.
   3. Upon obtaining satisfactory clearance air sample results, the isolation and critical barriers shall be removed and bagged as RACM asbestos waste. Following this, the decontamination enclosures shall be removed.

3.13 NON-FRIABLE FLOORING AND/OR MASTIC REMOVALS

A. The following procedures may only be used for the removal of non-friable flooring and/or mastic materials using foam or viscous liquid (non-toxic) following 1-108 Foam/Viscous Liquid use in Flooring Removal These procedures shall not apply to beadblaster use or other abrasive abatement methods.

B. The Contractor shall restrict access to the immediate area where removals are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

C. Personal and waste decontamination enclosures shall be utilized and shall be constructed at a location in accordance with the approved Work Plan. Remote personal decontamination enclosure may be allowed by variance.

D. The Work Area shall be prepared per applicable regulations.

E. Negative air shall be maintained at six (6) air changes per hour.

F. OSHA compliance air monitoring is required per section 1.09.

G. ACM removal shall follow procedures defined in section 3.07.

H. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed before being passed into the wash room for double- bagging. The bags or containers shall then be transferred to the waste storage container. All transfer of waste bags and containers outside the Work Area shall be in watertight carts.

I. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.
   1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
   2. All surfaces in the Work Area shall be wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
   3. The Abatement Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement.
   4. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces covered with plastic in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The Abatement Project Monitor shall determine adequacy of coverage.
   5. After the encapsulant has been applied and the required waiting/settling and drying time has elapsed, aggressive final clearance air sampling shall then be conducted by the APM.
   6. Upon receipt of satisfactory final clearance air sampling results, the isolation and critical barriers shall be removed. Following this, the decontamination enclosures shall be removed.

3.14 RESTORATION OF UTILITIES, FIRESTOPPING, AND FINISHES

A. If final inspection is required by NYC DEP regulations or Variance, Owner or Owner's representative's Design Professional shall be responsible to submit the A-TR1 form to NYC DEP.

B. After final clearance, remove locks and restore electrical and HVAC systems. All temporary power shall be disconnected, power lockouts removed and power restored. All temporary plumbing shall be removed.

C. Finishes damaged by asbestos abatement activities including, but not limited to, plaster/paint damage due to duct tape and spray adhesives, and floor tile lifted due to wet or humid conditions, shall be restored prior to final payment.
   1. Finishes unable to be restored shall be replaced under this Contract.
   2. All foam and expandable foam products and materials used to seal Work Area openings shall be completely removed upon completion of abatement activities.

D. All penetrations (including, but not limited to, pipes, ducts, etc.) through fire rated construction shall be firestopped using materials and systems tested in accordance with ASTM E814 on Projects where reinsulation is part of the required work.

PART 4 DISPOSAL OF ASBESTOS WASTE

4.01 TRANSPORTATION AND DISPOSAL SITE

A. The Contractor's Hauler and Disposal Site shall be approved by the Owner or Owner's representative. All waste generated during the asbestos project shall be disposed of as RACM asbestos waste.

B. The Contractor shall give 24 hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and APM are present and the APM authorizes the release of the waste as described herein.

C. All waste generated as part of the asbestos project shall be removed from the site within ten (10) calendar days after successful completion of all asbestos abatement work.

D. Upon arrival at the Project Site, the Hauler must possess and present to the APM a valid US DOT Hazardous Waste Transporter Permit, New York State Department of Environmental Conservation Part 364 Asbestos Hauler's Permit and any New York City required permit/license. The APM may verify the authenticity of the hauler's permit with the proper authority.

E. The Hauler, with the Contractor and the APM, shall inspect all material in the transport container prior to taking possession and signing the Asbestos Waste Shipment Records.

F. Unless specifically approved by the Owner or Owner's representative, the Contractor shall not permit any off-site transfers of the waste or allow the waste to be transported or combined with any other off-site asbestos material. The Hauler must travel directly to the disposal site as identified on the notifications with no unauthorized stops.

G. The APM shall verify the landfill to be used for waste disposal with the waste transporter (driver) and Contractor prior to the waste trailer/dumpster leaving the site. The APM shall confirm the waste transporter firm and landfill are listed on the regulatory notifications for the project and the waste transport vehicle license number is listed on the current NYS DEC Waste Transporter permit.

4.02 WASTE STORAGE CONTAINERS

A. All waste containers shall be fully enclosed with a hard top and be lockable (i.e. enclosed dumpster, trailer, etc.). No open containers will be permitted on-site (i.e. open dumpster with canvas cover, etc.) unless specifically permitted by a Variance. When asbestos contaminated waste must be kept on the work site overnight or longer, it shall be double bagged and stored in accordance with Federal, State, and local laws, including New York City Department of Sanitation Title 16, Chapter 8 of the Rules of New York City.

B. The APM shall verify that the waste storage container and/or truck tags (license plates) match the information listed on the New York State Department of Environmental Conservation Part 364 permit. Any container not listed on the permit shall be removed from the site immediately.

C. The container shall be plasticized and sealed with two (2) layers of 6 mil polyethylene. Once on site, it shall be kept locked at all times, except during load out. The waste container shall not be used for storage of equipment or contractor supplies.

D. While on-site, the container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

E. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be displayed on both sides and back of the container. The permit number shall be at least 3 inches high and in a color that contrasts with the container / vehicle background color.

F. The container is not permitted to be loaded unless it is properly plasticized, has the appropriate danger signage affixed, and has the permit number appropriately displayed on the container.

G. Waste generated off-site or from a different project is not permitted to be brought onto the Project site and/or loaded into the waste container.

H. All asbestos waste removed from the Project site shall be transported directly to the disposal site without any additional waste being added to the container during transport.

I. Owner or Owner's representative may initiate random checks at the Disposal Site to ensure that the procedures outlined herein are complied with.

4.03 OWNER'S REPRESENTATIVE AND HAULER'S ASBESTOS WASTE SHIPMENT RECORDS

A. An Asbestos Waste Shipment Record shall be provided by the Owner's representative (Appendix A) and shall be utilized in conjunction with the Asbestos Hauler's Waste Shipment Record.

B. Owner's representative's Waste Shipment Record and the Hauler's Waste Shipment Record shall be completed by the Contractor and verified by the APM that all the information and amounts are accurate and the proper signatures are in place.

C. The Waste Shipment Records shall have the appropriate signatures of the APM, the Contractor, and the Hauler representatives prior to any waste being removed from the site.

D. Copies of the completed Owner's representative Waste Shipment Record and the Hauler's Waste Shipment Record shall be retained by the APM and the Contractor and shall remain on site for inspection.

E. The Contractor shall utilize the Waste Shipment Record Log provided by Owner or Owner's representative. This log shall be maintained by the Project Supervisor and shall be kept on site at all times. (See Appendix B.)

F. Upon arrival at the Disposal Site, Owner's representative Waste Shipment Record and the Hauler's Waste Shipment Record shall be signed by the Disposal Facility operator to certify receipt of ACM covered by the Waste Shipment Record.

G. The Disposal Facility operator shall return the original Owner's representative's Waste Shipment Record and the Hauler's Waste Shipment Record to the Contractor.

H. The Contractor shall forward copies of Owner's representative's Waste Shipment Record and the Hauler's Waste Shipment Record to the APM within 14 days of the waste container being

removed from the site. Failure to do so may result in payment being withheld from the Contractor.

I. Originals of all Waste Shipment Records, Contractor Acknowledgement Statements, and signed / notarized letters shall be submitted by the Contractor to Owner or Owner's representative with the final close-out documentation.

END OF SECTION 02 82 00

APPENDIX A

SAMPLE ASBESTOS WASTE SHIPMENT RECORD

NEW YORK STATE OF OPPORTUNITY. DASNY

Asbestos Waste Shipment Record
Dormitory Authority State of New York
515 Broadway
Albany, New York 12207-2964

Record No.
A4001

DASNY PROJECT NUMBER: _____

Responsible Agency: EPA Region II - Air Branch
290 Broadway, 21st Floor, New York, NY 10007-1866

DASNY Project Name: _____

Generator Facility Name: _____

Generator Facility Address: _____

_____

DASNY Contact Person: _____ Phone #: _____

Asbestos Abatement Contractor Firm Name & Address: _____

_____

Contact Person _____ Phone # _____ Asbestos License # _____

Asbestos Consultant/Monitoring Firm Name and Address: _____

_____

Contact Person _____ Phone # _____ Asbestos License # _____

Asbestos Abatement Contractor/Consultant Certification: I hereby declare that the contents of this consignment are fully described below and are packed, marked, and labeled in accordance with applicable governmental regulations.

Type of Material: _____ RQ, NA2212, RACM Asbestos, 9, PGIII

Type & Size of Container: _____ Type of Packaging & Volume (yd^3 or m^3): _____

Asbestos Abatement Contractor Name: _____

Date: _____ Signature: _____

Asbestos Consultant/Monitor Name: _____

Date: _____ Signature: _____

Transporter/Transfer Facility Acknowledgement of Receipt of Material:

Transporter #1 Company Name, Address, Phone #: _____

Name: _____ Signature: _____

Date & Time of Departure _____ State Transporter Permit # _____

Truck/Trailer License # _____ USDOT Permit # _____

Discrepancies Noted: _____

Transfer Facility (if applicable) Company Name, Address, Phone #: _____

Name: _____ Signature: _____

Date & Time of Departure _____ Permit (NYSDEC #) _____

Discrepancies Noted: _____

Transporter #2 (if applicable) Company Name, Address, Phone #: _____

Name: _____ Signature: _____

Date & Time of Departure _____ State Transporter Permit # _____

Truck/Trailer License # _____ USDOT Permit # _____

Discrepancies Noted: _____

Disposal Facility Owner or Operator: I hereby certify receipt of the asbestos waste covered by this shipment record including discrepancies noted above.

Disposal Facility Name, Address and Phone #: _____

_____

Date & Time of Arrival: _____

Name: _____ Signature: _____

Disposal facility to return completed waste shipment record (white copy) to the Asbestos Abatement Contractor listed above.

White: DASNY **Green**: Disposal Facility **Canary**: Transporter **Pink**: Consultant **Goldenrod**: Contractor

SAMPLE

NEW YORK STATE OF OPPORTUNITY. | DASNY

Asbestos Waste Shipment Record
Dormitory Authority State of New York
515 Broadway
Albany, New York 12207-2964

Record No.
A4001

DASNY PROJECT NUMBER: 12349999

Responsible Agency: EPA Region II - Air Branch
290 Broadway, 21st Floor, New York, NY 10007-1866

DASNY Project Name: Lake Placid University Snow Hall Renovation

Generator Facility Name: Lake Placid University

Generator Facility Address: 1234 Above and Beyond Ln, Lake Placid NY 12340

DASNY Contact Person: DASNY Construction Project Manager Phone #: (###) ###-####

Asbestos Abatement Contractor Firm Name & Address: QPN Abatement Services, Inc.
1234 Elm Street, Albany NY 12234

Contact Person Owner or Project Manager Phone # (###) ###-#### Asbestos License # NYSDOL License #

Asbestos Consultant/Monitoring Firm Name and Address: WUV Architecture & Engineering, Inc.
1130 Main Street, Albany NY 12234

Contact Person Project Manager Phone # (###) ###-#### Asbestos License # NYSDOL License #

Asbestos Abatement Contractor/Consultant Certification: I hereby declare that the contents of this consignment are fully described below and are packed, marked, and labeled in accordance with applicable governmental regulations.

Type of Material: TSI & Miscellaneous RQ, NA2212, RACM Asbestos, 9, PGIII

Type & Size of Container: 100 yard trailer Type of Packaging & Volume (yd³ or m³): 2x 6 mil Bags

Asbestos Abatement Contractor Name: Taylor Doe
Date: 1/1/2021 Signature: X——

Asbestos Consultant/Monitor Name: Riley Smith
Date: 1/1/2021 Signature: X——

Transporter/Transfer Facility Acknowledgement of Receipt of Material:

Transporter #1 Company Name, Address, Phone #: Zeus Hauling, 2234 Spring Lane, Albany, NY 12234 (###) ###-####
Name: Driver Name Signature: X——
Date & Time of Departure 1/1/2021 @ 10:22 AM State Transporter Permit # State Permit #
Truck/Trailer License # ABC 2679 / XYZ 3489 USDOT Permit # Permit #
Discrepancies Noted: TBD by Transporter (if applicable)

Transfer Facility (if applicable) Company Name, Address, Phone #: SWS Env Solutions, Inc. 255 Main Street, Syracuse NY 12234 (###) ###-####
Name: Transfer Facility Representative Signature: X——
Date & Time of Departure 1/2/2021 @ 4:13 PM Permit (NYSDEC #) NYSDEC Permit #
Discrepancies Noted: TBD by Transfer Facility (if applicable)

Transporter #2 (if applicable) Company Name, Address, Phone #: See above for example text
Name: Signature: X——
Date & Time of Departure State Transporter Permit #
Truck/Trailer License # USDOT Permit #
Discrepancies Noted:

Disposal Facility Owner or Operator: I hereby certify receipt of the asbestos waste covered by this shipment record including discrepancies noted above.
Disposal Facility Name, Address and Phone #: XYZ Landfill, 99 Plankton St. Shoretown, NY 14567 (###) ###-####

Date & Time of Arrival: 1/1/2021 @ 3:45 PM
Name: Disposal Facility Representative Signature: X——

Disposal facility to return completed waste shipment record (white copy) to the Asbestos Abatement Contractor listed above.

White: DASNY **Green:** Disposal Facility **Canary:** Transporter **Pink:** Consultant **Goldenrod:** Contractor

APPENDIX B

WASTE SHIPMENT RECORD LOG

WASTE SHIPMENT RECORD LOG

Facility Name: _____

Building Name/Number: _____

Project Name: _____

Owner Project Number: _____

Asbestos Contractor: _____

Asbestos Project Monitor: _____

Load No.	Hauler Name	NYSDEC #	License Plate No.	Size of Container	Disposal Facility Name	Date Depart from Site	Date Received at Disposal Site	Date Shipment Record Returned

Comments:

Page _____ of _____

APPENDIX C

CONTRACTOR’S ACKNOWLEGEMENT STATEMENT

CONTRACTOR'S ACKNOWLEDGEMENT STATEMENT

Re: Abatement of Asbestos-containing Materials

_____
(Owner Project Title)

_____
(Project Location-Campus, Building ID, Floor)

_____ _____
(Owner Project Number) Project Date(s) (Start/End)

_____
(Asbestos Contractor)

In consideration of the following individuals' employment in connection with the abatement, handling, and disposal of RACM asbestos-containing materials at the referenced Project, I hereby certify that the employees: a) have received the medical examinations required by OSHA 29 CFR 1926.1101; b) have been fit tested specifically for respirators used on the Project; and c) have received training as required by OSHA 29 CFR 1926.1101 in the proper handling of asbestos-containing materials, including the health implications and risks involved, as well as the use and limitations of the respiratory equipment to be used.

Employee Name (Supervisor and Handlers) (Print Name)	Asbestos NYS DOL Certificate Number	Asbestos NYC DEP Certificate Number
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		

Project Supervisor: _____ _____
Print Name Signature

(Notary block here) Notary Name: _____

APPENDIX D

NYS DOL DRAFT VARIANCES

SECTION 02 83 10

LCP/LBP DISTURBANCES USING OSHA LEAD SAFE WORK PRACTICES

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. The work covered by this Specification shall consist of furnishing all labor, materials, tools, and equipment necessary to control and mitigate potential lead-based paint (LBP) and lead-containing paint (LCP) material hazards during demolition/renovation activities pertaining to the project **Transformer Rooms Nos. 1 & 2 – Bldg. 1 Bronx Psychiatric Center** at 1500 Waters Place, Bronx, NY 10461 DASNY Project Number 3816609999

This Specification shall be used as a guideline for Contractors who complete the demolition/renovation activities pertaining to this Project**,** as detailed within Section 1.01, B of this Specification. The intent of this Specification is to remain in conformance with Occupational Safety and Health Administration (OSHA) Regulation 29 CFR 1926.62 "Lead Exposure in Construction" and to maintain an airborne concentration of lead-dust below the Action Level. This Specification is written to provide pertinent information from OSHA for reference, and specifically regarding lead safe work practices.

B. The following is a detailed listing of identified LBP and/or LCP, above the laboratory and/or device detection limit:

Location	Component	Substrate	Concentration	Color	Condition
To Be Determined					
To Be Determined					
To Be Determined					
To Be Determined					
To Be Determined					

It should be noted that several components tested did contain minimal lead-concentrations below the EPA threshold level of 1.0 mg/cm^2 or 0.5% by weight for classification as LBP and are considered lead-containing paints or coatings by 29CFR 1926.62. OSHA does not recognize a minimum limit for lead concentration in paint for the purpose of disturbance. Personal Air monitoring of workers performing demolition/cleaning/disturbance of painted surfaces shall be completed as required by OSHA. Items containing any amount of lead concentration are considered lead-containing paints or coatings per 29 CFR 1926.62. See project environmental survey report for lead paint reports. Lead paint summary information is located within the Appendices of this specification.

For Storage, Transportation and Disposal requirements, refer to the DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 028600.

C. Manual demolition, scraping and sanding of lead-based paint or lead containing paint coated surfaces, power tool cleaning with dust collection systems shall be performed in conjunction with engineering and work practice controls meeting the requirements of 29 CFR 1926.62(e)(1).

D. Components with LBP and LCP shall be removed intact to the extent practicable. A 6-mil polyethylene drop cloth shall be placed around and/or beneath the component, prior to its removal, to catch any paint chips that may become dislodged. Intact components shall be wrapped in a layer of clear polyethylene sheeting prior to movement to the disposal container. The area around the component removal shall be wet wiped and high-efficiency particulate air (HEPA) filter vacuumed, including the tent enclosure (if applicable). The polyethylene sheeting shall be carefully folded in on itself and placed in a clear disposal bag and sealed closed. All debris shall be properly disposed of in accordance with the respective waste

stream Resource Conservation Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) testing results and applicable hazardous waste characteristic testing results.

E. Chemical stripping may be used for LBP and LCP removal on surfaces that will be subjected to welding, cutting, torch burning or where it is the only acceptable procedure. No chemical strippers containing methylene chloride shall be used by the Contractor on this project. SDS for stripping and neutralizing chemicals must be reviewed and approved by the Consultant prior to use and a copy shall be posted at the site.

F. The Contractor's use of a subcontractor (must be approved) shall not relieve the Contractor of full responsibility for the work to be performed.

G. The Contractor shall complete an exposure assessment that is compliant with OSHA.for LCP & LBP disturbances.

H. The Contractor must provide to his workers the following: Respiratory protection in accordance with the Contractor's Respiratory Protection Program, personal protective clothing, lead-free change areas, hand washing/shower facilities, blood lead level monitoring and training per 29 CFR 1926.62. The Contractor shall provide additional respiratory protection as indicated by the SDS' as necessary, for any chemical products utilized for the removals. **Respiratory Protection is required for all LBP disturbances**.

I. The Contractor shall ensure that any HVAC equipment intakes within and around the control areas are protected by shutting down the units. The Contractor shall alter the size and extent of the isolation barriers as necessary due to weather conditions, functional space use and density of building occupants in the vicinity, as required.

1.02 DEFINITIONS, REGULATIONS & REFERENCE STANDARDS

A. Definitions (excerpted from 29 CFR 1926.62)

1. **Action Level:** Employee exposure, without regard to the use of respirators, to an airborne lead concentration of 30 micrograms per cubic meter (30 ug/m^3) calculated as an 8-hour time-weighted average (TWA). Exceedance of the Action Level requires blood lead monitoring implementation.
2. **Competent Person:** One who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them. For LBP work, the Competent Person shall also be the on-site Supervisor/Foreman in-charge of the work crew.
3. **Exposure Assessment:** Each employer who has a workplace or operation covered by 29 CFR 1926.62 shall initially determine if any employee may be exposed to lead at or above the Action Level.
4. **Lead:** Metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.
5. **Lead-Based Paint (LBP):** Paint, varnish, shellac or other coatings on surfaces that contain 1.0 milligram per square centimeter (1.0 mg/cm^2) or more lead or 0.5% or more lead by weight. The concentration 0.5% is equivalent to:
    a. 5,000 parts per million (5,000 ppm) and;
    b. 5,000 milligrams per kilogram (5,000 mg/kg)
6. **Lead-Containing Paint (LCP):** Paint, varnish, shellac or other coatings on surfaces that contain measurable concentrations less than 1.0 milligrams per square centimeter (1.0 mg/cm^2) lead or less than 0.5% or more lead by weight including equivalents less than 5,000 ppm and 5,000 mg/kg. This does not include paint, varnish, shellac or other

coatings on surfaces where the concentration is below the detection limit of the respective laboratory method / device.

7. **LBP Inspection:** A surface by surface investigation to determine the presence of LBP. A report is then issued that identifies if there is LBP present and where it is located.

8. **Lead Risk Assessor:** EPA trained and certified to conduct LBP inspections and collect samples for the presence of lead in air, dust and soil for the purposes of abatement clearance testing as well as conduct risk assessments.

9. **Permissible Exposure Limit (PEL):** The limit above which the employer shall not expose workers to lead. The current PEL for lead is 50 ug/m^3 over an eight-hour time-weighted-average for all employees covered.

B. General Requirements

The Contractor is required to perform all work related to this project in strict accordance with all applicable Federal, State and Local regulations.

Where these requirements vary, the most stringent shall apply.

C. Specific Requirements

1. American National Standards Institute (ANSI)
ANSI Z9.2-79 – Fundamentals Governing the Design and Operation of Local Exhaust Systems.

2. Z88.2-80 – Practice for Respiratory Protection.

3. Code of Federal Regulations (CFR)

4. 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response.

5. 29 CFR Part 1910.134 – Respiratory Protection.

6. 29 CFR Part 1910.146 – Confined Space Entry Program.

7. 29 CFR Part 1910.1025 – Lead (General Industry Standard).

8. 29 CFR Part 1910.1200 – Hazard Communication.

9. 29 CFR Part 1926.55 – Gases, Vapors, Fumes, Dusts and Mists.

10. 29 CFR Part 1926.57 – Ventilation.

11. 29 CFR Part 1926.62 – Lead (Construction Industry Standard).

12. 40 CFR Part 260 – Hazardous Waste Management Systems: General.

13. 40 CFR Part 261 – Identification and Listing of Hazardous Waste.

14. 40 CFR Part 262 – Generators of Hazardous Wastes.

15. 40 CFR Part 263 – Transporters of Hazardous Waste.

16. 40 CFR Part 264 – Owners and Operators of Hazardous Waste Treatment, Storage & Disposal Facilities.

17. 40 CFR Part 265 – Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage & Disposal Facilities.

18. 40 CFR Part 268 – Land Disposal Restrictions.

19. 40 CFR Part 745 – Lead; Requirements for Lead-Based Paint Activities in Child Occupied Facilities

20. 49 CFR Parts 170-178 – Department of Transportation Regulations.

21. New York Codes of Rules and Regulations (NYCRR)
    a. 6 NYCRR Part 360 – Solid Waste Regulations.
    b. 6 NYCRR Part 364 – Waste Transporter Permits.
    c. 6 NYCRR Part 370-373 – Hazardous Waste Regulations.

22. Steel Structures Painting Council (SSPC)
    a. SSPC-Guide 6 – Guide for Containing Debris Generated During Paint Removal Operations.
    b. SSPC-Guide 7 – Guide for the Disposal of Lead-Contaminated Surface Preparation Debris.

23. Underwriters Laboratories. Inc. (UL)
    a. UL 586 – High Efficiency, Particulate Air Filter Units.

1.03 QUALITY ASSURANCE

The Contractor's Competent Person is required to maintain a copy of the following documents:

A. Qualifications

1. Contractor: Documentation that the Contractor has prior experience on LBP and LCP activity projects similar in nature and extent to ensure the capability to perform the required work procedures in a satisfactory manner.

2. Competent Person: Contractor's Certification that the Contractor's full-time on-site Competent Person meets the Competent Person requirements of 29 CFR Part 1926.62 and is experienced in administration and supervision of LBP and LCP activity projects, including work practices, protective measures for building and personnel, disposal procedures, etc. The Competent Person shall also be the project Supervisor.

3. Contractor's Testing Laboratory: Documentation that the laboratory performing the OSHA personal sample analysis is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that it is listed proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT), and is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory. Certification shall include accreditation for heavy metal analysis, and a Quality Assurance and Quality Control Program. Currently, the American Association for Laboratory Accreditation (ASLA) and the American Industrial Hygiene Association (AIHA) are the EPA recognized laboratory accreditors. Documentation shall include the date of accreditation or reaccreditation.

4. Blood Lead Testing Laboratory: Adequate documentation that the laboratory is certified to perform blood lead analysis for the State where the work site is located.

B. Respiratory Protection Devices

Manufacturer's NIOSH certification for respiratory protection devices utilized on the site.

C. Cartridges, Filters, and Vacuum Systems

Manufacturer's NIOSH certification of approval of respirator cartridges (organic vapor, acid gas, mist, dust, high efficiency particulate); High Efficiency Particulate Air (HEPA) filtration capabilities for all cartridges, filters, and HEPA vacuum systems.

D. Medical Examination and Records

1. Certification that employees who are involved in LBP and LCP work have received medical examinations and will receive continued medical surveillance, including blood lead level monitoring, as required by 29 CFR Part 1926.62, 29 CFR Part 910.1200, 29 CFR Part 1910.120 and by the state and local regulations pertaining to such work. Records shall be retained, at Contractor expense, in accordance with 29 CFR Part 1910.20.

2. Provide medical surveillance to workers until exposure monitoring reveals that workers are not exposed to airborne lead at or above the Action Level of 30 ug/m^3. This consists of a blood test measuring the level of lead and zinc protoporphyrin by a licensed physician. Further testing and medical exams may be necessary depending on the results of initial blood tests and/or the initial exposure assessment.

E. Training

Training certification shall be maintained and posted at the site, prior to the start of work involving LBP and LCP work, for all of the Contractors' workers, supervisors and Competent Person. Training shall meet the requirements of 29 CFR Part 1926.62, 29 CFR Part 1926.59, 29 CFR Part 1910.1200 and 49 CFR 172. Training shall be provided prior to the time of job assignment and as required by the regulations thereafter. The project specific training shall, at a minimum, include the following.

1. Lead Paint Awareness Training as per 29 CFR 1926.62.

2. Specific nature of the operation, which could result in exposure to lead.

3. Purpose, proper selection, fitting, use and limitations of respirators.

4. Purpose and description of the medical surveillance program and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females, hazards to the fetus and additional precautions for employees who are pregnant).

5. Relevant engineering controls and good work practices.

6. The contents of any compliance plan in effect.

7. Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

8. The employee's right of access to records under 29 CFR part 1910.20.

F. Respiratory Protection Program

1. Furnish each employee required to wear a negative pressure respirator or other appropriate type with a respirator fit test at the time of initial fitting and at least every 12 months thereafter as required by 29 CFR Part1910.134 and 29 CFR Part 1926.62.

2. Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR Part 1910.134 and 29 CFR Part 1926.62.

3. All workers are required to don respirator(s) with the appropriate level of protection commensurate with the airborne concentrations of lead in which they are working. The

level of protection will be determined by the Contractor, based on objective air monitoring data.

1.04 ON-SITE SUBMITTALS

The Contractor's Competent Person is required to maintain a copy of the following documents on-site:

A. Certifications

Prior to the start of work, maintain the on-site, required certifications listed above in Section 1.03.

B. Equipment List

Maintain a list of equipment items to be used in the work, including brand names, model, capacity, performance characteristics, quantities, and other pertinent information.

C. LBP and LCP Safe Work Practice Compliance Plan

The contractor shall prepare a detailed LBP and LCP Safe Work Practice Compliance Plan that identifies the work procedures, health and safety measures to be used in LBP and LCP work procedures; and that addresses spill prevention, containment, and emergency response procedures. The Plan shall be maintained on-site. The plan shall address the methods to be undertaken during LBP and LCP disturbances to include all requirements of 1926.62(e)(2)(ii) including, but not limited to the following key elements:

1. LBP and LCP containment methods to control employee exposure to lead at or below the permissible exposure limit.
2. Training requirements as required by Federal, State, and Local regulations.
3. Unique problems associated with the LBP and LCP project.
4. Sketch of location and details of LBP and LCP control areas, and decontamination procedures. Refer to the DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 028600 for waste storage area requirements.
5. Eating, drinking, smoking, and rest room procedures.
6. Sequencing of LBP and LCP related work.
7. Personal protective equipment and respiratory protection program, including controls.
8. Engineering controls, containment structures and safety measures. Refer to 1.07, D of this Section for HEPA filtered negative air unit requirements, as applicable.
9. Worker exposure assessment procedures.
10. Work Practice controls.
11. Housekeeping.
12. Hygiene facilities and practice.
13. Medical surveillance, including medical removal procedures.
14. Sampling, testing and analytical methods for personal air sampling requirements of 29 CFR Part 1926.62. Procedures must include frequency, locations, sampling, and analytical methods to be used.
15. Contractor to include the segregation and minimization of lead waste streams from construction and demolition waste in their lead-based paint management plan. For demolition projects, US EPA requires that the amount of hazardous waste to be

disposed be minimized. Therefore, the Contractor shall indicate the specific waste streams to be generated in the minimization and segregation plan.

16. Visual clearance log for each control area that is maintained by the Contractor's Competent Person.

D. Compliance Program

Contractor's Compliance Program prepared in accordance with 29 CFR Part 1926.62 (e) (2) shall be maintained on-site.

E. Sampling and Laboratory Analysis Reports

Maintain on-site all field sampling logs for all personal air samples taken, including copies of laboratory analysis reports and chain of custody records for all sample analyses.

F. Competent Person certification per Sections 1.02 and 1.03.

1.05 CLOSEOUT SUBMITTALS: At the conclusion of the LBP/LCP project, the Contractor shall provide the following closeout submittals:

1. Refer to DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 02 86 00 for closeout document requirements related to the disposal of hazardous waste, if applicable.

1.06 POSTED WARNINGS & NOTICES

The following regulations, warnings and notices shall be posted at the work site in accordance with 29 CFR Part 1926.62.

A. Regulations

A copy of applicable Federal, State, and Local regulations shall be maintained at the work site.

B. Warning Signs

Warning signs shall be provided at approaches to LBP/LCP control areas. Signs shall be located at a distance from the LBP and LCP control areas that will allow personnel to read the sign and take the necessary protective actions required before entering the LBP/LCP control area. The signs shall comply with the requirements of 29 CFR Part 1926.62.

C. Worker Information

Right-to-know notices shall be placed in clearly visible areas of the work site in compliance with Federal, State and Local regulations.

D. Exposure Air Monitoring Results

Exposure air monitoring results shall be prepared in order to be easily understood by the workers and shall be placed in a clearly visible area of the work site.

E. Emergency Telephone Numbers

A list of telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Government and Contractor

representatives who can be reached 24 hours per day as well as professional consultants directly involved in the project.

1.07 EQUIPMENT & MATERIALS

Sufficient quantities of health and safety materials required by 29 CFR Part 1926.62, and other materials and equipment needed to complete the project, shall be available and kept on the site.

A. Respirators

Air-purifying respirators shall be approved by NIOSH for use with dust, fumes and mists having permissible exposure limits less than 0.05 milligrams per cubic meter (i.e. have high-efficiency particulate air [HEPA] filters) and for other hazardous airborne contaminants that may be encountered, as determined by the Competent Person. The Contractor shall furnish, at no cost to personnel/employees, respirators to provide protection from airborne concentrations of lead. Respirators shall comply with the requirements of 29 CFR Part 1926.62 and shall be used in accordance with 29 CFR Part 1926.62, 29 CFR Part 1926.103 and 29 CFR Part 1910.134.

B. Respirator Cartridges

A sufficient supply of respirator cartridges shall be maintained at the work site to provide new cartridges to employees and authorized visitors throughout the duration of the project. Cartridges shall be replaced according to the manufacturer's recommendations, when breathing becomes difficult, or if the cartridges become wet.

C. Protective Clothing

1. The Contractor shall furnish, at no cost to personnel/employee, equipment/ clothing for protection from airborne and waterborne LBP and LCP debris. An adequate supply of these items shall be available for worker and authorized visitor use. Workers and visitors shall not take protective clothing and equipment off the work site at any time. Protective clothing includes:

    a. Coveralls (Whole Body Protective Coverings): Full-body coveralls and head covers shall be worn by workers in the control area as necessary. Sleeves shall be secured at the wrist and pants legs at the ankle with tape. Permeable clothing shall be provided in heat-stress conditions. Where non-disposable coveralls are provided, these coveralls shall be cleaned after each wearing and kept within the control area or decon/airlock (bagged). Cleaning of coveralls and other non-disposable clothing shall be in accordance with the provisions for cleaning in 29 CFR Part 1926.62.

    b. Boots: Work boots with nonskid soles or impermeable work boot covers shall be worn by workers. Where required by OSHA, safety boots (steel toe or steel toe and shank) shall be worn. Paint the uppers of boots red with waterproof enamel. Do not allow boots to be removed from the control area for any reason after being contaminated with LBP or LCP debris. Keep within control area or decon/airlock (bagged).

    c. Gloves: Inner gloves, appropriate for items and hazards encountered, and disposable outer work gloves shall be provided to each worker and shall be worn while the worker is in the control area. Glove material shall be appropriate for the specific chemical exposure. Gloves shall not be removed from the control area and shall be disposed of as LBP or LCP contaminated waste at the end of the work.

d. Hard Hats: Head protection (hard hats) shall be provided as required by OSHA for workers and authorized visitors. Protective plastic-strap suspension hats shall be used. Hard hats shall be worn at all times when work is in progress. Hard hats shall remain in the control area until the project is completed. Hard hats shall be thoroughly cleaned, decontaminated, dried and bagged before being removed from the control area at the end of the project.

e. Eye Protection: Fog-proof goggles for personnel engaged in LBP and LCP operations shall be worn when the use of a full-face piece respirator is not required and kept within control area or decon/airlock (bagged) until completion of project.

D. Negative Air Pressure System

When a LBP or LCP control area requires the use of an airtight containment barrier, a negative air pressure system shall be used and pressure differential recordings taken. LBP and LCP shall not be removed from the LBP/LCP control area until the proper engineering controls and HEPA filtration systems are in place.

1. HEPA Filter Requirements

The negative air pressure system shall be equipped with approved HEPA filters per UL 586. Negative air pressure equipment shall be equipped with new HEPA filters, and shall be sufficient to maintain a minimum pressure differential of minus 5 Pascals (Pa), equivalent to 0.02 inch of water column relative to adjacent, unsealed areas. Negative air pressure system minimum requirements are listed below.

a. The unit shall be capable of delivering its rated volume of air with a clean first stage filter, an intermediate filter and a primary HEPA filter in place. The units shall be clean and sealed (intake & exhaust) at all times when not operating in a control area.

b. The HEPA filter shall be certified as being capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. 700 hours is the manufacturer life recommendation of a HEPA filter (approximately 1 month of continuous operating).

c. The unit shall be capable of continuing to deliver no less than 70 percent of rated capacity when the HEPA filter is 70 percent full or measures 620 Pa (2.5 inches of water) static pressure differential on a magnehelic gauge.

d. The unit shall be equipped with a manometer-type negative pressure differential monitor with minor scale division of 0.02 inch of water and accuracy within plus or minus 1.0 percent. The manometer shall be calibrated in accordance with the manufacturer’s recommendations. Record manually manometer readings of the pressure differential between the LBP control area and adjacent unsealed areas at the beginning and end of each work day.

e. The unit shall be equipped with a means for the operator to easily interpret the readings in terms of the volumetric flow rate of air per minute moving through the machine at any given moment.

f. The unit shall be equipped with an electronic mechanism that automatically shuts the machine off in the event of a filter breech or absence of a filter.

g. The unit shall be equipped with an audible horn that sounds an alarm when the machine has shut itself off.

h. The unit shall be equipped with an automatic safety mechanism that prevents a worker from improperly inserting the main HEPA filter.

i. The unit shall be ducted through the containment barrier wall to the exterior of the building. The unit shall not be exhausted into any interior areas. If exhausting to the exterior is not feasible, utilize an unoccupied area or room that is large enough to handle the volume of air with two units connected in series. Applicable warning signage shall be posted at this location. **DASNY CPM prior approval is required if exhausting into the interior of the building.**

2. Number of Units Required

The air within the containment barrier shall be changed at least once every 15 minutes by a continuously operating negative air pressure system, until the LBP/LCP control area barrier is removed. Filters shall be replaced as necessary to maintain the efficiency of the system. A back-up unit shall be maintained on-site.

3. Auxiliary Generator

If site conditions can't provide power, an auxiliary generator shall be provided. The generator shall not present a carbon monoxide hazard to workers.

4. Discontinuing Negative Air Pressure System

The negative air pressure system shall not be shut down during LBP/LCP work unless authorized by the DASNY's third-party Environmental Consultant. At the completion of the LBP/LCP work procedures and disposal project, units shall be run until removal is completed satisfactorily and full cleanup has been completed and satisfactory clearance has been achieved. Dismantling of the negative air pressure systems shall conform to the written decontamination procedures. Prefilters shall be removed and properly disposed. The intake and exhaust of the machines shall be sealed with polyethylene to prevent environmental contamination.

E. Expendable Materials

1. Polyethylene Sheet and Clear Bags - General

Polyethylene sheet and clear bags shall have pre-printed labels, and 5-inch (minimum) long plastic ties, pointed and looped to secure the filled bags. Polyethylene sheets shall be in roll sizes to minimize seams.

2. Polyethylene Sheet - Flame Resistant

Where a potential for fire exists, flame-resistant polyethylene sheets shall be provided. Polyethylene film shall conform to the requirements of NFPA 701.

3. Polyethylene Sheet - Reinforced

Reinforced polyethylene sheet shall be provided where high skin strength is required such as where it constitutes the only barrier between the LBP control area and the indoor and outdoor environments. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between two layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

4. Tape and Adhesive Spray

Tape and adhesive shall be capable of sealing joints between polyethylene sheets and for attachment of polyethylene sheets to adjacent surfaces. After dry application, tape or adhesive shall retain adhesion when exposed to wet conditions, including amended water. Tape shall be minimum 2 inches wide, industrial strength.

5. Containers

DOT approved impermeable containers shall be used to receive and retain LBP and LCP waste and debris and lead contaminated material until disposal. Containers shall be labeled in accordance with EPA, DOT and OSHA standards, as applicable for the type of waste. Waste streams shall be segregated in a manner to reduce the potential volume of hazardous waste generated.

6. Chemicals

Chemicals, including caustics and paint strippers, shall be properly labeled, stored in leak-tight containers and properly/safely secured from the general public.

F. Vacuum Systems

HEPA filtered vacuum systems shall be used during LBP/LCP operations which generate dust. The systems shall be suitably sized for the project, and filters shall be capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. Vacuum opening, wands and hoses shall be sealed at all times when not in a control area.

G. Chemical Paint Strippers

Chemical paint strippers shall contain no methylene chloride.

H. Chemical Paint Stripper Neutralizer

Neutralizers for paint strippers shall be compatible with the substrate and suitable for use with the chemical stripper that has been applied to the surface.

I. Storage of Materials

Materials shall be stored in an approved enclosed structure, which protects them from damage, rain, wind, etc. and contamination. During periods of cold weather, plastic materials shall be protected from the cold. Regularly inspect materials to identify damaged or deteriorating items. Damaged or deteriorated items shall not be used and shall be removed from the site as soon as they are discovered. Stored materials shall not present a hazard or an inconvenience to workers, visitors, employees and/or other building occupants.

PART 2 – EXECUTION

2.01 WORK PROCEDURES

LBP and LCP work procedures and related work shall be performed in accordance with the accepted Contractor's LBP and LCP Safe Work Practice Compliance Plan, 29 CFR Part 1926.62 and as specified herein. LBP/LCP waste and debris, lead contaminated debris and personal protective clothing and equipment shall be disposed of in compliance with Federal, State, and Local regulations and in accordance with the respective waste stream 8 RCRA Metals TCLP testing results and applicable hazardous characteristic testing results.

A. Personal Protection Procedures

Respiratory Protection is required for all LBP disturbances. Personnel shall wear and use protective clothing and equipment as specified and required by 29 CFR Part 1926.62 and 29 CFR Part 1910.120. Eating, smoking, drinking, chewing tobacco, chewing gum, applying makeup and use of non-work-related walkie-talkies/phones shall not be permitted in the LBP and LCP control area. Personnel of trades not engaged in the LBP or LCP work procedures and disposal of LBP and LCP shall not be exposed at any time to airborne concentrations of lead equal to or in excess of 30 micrograms per cubic meter of air (30 ug/m^3). Electrical service shall be disconnected when wet removal is performed, and temporary electrical service protected by a ground fault circuit interrupter (GFCI) shall be provided.

B. Safety and Health Procedures

The Competent Person shall be present on the work site throughout the LBP and LCP project to supervise, monitor and document the project's health and safety provisions. A daily log shall be maintained showing the results of air sampling tests throughout the project area. LBP and LCP work being conducted within a LBP or LCP control area where an airtight barrier is required shall be stopped if measured airborne lead concentrations, collected during LBP or LCP work procedures, exceed the Action Level.

C. Safety and Health Responsibilities

The Competent Person shall:

1. Verify that training meets applicable requirements.
2. Review and approve LBP/LCP Safe Work Practice Compliance Plan for conformance to the applicable referenced standards.
3. Inspect LBP and LCP removal work for conformance with the accepted Safe Work Practice Compliance Plan.
4. Ensure that worker exposure air monitoring activities are in accordance with 29 CFR Part 1926.62.
5. Ensure work is performed in strict accordance with specifications.
6. Ensure hazardous exposure to personnel and to the environment are adequately controlled.
7. The Contractor's Competent Person shall be responsible for directing personal air monitoring and shall also perform visual inspections prior to the visual inspection conducted by DASNY's third-Party Environmental Consultant (if applicable), to verify the control areas are free of all visible debris.
8. If required, the Contractor's Competent Person shall coordinate with DASNY and the DASNY's third-party Environmental Consultant for any control areas requiring final air/wipe testing clearance testing (Action Level/wipe) in accordance with OSHA and/or US Department of Housing and Urban Development (HUD) protocols.

D. Medical Surveillance Procedures

Medical surveillance shall be implemented in accordance with the accepted Contractor's LBP/LCP Safe Work Practice Compliance Plan and shall comply with the requirements of 29 CFR Part 1926.62, including the provisions for blood lead level monitoring, medical removal, protection and a physician's written opinion, signed by the physician performing the employee examination. The Contractor's Competent Person shall maintain on-site, a copy of the written opinion for Contractor's employees prior to each employee's commencement of work.

E. Engineering Controls and Containment Structures

Engineering and work practice controls are the primary means of maintaining exposures to lead below the PEL. Paint removal and surface preparation activities must keep dust levels at a minimum. Power tools must be equipped with manufacturer equipped vacuum shrouds including an attached HEPA filtered vacuum system.

1. LBP/LCP Control Area

   The control area is where LBP/LCP work procedures occur and as such shall be considered contaminated. The LBP/LCP control area shall be isolated to prevent LBP/LCP containing dust or debris from passing into adjacent areas. The control area shall be decontaminated at the completion of the LBP/LCP work procedures and disposal work.

2. Boundary Requirements.

   Physical boundaries along with Warning Signage shall be provided around exterior LBP/LCP control areas by taping off the area indicated in the Safe Work Practice Compliance Plan.

3. Control Barriers

   The LBP/LCP control area shall be designated and separated from other outside areas with control barriers. The polyethylene sheeting shall mask and seal all openings. The LBP/LCP control area shall be erected according to the Contractors LBP/LCP Safe Work Practice Compliance Plan. Polyethylene sheeting shall be mechanically supported, independent of duct tape or spray adhesive.

4. Exterior Masking and Sealing

   Exterior LBP/LCP control area requirements: Where the construction of a contained LBP/LCP control area is impractical or not required based on the method of lead work procedures, a taped-off perimeter shall be installed around the area where the LBP/LCP handling procedures are performed and other requirements for LBP/LCP control areas shall be maintained. Personal monitoring of airborne concentrations is still required and shall be conducted in accordance with 29 CFR Part 1926.62.

5. Hand Wash Station

   An operational hand washing station shall be provided to all workers adjacent to each LBP/LCP control area utilizing polyethylene sheeting as a drop cloth. Water shall be hot and cold or warm. Soap dish, continuing supply of soap, and clean towels shall be provided. The hand wash station shall be maintained in a sanitary condition. Waste water shall be collected and placed within clear polyethylene bags and sealed. Bags shall be immediately placed within non-leaking drums and sealed.

6. Equipment Decontamination

   An equipment decontamination area shall be installed at the entrance to each LBP/LCP control area to allow for the cleaning of all equipment utilized on the project. Polyethylene sheeting shall be utilized as a drop cloth, along with a utility tub to clean and capture debris/water during the cleaning process. Water shall be hot and cold or warm. Continuing supply of detergent and clean towels shall be provided. The

equipment decontamination area shall be maintained in a sanitary condition. Waste water shall be collected and placed within clear polyethylene bags and sealed. Bags shall be immediately placed within non-leaking drums and sealed.

F. Temporary Utilities

1. Temporary equipment as necessary to provide adequate power, light, heat, and water shall be installed, as needed, to accomplish the LBP/LCP operations properly and safely. The Contractor shall maintain the security and maintenance of the utility system in the LBP/LCP control areas. In the event of a failure of any utility system, the Owner will not be responsible for any loss of time or other expense incurred by the Contractor. In addition to any site-specific temporary utility requirements, the Contractor shall provide:

   a. Back-flow protection on all water connections. Fittings installed by the Contractor shall be removed after completion of work with no damage or alteration to existing water piping and equipment.

   b. When applicable, heavy-duty abrasion-resistant hoses to provide water to each control area and decontamination area.

   c. A hot water heater, if necessary, to provide warm water to the decontamination showers, hand wash station and equipment decontamination area.

   d. Electrical service to control areas. Electrical service shall comply with National Electric Code, State and Local requirements and UL standards. Warning signs shall be posted at power outlets, which are other than 110-120 volt power. Only grounded extension cords connected into a GFCI shall be used. Incandescent lamps and light fixtures shall be of adequate wattage to provide good illumination in LBP/LCP control areas.

   e. Temporary heating units, when needed, that have been tested and labeled by UL, FM, or another recognized trade association related to the fuel being consumed. Forced air or fan type units shall not be utilized inside a control area. Units shall have tip-over protection.

2.02 LEAD-BASED/CONTAINING PAINT WORK PRACTICES (Use methods as applicable)

A. Component Removal:

Components shall be removed intact to the extent practicable. Following HEPA vacuuming and wet wiping precleaning of existing paint chips and debris, a polyethylene drop cloth shall be placed around and/or beneath the component, prior to its removal, to catch any paint chips that may become dislodged. The component shall be wrapped and sealed in a layer of clear polyethylene prior to movement to the disposal container. Follow proper disposal requirements. The area around the component removal shall be HEPA vacuumed and wet wiped. The polyethylene sheeting shall be carefully folded in on itself and placed in a clear disposal bag. Containment debris shall be properly stored of in accordance with respective waste stream as per the Contractor’s LBP/LCP Safe Work Practice Compliance Plan

B. Chemical Stripping:

Chemical stripping may be used for LBP and LCP removal on surfaces that will be subjected to welding, cutting, torch burning or where it is the only acceptable procedure. No chemical strippers or associated neutralizer chemicals containing methylene chloride shall be used by the Contractor on this project.

1. Following HEPA vacuuming and wet precleaning of existing paint chips / debris, horizontal surfaces directly below and in a radial direction from the area where chemical stripping is to be performed shall be covered with plastic sheeting and shall

also extend ten (10) feet on either side of the control area or to the furthest practical distance to catch any paint chips that may become dislodged.

2. All LBP/LCP on specified surfaces shall be removed to the bare substrate. The job is not considered complete until the substrate is dry, free of paint, debris, and LBP/LCP residue.

3. LBP/LCP stripping agents shall be brushed or troweled on the designated surfaces, or otherwise applied to a minimum thickness in accordance with manufacturer's specifications.

4. The required application/reaction time for stripping will depend upon the ambient temperature, humidity, and thickness of LBP/LCP. If LBP/LCP is not completely removed following the initial application of stripper, additional applications and wet scrapings may be required.

5. Removed LBP/LCP shall not be deposited on the polyethylene containment surfaces but shall be transferred directly into clear polyethylene bags from the scraper and sealed. LBP/LCP shall be removed by wet scraping to the maximum extent feasible. If the substrate is to be reused, the removal activities shall not damage the substrate.

6. Any residue not removable by wet scraping shall be washed down to the bare metal substrate with an appropriate, pre-approved solution. LBP/LCP-contaminated wastewater shall be kept to a minimum using wet scrub brushes or sponges. These residues and disposable cleaning media shall also be directly transferred to clear polyethylene bags and sealed. Bags shall be immediately placed within non-leaking drums and sealed. Free standing water shall be eliminated by use of a drying agent. Contractor shall include the segregation and minimization of lead waste from construction and demolition waste in their LBP/LCP Safe Work Practice Compliance Plan.

C. Manual Demolition/Scraping/Cleaning:

1. Manual demolition, scraping, sanding and power tool cleaning with dust collection systems shall be performed in conjunction with engineering and work practice controls meeting the requirements of 29 CFR 1926.62(e)(1).

2. Following HEPA vacuuming and wet wipe precleaning of existing paint chips / debris, seal openings of HVAC ductwork and other penetrations (doors, windows, etc.) within the Control Area with two layers of polyethylene sheeting. For work on vertical surfaces, place a layer of polyethylene sheeting below the area prior to manual demolition/scraping/sanding/cleaning. The sheeting shall extend ten (10) feet on either side of the control area or to the furthest practical distance to catch any paint chips that may become dislodged.

3. Wet methods shall be used during manual scraping, sanding and power tool cleaning with dust collection systems. Local HEPA ventilation shall be utilized in conjunction with manual scraping, sanding and power tool cleaning with dust collection systems. In the case that local HEPA ventilation is not sufficient to control dust hazards, the Contractor shall be required to install engineering controls to meet requirements of specification section 1.06, D., “Negative Air Pressure System”.

4. Removed LBP/LCP shall not be allowed to accumulate on surfaces within the Control Area but shall be HEPA vacuumed or placed directly into clear polyethylene bags. The Contractor shall maintain all surfaces as free as practicable of accumulated lead dust to prevent the dispersal of lead into the work places that are outside of the lead

paint control areas. LBP/LCP shall be removed by manual methods to the maximum extent feasible.

5. Debris shall be bagged in clear polyethylene bags, sealed, and secured in leak proof drums. The area around the surfaces subject to work shall be HEPA vacuumed and wet wiped, including the polyethylene sheeting. Upon a satisfactory clearance inspection by DASNY's Third-Party Environmental Consultant (as applicable) and the Contractor's Competent Person, the cleaned polyethylene sheeting shall be carefully folded in on itself and placed in a clear disposal bag. Containment debris shall be properly stored in accordance with the respective waste stream as indicated in the contractor's LBP/LCP Safe Work Practice Compliance Plan. The contractor shall coordinate with the DASNY's third-party Environmental Consultant to test the waste streams for disposal.

D. Alternative Lead Work Procedures

1. Any work procedure deviating from the outlined procedures above shall be submitted through the CPM to DASNY Code Compliance and the Owner's third-party Environmental Consultant for review and approval prior to the start of the project. As there are many different components in different areas of the building(s), it is impractical to address every potential lead work procedure. The intent of alternative lead work procedures shall be to maintain compliance with 29 CFR 1926.62 and maintain airborne concentrations of lead dust below the Action Level of 30 ug/m^3.

2.03 PERSONAL AIR MONITORING & WASTE STREAM SAMPLING

During all LBP/LCP removal and disposal operations, the Contractor's OSHA Competent Person shall be on-site inspecting the work to ensure that the health and safety requirements of this contract are satisfied. DASNY may elect to have a Third-Party Environmental Consultant on-site to perform visual clearance inspections.

A. Personal Air Monitoring (Provided by the Contractor, as required by OSHA)

1. Personal air monitoring samples for airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926.62

B. Waste Sampling and Testing (Provided by DASNY's Third Party Environmental Consultant)

1. Sampling and testing of all waste streams, shall be in accordance with 40 CFR Part 261, 6 NYCRR Part 371 and SW-846, Chapter 9, Sampling Plan. See Paragraph 2.05 C. of this specification section for waste sampling and analyses requirements. 8 RCRA Metals TCLP sampling and analysis shall be the minimum required for generated LCP/LBP waste streams. There has recently been an increase in additional testing parameters (i.e. PCBs) required by disposal facilities so this should be coordinated with the selected disposal facility and relayed to the Environmental Consultant prior to sampling activities. If chemical strippers are used during LBP and LCP removal process, then applicable hazardous characteristic sampling and analysis shall be required.

2.04 ADJACENT AREAS

Damage to adjacent areas shall be repaired by the Contractor to the approval of the Owner.

2.05 CLEAN-UP & DISPOSAL

A. Cleanup

1. Daily:
Surfaces in the LBP/LCP control area shall be maintained free of accumulations of paint chips, LBP/LCP debris and dust. Spread of dust and debris shall be restricted; waste shall not be distributed over the control area. Dry sweeping or compressed air shall not be used for cleanup. At the end of each shift, the area shall be cleaned of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner and wet wiping the area. LBP/LCP work procedures shall cease during the cleanup.

2. At completion of LBP/LCP work and a satisfactory visual inspection by DASNY's Third Party Environmental Consultant (if applicable) and OSHA Competent Person, a clean-up shall be performed by the Contractor. This clean-up includes removal of any contaminated material, equipment or debris including polyethylene sheeting from the control area. The polyethylene sheeting shall be sprayed or misted with water for dust control, construction debris removed and polyethylene sheeting wet wiped. Then the sheeting shall be removed by folding it in upon itself.

   a. Lead-contaminated debris shall be containerized in accordance with the Contractor's LBP/LCP Safe Work Practice Compliance Plan Waste bags shall not be overloaded and shall be securely sealed and stored in the designated area.

   b. Removal of surface polyethylene sheeting shall begin from top to bottom. Removal of floor polyethylene sheeting shall begin at the corners and folded in the middle to contain the dust. Polyethylene shall be disposed of as per the Contractor's LBP/LCP Safe Work Practice Compliance Plan Cleaning Equipment. The Contractor shall decontaminate the lead abatement equipment and equipment used in the control area. The wastewater from cleaning shall be contained, sampled and disposed of as specified within Section 2.01 E. 6. and 2.02 B. 7 *and as per* contractor's LBP/LCP Safe Work Practice Compliance Plan.

B. Certification

1. The Contractor's Competent Person shall certify and sign within the log that the respiratory protection for the employees was adequate, the work procedures were performed in accordance with 29 CFR Part 1926.62 and that there was no visible accumulations of LBP/LCP paint/coating or dust on the worksite. Do not remove warning signs at the lead control area or roped-off boundary signs prior to the completion of the Competent Person's signed certification. If applicable, the Contractor's Competent Person's certification shall be forwarded to the DASNY Project Manager and the DASNY's Third Party Environmental Consultant's for review prior to removing warning signs at the lead control area or roped-off boundary signs.

C. Waste Storage and Disposal (Provided by the Contractor) and Sampling/Analysis (Provided by DASNY's Third Party Environmental Consultant).

1. LBP/LCP Wastes and Lead-Contaminated Water. Refer to DASNY Standard Specification for the Identification and Disposal of Hazardous Waste section 02 86 00.

END OF SECTION 02 83 10

Appendix A: LBP and LCP Survey Report Documentation Summary:

For Details, refer to the Environmental Survey Report Included as Part of this Project Manual.

SECTION 02 84 00

NON-LIQUID PCB MATERIAL REMOVAL

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This demolition, renovation or removal/remediation Project will include the removal and disposal of non-liquid Polychlorinated Biphenyl (PCB) materials (herein referred to as PCB materials) at Bronx Psychiatric Center, Building 1, 1500 Waters Place, Bronx, NY, DASNY Project Number 3816609999.

B. The work shall include but not be limited to the removal of the following.

Floor/level/ location/phase	Work Area Designation (i.e. WA-01)	Description of PCB Materials	Length (if applicable)	Width (if applicable)	# of Masonry Openings (if applicable)	Approximate Quantity (SF/LF/EA)
1st Floor	Transformer Room #1	PCB Remediation Waste Concrete Slab	N/A	N/A	N/A	N/A
1st Floor	Transformer Room #2	PCB Remediation Waste Concrete Slab	N/A	N/A	N/A	N/A
1st Floor	Transformer Room #1	PCB Remediation Waste Soil	N/A	N/A	N/A	N/A
1st Floor	Transformer Room #2	PCB Remediation Waste Soil	N/A	N/A	N/A	N/A
					Total Quantity	N/A

C. The PCB Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the PCB Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. Working hours shall be as required and approved by the Owner. PCB material removal activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The PCB Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions are described below.
"None"

1.03 PERMITS AND COMPLIANCE

A. The PCB Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.

B. Perform PCB related Work in accordance with New York State Department of Environmental Conservation (DEC) Hazardous Waste Regulations (6 NYCRR 370-374, i.e. Hazardous Waste Rules), 40 CFR 761, 29 CFR 1926 and project documents, as specified herein. Where in conflict, always adhere to the more stringent requirements.

C. The PCB Contractor must maintain current licenses or registrations pursuant to DEC and United States Environmental Protection Agency (EPA) regulations for all Work related to this Project, including the removal, handling, transport, and disposal of hazardous and industrial waste.

D. The Environmental Consultant shall be prepared to obtain an EPA ID number if so directed by the Owner.

E. Failure to adhere to the Project Documents shall constitute a breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to so terminate shall not relieve the PCB Contractor from future compliance.

1.04 SUBMITTALS

A. PCB Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the PCB Contractor shall submit an electronic copy of the documents listed below to the DASNY Project Manager, the DASNY Code Compliance Unit and the Environmental Consultant for review and Code Compliance approval prior to the commencement of PCB removal activities:

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
1. Training & Certifications			
a. List of the employees scheduled to perform this work and their project function (Supervisor or Worker)	X	X	X
b. Certificate of on-site supervisor, for successful completion of OSHA 40-hour Health and Safety course [29 CFR 1910.120/1926.65] for handling hazardous waste and spills, including most recent refresher training.	X	X	X
c. OSHA 8-hour supervisor training [29 CFR 1910.120(e)(4)/1926.65(e)(4)] for hazardous waste.	X	X	X
d. Certificates of workers, for successful completion of OSHA 40-hour Health and Safety course [29 CFR 1910.120/1926.65] for handling hazardous waste and spills, including most recent refresher training.	X	X	X
e. Valid United States Department of Transportation (DOT) training [49 CFR172.704] for supervisor and all employees loading waste and maintaining on-site waste storage area. This training shall include: general awareness / familiarization training; function specific training; safety training; security awareness training; and in-depth security training.		X	X
f. Annual hazardous waste RCRA training as per 40 CFR 260.10, 262.17(a)(7), 264.16 & 265.16. Submit sign-in sheets for all employees and supervisors working on the project. This training may be either 2 hours, 4 hours or 8 hours, as applicable.		X	X
g. Employees managing Hazardous Waste must also meet the Personnel training requirements in section 6 NYCRR 373-3.2, 3.3, 3.4 & 376(g)(1)(v), as applicable. OSHA HAZWOPER training should suffice for this requirement.		X	X
h. Confined Space training certificates as per 29 CFR 1910.146 or 1926.1207, as applicable.	X	X	X
2. Transportation & Disposal			
a. Valid Hazardous Waste Transporter NYS Part 364 permit for all transporters.	X	X	X

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
b. Valid Hazardous Waste Transport vehicle permit for all transporters for each state the waste is being transported through to reach the Treatment, Storage and Disposal Facility (TSDF), as applicable.	X	X	X
c. Valid US DOT vehicle registration for all transporters.	X	X	X
d. Transfer Facility Permit (if used) including the name, address and EPA ID No. of the facility, contact person. Include an acknowledgement letter stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)].	X	X	X
e. Final Disposal Facility permit including the name, address and EPA ID No. of the facility, contact person. Include an acknowledgement letter from the disposal facility stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)]. **The final destination of waste must be within the United States.**	X	X	X
f. The TSDF permit(s) must identify the waste material(s) to be received.	X	X	X
g. Draft Land Disposal Restriction (LDR) form (See Appendix C for PCB LDR)	X	X	X
h. Draft Waste Profile	X	X	X
i. Draft Waste Manifest	X	X	X
j. Draft c7 NYSDEC Notification form for any metals to be recycled, if applicable.	X	X	X
3. Site-specific			
a. Safety Data Sheet (SDS) for all materials to be removed.	X	X	X
b. If the PCB Contractor introduces any chemical into the work environment, a SDS for each chemical must be presented to the Owner's Representative prior to use.	X	X	X
4. Progress Schedule:			
a. Show the complete sequencing of removal activities and the sequencing of Work within each building, wing or section of building. *The schedules will be utilized to schedule facility and third-party environmental consultant requirements.*	X	X	X
b. Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building or phase.		X	X
5. Scope of Work Plan:			
Removal Work Plan and Drawing(s) Provide a written work plan description of work and drawing(s) that clearly indicates the following:			
a. All work areas/phases numbered sequentially.	X	X	X
b. Locations and types of all decontamination enclosures for each work area/phase.	X	X	X
c. Proposed location and construction of storage facilities and field office (when applicable).		X	X
d. Location of water and electrical connections to building services for each work area/phase.	X	X	X
e. Type of removal activity/technique for each work area/phase.	X	X	X
f. List waste types and quantity being generated and stored (refer to 1.01, B).	X	X	X
g. Site/work area preparation and cleanup procedures.		X	X
h. Include in the plan, eating, drinking, and sanitary procedures, interface of trades and sequencing of hazardous waste generation.		X	X
i. The job specific plan for worker protection issues regarding personal protective equipment, the work procedures, and exposure assessment procedures.	X	X	X

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
j. Include occupational and environmental sampling (if any by the PCB Contractor), frequency and duration of sampling.			X
k. PCB Contractor's Health and Safety Plan	X	X	X
l. PCB Contractor's Facility Contingency Plan revision information for material handling and emergency procedures.			X
m. Container Storage Area (CSA) construction details. (refer to 3.03.K.) [How is the waste being stored? (indoors or outdoors, drums, containers, or dumpsters, types, with cover?).]	X	X	X
n. Include waste transport routes to the CSA from each work area/phase	X	X	X
o. Collected wastewater disposal/treatment plan.		X	X
p. Include plan for hazardous waste segregation and minimization including metal recycling, as necessary.		X	X
q. PCB Contractor waste generation details (amount per day, per week or per quarter) in kgs or tons.			X
r. PCB Contractor emergency evacuation plan requirements and evacuation route for the project specific work areas/phases.			X
s. Duration of waste generation and contract.			X
t. DASNY PM, Facility Representative, and Project team emergency contact numbers. [to be posted at CSA (interior and exterior).]	X	X	X
Do not start work until submittals are returned with the Owner's Representative stamp indicating that the submittal is approved for unrestricted use.	X	X	X

VSQG: <220 lbs.; SQG: 220lbs – 2200lbs (180 Days); LQG - >2,200lbs (90 Day).

B. PCB On-Site and During Construction Submittal Requirements.

On-Site & During Construction	VSQG (CESQG)	SQG	LQG
1. The following submittals, documentation, and postings shall be maintained on-site by the **PCB Contractor** during removal activities at a location approved by the Environmental Consultant:			
a. Approved pre-work submittals.	X	X	X
b. Project Documents (specifications and drawings).	X	X	X
c. Applicable regulations.	X	X	X
d. Updated licenses/permits and acknowledgement letters for any changes in transporter or disposal site.	X	X	X
e. For each employee, current annual medical respiratory clearance.		X	X
f. For each employee, current satisfactory respiratory fit test results.		X	X
g. Copy of updated facility contingency plan (copy to be kept in the CSA) Coordinate with facility for an approximate 1-hour training session on the facility contingency plan requirements and PCB Contractor's emergency action plan. Maintain proof of contingency plan training for all on-site employees.			X
h. PCB Contractor shall provide weekly update, including initial container storage dates for each container stored, an approximate estimate of amount of waste being generated during each work-day, week or month that it is stored on-site. The actual weight of the waste, excluding the weight of the dumpster / container, shall be identified.			X
i. Toxicity Characteristic Leaching Procedure (TCLP) waste sample results. PCB Contractor shall notify DASNY and Environmental Consultant for waste stream sampling prior to any waste being removed from the site.	X	X	X
j. Completed Waste Profile form(s). PCB Contractor shall utilize analytical test results from the survey report and / or TCLP results provided by Environmental Consultant, as appropriate, to generate waste profile and LDR form.	X	X	X
k. Completed LDR form.	X	X	X
l. List of emergency phone numbers.	X	X	X
m. Waste disposal log.		X	X

On-Site & During Construction	VSQG (CESQG)	SQG	LQG
n. Daily Project Log.	X	X	X
o. Copy of Waste manifest for each load of waste that is removed from site.	X	X	X
p. Copy of completed hazardous waste manifest including legible transporter and disposal facility information, dates and times of waste shipment departures / arrivals, and signatures, for each load of waste, within 35 days of waste being removed from site.	X	X	X
2. The following documentation shall be maintained on-site by the **Environmental Consultant** during removal activities:			
a. Valid Environmental Consultant personnel OSHA, RCRA, and DOT training certifications.	X	X	X
b. Proof of current Facility Contingency Plan Training.			X
c. Consultant Daily Log.	X	X	X
d. Listing of all visual inspections with the date of inspection and the date of signoff on the supervisor's log.	X	X	X
e. Hazardous Materials Survey Report.	X	X	X
f. All TCLP waste sample laboratory results including completed chain of custody forms and valid laboratory NYS DOH ELAP certifications.	X	X	X
g. CSA Inspections – Initial Inspection and Weekly Inspections Thereafter.	X	X	X
h. All applicable waste documentation, including but not limited to Universal Hazardous Waste Manifests, waste profiles, LDR forms, and disposal facility letter(s).	X	X	X

C. PCB Project Close-out Submittals:

1. Within 30 days of the completion of each removal phase, the **PCB Contractor** shall submit an electronic copy of the documents listed below to DASNY Code Compliance and the Environmental Consultant for review. Original fully executed waste records, original signed notarized PCB Contractor's Acknowledgement Statements and any other original signed notarized documents required must be sent to Code Compliance prior to final approval. Once DASNY Code Compliance approves the close-out submittal, the PCB Contractor shall provide 3 hard copy sets of the approved close-out documents (double-sided and bound) to DASNY Project Management for appropriate distribution, including 1 set to be distributed to the facility, prior to PCB Contractor's final payment.
   a. **Fully Executed Copies** of all completed hazardous waste disposal manifests, disposal logs, LDR forms, acceptance letters and certificates of disposal, shall be sent to DASNY Code Compliance including legible transporter and disposal facility information, departure / arrival times and dates, and signatures. Original hazardous waste manifests shall be sent to the Owner or disposal facility state, as applicable. With proof of their receipt.
   b. Daily progress log, worker attendance sheets,
   c. Entry/Exit Logs. Decontamination unit entry/exit log for PCB removals (must be separate from any documentation associated with PCB removals, unless the material is both PCB and ACM).
   d. PCB Contractor's Acknowledgment Statement Forms. **Original** notarized statement shall be sent to DASNY Code Compliance.
   e. If TSDF transfer facility is utilized, completed hazardous waste manifest from final destination must also be provided. **The final destination of waste must be within the United States.**
   f. Documentation (i.e. daily log) of Container Storage Area (CSA) closure (if applicable) in accordance with applicable federal and state regulations.

2. Within 30 days of the completion of each removal phase, the **Environmental Consultant** shall submit one electronic copy of the documents listed below to DASNY Code Compliance for review and approval prior to Environmental Consultant's final payment. Once DASNY Code Compliance approves the close-out submittal, the Environmental Consultant shall

provide three sets of the approved close-out documents (double-sided and bound) to DASNY Project Management, including one set to be distributed to the facility.

a. Upon completion of the Project, the Environmental Consultant shall certify to the Owner, in writing, that the work is complete and acceptable in an Executive Summary of the work.
b. The Environmental Consultant shall review and approve or disapprove all necessary guarantees, certificates of compliance, and all other close-out documentation, which the PCB Contractor is required to submit.
c. The Environmental Consultant shall provide to the Owner the final Project data binder to include:
    1) All daily logs.
    2) Summary of all visual inspections with the date of inspection and the date of signoff on the supervisor's log.
    3) Any applicable sampling logs, results, chain of custody forms, and sample location plans.
    4) Daily worker rosters.
    5) All TCLP waste sample laboratory results including completed chain of custody forms and valid laboratory NYS DOH ELAP certifications.
    6) All applicable waste documentation, including but not limited to: Uniform Hazardous Waste Manifests, waste profiles, LDR forms, and disposal facility letter(s).
    7) All pertinent correspondence related to the Project including but not limited to clearance letters and supplemental inspection findings performed during construction, copies of all weekly hazardous waste storage location inspections reports, etc.

D. PCB Project Submittals shall be submitted as separate packages, not included with any other environmental or hazardous materials submittals.

1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the PCB Contractor shall attend a pre-construction conference attended by Owner, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:
1. PCB Contractor's scope of Work, Work plan, and schedule to include number of workers and shift days and times.
2. PCB Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
3. Environmental Consultant's duties, functions, and authority.
4. PCB Contractor's Work procedures including:
    a. Methods of job site preparation and removal methods.
    b. Respiratory protection.
    c. Disposal procedures.
    d. Cleanup procedures.
    e. Fire exits and emergency procedures.
5. PCB Contractor's required pre-work and on-site submittals, documentation, and postings.
6. PCB Contractor's plan for 24 hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas and disposal container / CSA.
7. Temporary utilities.
8. Handling of furniture and other movable objects.
9. Storage of removed PCB materials in CSA.
10. Waste disposal requirements and procedures, including PCB Contractor notification to DASNY project management and Environmental Consultant for TCLP waste stream sampling, once waste stream generation has commenced, and prior to any waste being removed from site.
11. If applicable, contingency plan training information.

C. In conjunction with the conference, the PCB Contractor shall accompany the Owner and Environmental Consultant on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of disposal container / CSA, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

1.06 DEFINITIONS, APPLICABLE STANDARDS AND REGULATIONS

A. Definitions

1. Hazardous waste shall be any materials to be disposed that possess at least one of four characteristics (ignitability, corrosivity, reactivity or toxicity) as defined and regulated by the Resource Conservation and Recovery Act (RCRA) and applicable state and federal regulations, or a material specifically identified as hazardous waste by applicable Federal or State lists, in 40 CFR 261 or 6 NYCRR 371, respectively.
2. A Conditionally Exempt/Very Small Quantity Generator (CESQ/VSQG) of hazardous waste shall be a waste handler who generates no more than 100 kilograms per month of listed and/or characteristic hazardous waste, generates no more than 1 kilogram of acute hazardous waste in any calendar month, and stores no more than 1,000 kilograms of listed and/or characteristic hazardous waste or more than 1 kilogram of acute hazardous waste.
3. A Small Quantity Generator (SQG) of hazardous waste shall be a waste handler who generates no more than 1,000 kilograms per month of listed and/or characteristic hazardous waste, generates no more than 1 kilogram of acute hazardous waste per month, and stores no more than 6,000 kilograms of listed and/or characteristic hazardous waste or more than 1 kilogram of acute hazardous waste.
4. Large Quantity Generator (LQG) of hazardous waste shall be a waste handler who generates more than 1,000 kilograms per month of listed and/or characteristic hazardous waste, generates more than 1 kilogram of acute hazardous waste per month, or stores more than 6,000 kilograms of hazardous waste or 1 kilogram of acute hazardous waste.
5. The Owner's Environmental Consultant Abatement Project Monitor (APM): The Owner shall provide a third-party Environmental Consultant APM to provide pre-work assessments, project monitoring assessments for the construction procedures for the work area and surrounding areas waste sampling, submittal review, initial and thence weekly disposal container / CSA inspection summaries, inspection and signoff of all hazardous waste shipments, and final clearance assessments. The PCB Contractor shall be responsible for the worker protection requirements.

B. The PCB Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

C. Federal Regulations:

1. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
2. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
3. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
4. 29 CFR 1926, "Construction Industry" (OSHA)
5. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
6. 40 CFR 761, "PART 761—POLYCHLORINATED BIPHENYLS (PCBs)" (EPA)
7. 49 CFR 171-173, Transportation Standards (DOT)

D. New York State Regulations:

1. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
2. 6 NYCRR, Parts 370-373, "Hazardous Waste Management System"

E. New York City Regulations (as applicable):

1. NYC DEP regulations.
2. NYC Fire Department (FDNY) regulations.

F. Standards and Guidance Documents:

1. American National Standards Institute (ANSI) Z88.2, Practices for Respiratory Protection

1.07 PROJECT MONITORING

A. The Owner shall engage the services of a Third-Party Environmental Consultant who shall serve as the Owner's Representative in regard to the performance of the PCB removal Project and provide direction as required throughout the entire removal Project period.

B. The PCB Contractor is required to ensure cooperation of its personnel with the Environmental Consultant for the sampling and project monitoring functions described in this section. The PCB Contractor shall comply with all direction given by the Environmental Consultant during the Project.

C. The Environmental Consultant shall provide the following administrative services:
   1. Review and approve or disapprove all submittals, shop drawings, schedules, and samples.
   2. Assure that all notifications to governmental agencies or landfills by the PCB Contractor are submitted in a timely manner and are correct in content.

D. The Environmental Consultant shall staff the Project with a trained and certified person(s) [see training required in 1.04(A), excluding OSHA 8 hr. supervisor training], to act on the Owner's behalf at the job site. This individual shall be designated as the Abatement Project Monitor (APM).
   1. The APM shall be on-site at all times the PCB Contractor is on-site. The PCB Contractor shall not be permitted to conduct any Work unless the APM is on-site (except for inspection and planning purposes during non-working days).
   2. The APM shall have the authority to direct the actions of the PCB Contractor verbally and in writing to ensure compliance with the Project documents and all regulations. The APM shall have the authority to Stop Work when gross Work practice deficiencies or unsafe practices are observed.
      a. Such Stop Work order shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been resolved.
      b. Standby time required to resolve the situation shall be at the PCB Contractor's expense.
   3. The APM shall provide the following services:
      a. Inspection of the PCB Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications.
      b. Monitor the progress of the PCB Contractor's Work, and report any deviations from the schedule to the Owner.
      c. Monitor, verify, inspect and document all waste load-out operations and sign waste manifest on behalf of DASNY and owner unless the Owner requires their personnel signature (i.e. OMH, some SUNY schools, etc.).
      d. The APM shall maintain a log on site that documents all project related and Environmental Consultant and PCB Contractor actions, activities, and occurrences.
      e. The APM shall take air, swipe, wipe, or bulk samples upon the Owner’s request.
      f. The APM shall collect waste stream samples for Toxicity Characteristic Leaching Procedure (TCLP) analysis and provide results to DASNY and PCB Contractor, along with chain of custody documentation.
   4. The following inspections shall be conducted by the APM. Additional inspections shall be conducted as required by Project conditions. Progression from one phase of Work to the next by the PCB Contractor is only permitted with the written approval of the APM.
      a. Pre-Construction Inspection: The purpose of this inspection is to verify the existing conditions of the Work Areas and to document these conditions.
      b. Pre-Commencement Inspection: This inspection shall take place only after the Work Area is fully prepped for removal.
      c. Work Inspections: The purpose of this inspection is to monitor the Work practices and procedures employed on the Project and to monitor the continued integrity of the containment system. Inspections within the removal areas shall be conducted by the APM during all preparation, removal, and cleaning activities at least twice every Work shift. Additional inspections shall be conducted as warranted.

d. On-site hazardous waste CSA inspections: Initial CSA inspection and weekly inspections thereafter.
e. Inspection and signoff, on behalf of owner where permitted, of all hazardous waste shipments that are removed from the site.
f. Visual Clearance Inspection: The purpose of this inspection is to verify that all materials in the scope of work have been properly removed and no visible PCB material debris/residue remains.
g. Punch List Inspection: The purpose of this inspection is to verify the PCB Contractor's certification that all Work has been completed as contracted and the existing condition of the area prior to its release to the Owner.

5. The Owner may, at their discretion, choose to conduct air sampling. If air samples collected during removal indicate any airborne PCB concentration(s) above the OSHA Permissible Exposure Limit (PEL) Time Weighted Average (TWA) of 0.5 mg/m^3 or EPA recommended thresholds, work shall be stopped immediately, and Work methods shall be altered to reduce the airborne PCB concentration(s).

1.08 PROJECT SUPERVISOR

A. The PCB Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
1. The Project Supervisor shall be trained in PCB removal and hazardous waste management in NYS, via a 40-hour HAZWOPER and 8-hour Supervisor training course, as well as appropriate RCRA and DOT training, as listed in 1.04 A.
2. The Project Supervisor shall have a minimum of one year experience as a supervisor.
3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If a Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by the Owner or DASNY.

C. The Project Supervisor shall maintain a bound Daily Project Log that includes the Waste Disposal Log required by section 4.03 of this specification.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the PCB Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the APM.

E. As required by applicable regulations, prior to assignment to hazardous waste work, instruct each employee with regard to the hazards of the generated waste, safety and health precautions, and the use and requirements of protective clothing and equipment, as well as the facility contingency plan and/or PCB Contractor emergency action plan. The PCB Contractor shall also determine whether work will be performed in confined spaces. If so, properly trained personnel shall be required.

1.09 TRAINING

A. As required by applicable regulations, prior to assignment to PCB Work, instruct each employee with regard to the hazards of PCB, safety and health precautions, and the use and requirements of protective clothing and equipment, as well as the facility contingency plan and/or PCB Contractor emergency action plan.

B. Employees managing Hazardous Waste as described in Section 3.03 of this specification must also meet the Personnel training requirements in section 6 NYCRR 373-3.2, as required in 1.04 A.

1.10 RESPIRATORY PROTECTION

A. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134. Provide respirator training.

B. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134.

C. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist initially and on a yearly basis thereafter. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual.

D. A storage area for respirators shall be provided by the PCB Contractor in the clean portion of the decontamination enclosure where they will be kept in a clean, dry environment.

E. The PCB Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters will be removed and discarded during the decontamination process. Filters cannot be reused. Filters must be changed if breathing becomes difficult.

F. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day.

G. Any authorized visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and shall not be permitted to return.

H. The PCB Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the PCB Contractor.

1.11 DELIVERY AND STORAGE

A. Deliver all materials to the job site in original packages with containers bearing manufacturer's name and label.

B. Store all materials at the job site in a suitable and designated area.
   1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
   2. Protect materials from unintended contamination and theft.
   3. Storage areas shall be kept clean and organized.

C. Remove damaged or deteriorated materials from the job site. Materials contaminated with PCBs shall be disposed of as PCB material as specified herein.

1.12 TEMPORARY UTILITIES

A. Where available, obtain power from Owner's existing system. Otherwise provide power from other sources (i.e. generator).
   1. Provide temporary 120-240 volt, single phase, three (3) wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCIs) for all electric requirements within the Work Area.
   2. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.
   3. Provide wiring and receptacles as required by the APM for air sampling equipment.

4. All power to the Work Area shall be brought in from outside the area through GFCIs at the source.

B. Provide temporary lighting for all Work Areas.
   1. The entire Work Area shall be kept illuminated at all times.
   2. Provide lighting as required by the Environmental Consultant for the purposes of performing required inspections.

C. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PART 2 PRODUCTS

2.01 PROTECTIVE CLOTHING

A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, and foot coverings. Provide disposable nitrile, neoprene, butyl or Viton® gloves, suitable to prevent PCB skin contact, to protect hands.

B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing removal Work.

C. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

D. Authorized visitors shall be provided with suitable protective clothing, headgear, hand protection, eye protection, ear protection and footwear whenever they enter the Work Area.

2.02 SIGNS AND LABELS, CONTAINERS

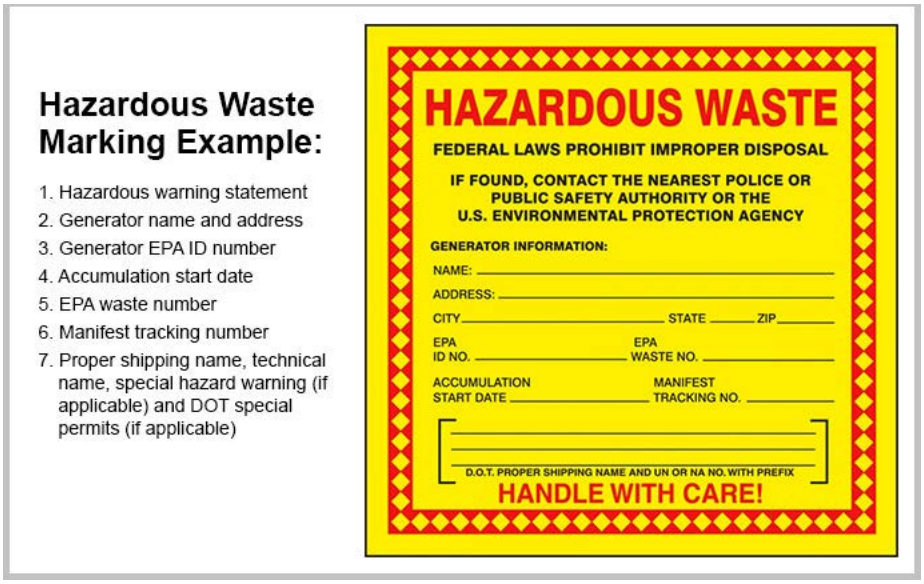
A. Products for signs, labels and containers shall be as indicated in this section, or as directed by the Owner and / or their representative

B. Provide warning signs and barrier tapes at all approaches to PCB Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

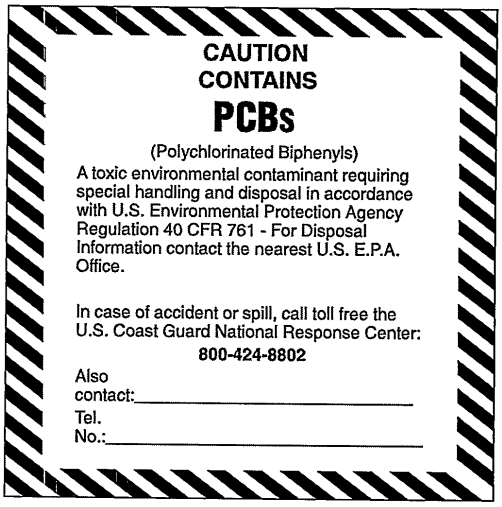
C. Each container used for on-site hazardous waste accumulation must be labeled or marked clearly with the words "Hazardous Waste," an indication of the hazards of the contents, and the date on which accumulation began (sections 262.16(b)(6) and 262.17(a)(5)).

Example:

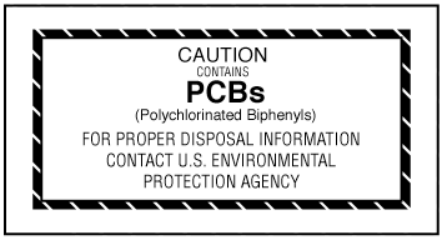
D. Provide the appropriate "Large PCB Mark" or "Small PCB Mark" (M_L or M_S per 40 CFR 761) as shown below, of sufficient size to be clearly legible, for display on waste containers (bags, boxes, rolloffs or drums) which will be used to contain or transport PCB contaminated material, in accordance with 40 CFR 761. In addition, U.S. Department of Transportation (DOT) 49 CFR Parts 171 and 172 requires the name and UN number of the material to be on the bags or drums, and, if shipped in bulk (rolloffs, Gaylord boxes, etc.), the bulk container must also be labeled: Polychlorinated Biphenyl, solid mixture UN 3432.



M_L



M_S



E. The PCB materials are also NYS Hazardous Waste, and must have a label stating the following on each container :

HAZARDOUS WASTE--Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority, or the U.S. Environmental Protection Agency.

Proper DOT Shipping Name_____
Generator's Name, Address, City, State, ZIP and phone_____
Generator's EPA Identification Number, Waste code_____
Accumulation Start Date _____
Manifest Tracking Number _____

F. Provide 6 mil plastic disposal bags with PCB caution labels.
1. The "Small PCB Label" (M_S per 40 CFR 761) may be used as shown above. Bags shall also be labeled with U.S. DOT required markings per 49 CFR 172, Polychlorinated Biphenyl, solid mixture UN 3432.
2. Labeled PCB waste containers or bags shall not be used for non-PCB waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not, shall be handled and disposed of as PCB waste.

2.03 DAILY PROJECT LOG

A. Provide a Daily Project Log. The log shall contain on title page: the DASNY Project name and number; name, address and phone number of Owner; name, address and phone number of Environmental Consultant / APM; name, address and phone number of PCB Contractor; and emergency numbers including, but not limited to, local Fire/Rescue department.

B. All entries into the log shall be made in non-washable, permanent ink, and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. The Project Supervisor shall document all Work performed daily and note all inspections.

2.04 SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.

B. Provide scaffolding and ladders as required by the APM for the purposes of performing required inspections.

2.05 SHIPPING CONTAINERS AND PACKAGING

A. Provide packaging in accordance with 49 CFR 173 Packaging Group 9, such as 30 or 55 gallon capacity fiber, plastic, or metal drums, Gaylord Boxes or other Intermediate Bulk Containers (IBCs), or non-siftable bulk containers, capable of being sealed air and water tight if PCB waste has the potential to damage or puncture disposal bags, or as specified by the waste disposal facility. Affix PCB caution labels on lids of drums, and opposite sides of drums or bulk containers, as well as the ends of bulk containers. Recovery or salvage drums must be acceptable for disposal of hazardous waste. Prior approval of drums is required. Drums or containers must meet the required OSHA, EPA (40 CFR Parts

260-264 and 300), and DOT Regulations (49 CFR Parts 171-178). Use of damaged containers shall not be allowed.

2.06 EQUIPMENT AND MATERIALS

A. All dry vacuuming performed under this contract shall be performed with HEPA filter equipped industrial vacuums conforming to ANSI Z9.2.

B. Any power tools used to drill, cut into, or otherwise disturb PCB material shall be manufacturer equipped with HEPA filtered local exhaust ventilation, unless specified otherwise.

1. Electromechanical tools using aggressive methods (e.g. angle grinders, masonry groove cutters, circular saws, and slot mills, etc.) are not allowed to be used for exterior open-air PCB caulk/sealant or glazing compound removals. Local HEPA exhaust is not sufficient for these tools. A negative pressurized enclosure is required for these operations, in addition to the localized ventilation.

C. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, waste container) shall be at least 6 mil fire retardant sheeting.

D. Absorbant Material: Clay, soil or any commercially available absorbent used for the purpose of absorbing hazardous or potentially hazardous materials.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. Should visible PCB debris be observed outside the Work Area, immediately stop work, notify the Owner, and institute emergency procedures as directed. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the PCB Contractor, at no additional cost to the Owner.

3.02 WORK AREA PREPARATION

A. PCB caution signs shall be posted at all approaches to the PCB Work Area. Post all emergency exits as emergency exits only on the Work Area side, post with PCB caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the PCB Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs.

B. Access to areas of work shall be regulated to prevent unauthorized visitors.

C. Personal/Equipment Decontamination Room or Area. An existing room or area that is adjacent to the work area shall be used for the decontamination of personnel and equipment. The room or area shall be covered by an impermeable dropcloth on the floor or horizontal working surface. The room or area must be of sufficient size to accommodate cleaning of equipment and removing personal protective equipment. Work clothing must be cleaned with a HEPA vacuum before it is removed. All equipment and surfaces of waste containers must be cleaned prior to removing them from the decontamination room or area. All personnel must enter and exit the PCB work area through the decontamination room or area.

D. Work Area Preparation For Exterior Removal:
1. Prior to placement of plastic sheeting, the ground / surface shall be pre-cleaned using HEPA vacuum and / or collection of visible PCB debris.
2. All ground surfaces exterior to the work area shall have a layer of 6 mil fire retardant plastic sheeting, attached to the building face and laid down on the surface below the exterior removal work area, at least 10 feet wide or to the furthest point of gravity fall for dislodged debris by methods used,

whichever is further. For work at the second story and above, extend 6 mil fire retardant plastic sheeting as necessary. For work above third story, by sidewalk, street, or property boundary, scaffolding sides shall be covered in 6-mil fire retardant plastic sheeting.

3. All operable windows within the work area and 25 feet from all sides of the work area shall be closed and cordoned off with caution tape, with ”do not open” warnings.
4. In the work area, isolate all HVAC equipment intakes by temporarily shutting down units during removals and installing plastic sheeting over the opening. Seal all openings (i.e. drain/grates) within 25 feet of work area, or within 10 feet of building.

E. Work Area Preparation For Interior Removal:

1. Isolate all HVAC equipment, including installing plastic sheeting and sealing airtight with duct tape all air returns and exhausts. Turn off all HVAC systems serving work area when feasible.
2. Prior to placement of plastic sheeting, the floor / surface shall be pre-cleaned using HEPA vacuum and / or collection of visible PCB debris.
3. All floor areas adjacent to the work area shall have a layer of 6 mil fire retardant plastic sheeting, attached to the interior wall and laid down on the surfaces below the removal work area, at least five (5) feet wide or to the furthest point of gravity fall for dislodged debris by methods used, whichever is further.
4. All movable objects shall be removed from the immediate work area. All non-movable objects shall be covered with one layer of 6 mil fire retardant plastic sheeting and sealed at the edges.
5. All operable windows within the work area shall be closed. /”do not open” warnings.
6. Temporary dust barriers consisting of a minimum of 6-mil fire-retardant plastic sheeting shall be installed at hallways, corridors, doorways, and other openings to the work area not used for passage during removals to establish work area containment enclosure.
7. A 6-mil fire retardant plastic sheeting overlapping curtained doorway shall be installed at the entrance to the work area.
8. For all work areas with use of aggressive electromechanical grinding tools for PCB removals, HEPA filtered negative air ventilation units must be installed in work area and shall operate continuously during removal operations to establish negative pressure. A minimum of 4 air changes per hour must be maintained within work area during removals and cleanings until work area clearance is obtained from the APM.

3.03 REMOVAL OF PCB MATERIALS - GENERAL

A. PCB-containing materials shall be removed in accordance with the Contract Documents and the approved PCB Work Plan.

B. Non-PCB items remaining, such as windows, doors, masonry, and all other building construction and components from which PCB materials are removed, shall be decontaminated by physical or chemical means (such as stripper) such that no visible residue remains. The removal of the PCB materials may require the use of scrapers, solvents, mastic removal chemicals, or other methods/procedures to ensure complete removal.

C. Use tools that generate the least amount of dust and that will still complete the PCB caulk/sealant or glazing compound removal. See current EPA regulations and recommendations regarding tools and protective measures to be used for PCB caulk/sealant or glazing compound removals.

D. Electromechanical tools using aggressive methods (e.g. angle grinders, masonry groove cutters, circular saws, and slot mills, etc.) are not allowed to be used for exterior open-air PCB caulk/sealant or glazing compound removals. Local HEPA exhaust is not sufficient for these tools to control release of fugitive emissions into the open air. Negative Pressurized enclosure(s) are necessary, in addition to localized ventilation for these types of aggressive removals. Stated above 2.06 B.1.

E. For exterior removals, take appropriate precautions (e.g. install windscreens, etc.) to prevent dust and debris from migrating due to windy conditions.

F. Remove accessible caulk/sealant or glazing compound that could be disturbed before cutting building components, such as window frames. Cutting of components will occur on the ground within a negative pressurized work area enclosure.

G. All removed PCB material shall be placed into 6 mil plastic disposal clear bags or other suitable container upon detachment from the substrate, or containers as specified by the waste disposal facility. Large components with PCB material or PCB residue shall be wrapped in one layer of 6 mil plastic sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with 6 mil plastic sheeting.

H. Power or pressure washers are not permitted for PCB removal or clean-up procedures.

I. All construction and demolition debris determined by the Environmental Consultant APM to be contaminated with PCBs shall be handled and disposed of as PCB waste. If non-porous (e.g. metal) removed components previously in contact with non-liquid PCBs are to be cleaned and decontaminated prior to disposal as non-PCB waste, the requirements of 40 CFR 761 Subpart D shall be met, including cleaning to Visual Standard No. 2, Near-White Blast Cleaned Surface Finish of the National Association of Corrosion Engineers (NACE). The APM shall verify compliance with Standard No. 2, by visually inspecting all cleaned removed components. The PCB Contractor shall note that a near-white metal blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter.

J. All PCB waste must be located at or near the point of generation, under the control of the Project Supervisor. Up to 55 gallons may be stored at the point of generation for an indefinite period, but any greater than 55 gallons must be moved within three 3 days to a Container Storage Area (CSA) as specified in 6 NYCRR Section 372.2 “Standards Applicable to Generators of Hazardous Waste”, or off-site. Waste may be stored at the CSA for 90 days (large quantity generator) or 180 days (small quantity generator), during which labeling, inspections, and other requirements must be met as described in 6 NYCRR Section 372.2, Section 373-3.1(d) and Subpart 373-3.

K. On-site CSA Requirements:
1. Each waste dumpster\container shall have completed hazardous waste label with facility name, correct EPA ID number, full address, waste codes and waste information.
2. Appropriate hazardous waste storage and contents labels shall also be posted on the containers.
3. Since this is considered a main storage area for the project, third-party DASNY Environmental Consultant APM shall be completing initial and thence weekly hazardous waste storage area inspection logs and these records should be provided to DASNY and the facility each week. Inspection logs shall document observations including but not limited to: number and type of containers; disposition (empty, full, partially full); oldest container accumulation date; whether containers are sealed; description of CSA securitization (i.e. lock); and whether CSA is fully framed and sealed. Weekly inspection records shall be maintained for three years.
4. Each dumpster\container shall also post all relevant DOT labels to indicate proper waste types.
5. Each dumpster\container shall identify the accumulation start date.
6. All dumpsters and containers being stored outside shall meet EPA RCRA container requirements and shall not leak. All dumpsters and containers must be fully covered and protected from elements.
7. A spill kit shall be maintained in the CSA.
8. Regarding the posting of emergency numbers, PCB Contractor shall coordinate with facility and DASNY and post all required emergency numbers including facility contact(s), DASNY field office, PCB Contractor emergency numbers and local fire, police and medical facility numbers. Signage shall be posted in the lockable CSA, which must be protected from the elements.

L. The CSA and personnel managing it must also meet the following requirements of 6 NYCRR 373:
1. Preparedness and Prevention provisions of Section 373-3.3
2. Secondary containment requirements of 373-2.9(f)(1)

3. Personnel training in section 373-3.2
4. Contingency plans and emergency procedures in section 373-3.4 subparagraph 376.1(g)(1)(v)
5. The containers must be dated when placed in storage, and accumulation times must be observed.
6. The total amount of hazardous waste stored in the CSA at any given time must not exceed the maximum for the current generator status (6,000kg-SQG, no limit LQG).
7. A label or sign stating "Hazardous Waste" must identify all areas and containers used to accumulate hazardous waste.

M. Closure of the CSA. If a CSA was created specifically for the PCB removal work, once the removal work is complete, the PCB Contractor shall immediately close out the CSA, as per 373-3.7(b) and (e). This shall be observed and documented by the Environmental Consultant APM.

N. The PCB Contractor is required to provide temporary protection of the building (i.e. roof, window openings, construction joints, etc.) at the end of each Work shift so as to maintain the building in a watertight condition. Any damage to the facility caused by inadequate PCB Contractor protection shall be the responsibility of the PCB Contractor.

O. Personal protective equipment, including respirators, shall be utilized and worn during all removal operations until the Work Area is cleared by the APM.

P. Following completion of gross removal and after all accumulations of PCB waste materials have been containerized, the decontamination procedures in Section 3.04 shall be followed.

Q. Finishes damaged by PCB removal activities shall be restored by the PCB Contractor prior to final payment. Finishes unable to be restored shall be replaced under this Contract.

R. Dry sweeping and any other methods that raise dust shall be prohibited.

3.04 EQUIPMENT AND AREA DECONTAMINATION

A. When removal of PCB materials is completed, the decontamination process shall consist of HEPA vacuuming, wet wiping/mopping and a repeated HEPA vacuuming of the entire work area. All surfaces in and around the work area must be free of dust generated during the work.

B. Decontaminate all tools and equipment before removal from the work area.

C. If dust or debris has migrated to areas of the building other than the immediate work area, those areas shall be incorporated into the work area and thoroughly decontaminated to ensure all visible dust generated by the activity is eliminated.

D. Uncontaminated dust barriers and other protective sheeting shall be placed in disposable construction bags and disposed of as normal trash.

E. Visually inspect the area for any remaining dust or debris. HEPA vacuum and wet wipe until space is clean. Dispose of vacuum contents as PCB waste.

F. Upon completion of decontamination and removal of temporary dust barriers, a final inspection shall be performed by the PCB Contractor accompanied by the APM. As a result of any visual inspection by the APM, the PCB Contractor will clean or reclean the affected areas at no additional expense to the Owner.

PART 4 DISPOSAL OF PCB WASTE

4.01 TRANSPORTATION AND DISPOSAL SITE

A. The PCB Contractor's Hauler and Disposal Facility shall be approved by the Owner. Prior to the hazardous waste being removed from the site, written notice must be provided and confirmation received from the intended disposal facility, indicating proper authority to receive the PCB bulk product hazardous waste, as well as the ultimate disposal method for the waste. The notice shall be acknowledged in writing via a disposal facility representative's signature, printed name and title, as well as phone number, in compliance with 6 NYCRR 372.2(b)(2). For disposal within New York State, facilities must be specifically permitted to accept PCB waste. In addition, The PCB Contractor is responsible for securing appropriate treatment or disposal for the generated hazardous waste streams at a permitted TSDF, if necessary, in compliance with all regulatory requirements, and for obtaining a copy of the waste manifest and waste profile of the treated waste as executed by the TSDF. If the manifest is not returned within 35 calendar days from removal from the site, the PCB Contractor shall notify the Owner and the NYS DEC, and initiate an investigation as required and contact the EPA and file an Exception report if not returned within 45 days.

B. The PCB Contractor shall give at least 24 hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the PCB Contractor and Environmental Consultant APM are present, and the Environmental Consultant APM authorizes the release of the waste. The DOT-trained Environmental Consultant APM must be on-site for all hazardous waste shipment. They may also be required to signoff on the hazardous waste manifest on behalf of the owner and DASNY to allow the hazardous waste shipment to leave the site. This responsibility shall be coordinated and executed in accordance with the Owner's direction.

C. All waste generated as part of the PCB project shall be removed from the site within ten (10) calendar days after successful completion of all PCB removal work. However, all disposal facility permits/licenses, waste profiles, LDR forms, hauler permit(s), and all other necessary paperwork must be submitted and approved by the Environmental Consultant APM before the waste is removed from the site. Waste stream samples shall be collected by the Environmental Consultant APM for TCLP analysis and the results utilized by the PCB Contractor for waste stream characterization and disposal determination.

D. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant APM a valid DEC Part 364 Waste Hauler's Permit. The Environmental Consultant APM may verify the authenticity of the hauler's permit with the proper authority.

E. The Hauler, with the PCB Contractor and the Environmental Consultant APM, shall inspect all material in the transport container prior to taking possession and signing the Hazardous Waste Manifests.

4.02 WASTE SHIPMENT STORAGE CONTAINERS

A. All waste shipment storage containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.).

B. The Environmental Consultant / APM shall verify that the waste shipment storage container and/or truck tags (license plates) match that listed on the DEC Part 364 permit. Any waste shipment storage container not listed on the permit shall be removed from the site immediately prior to storage of any material from the site.

C. The waste shipment storage container shall be plasticized and sealed with one layer of clear 6 mil plastic. Once on-site, it shall be kept locked at all times, except during load out. The waste shipment storage container shall not be used for storage of equipment or PCB Contractor supplies.

D. While on-site, the waste shipment storage container shall be labeled with DEC Hazardous Waste Warning Labels as specified in Section 2.02.

E. The New York State Department of Environmental Conservation Hauler's Permit number shall be displayed on both sides and back of the container. The permit number shall be at least 3 inches high and in a color that contrasts with the container / vehicle background color.

F. Waste generated off-site or from a different on-site non-DASNY project is not permitted to be brought onto the Project site and/or loaded into the waste container.

G. The waste shipment storage container is not permitted to be loaded unless it is properly plasticized, has the appropriate danger signage affixed, and has the permit number appropriately displayed on the container.

H. The Owner may initiate random checks at the Disposal Site to ensure that the procedures outlined herein are complied with.

4.03 HAZARDOUS WASTE MANIFESTS & DISPOSAL DOCUMENTATION

A. Based on New York State's consideration of PCBs as hazardous waste, a Uniform Hazardous Waste Manifest shall be utilized solely as the waste Manifest for transportation. A hauler billing form or bill of lading may be used if the hauler needs an independent record but shall not be used as the primary shipping document.

B. The Manifest shall be completed by the PCB Contractor and verified by the Environmental Consultant that all the information and amounts are accurate, and the proper signatures are in place.

C. The Manifest shall have the appropriate signatures of the Owner's Representative (the Generator) and the Hauler representative prior to any waste being removed from the site.

D. Copies of the completed Manifest shall be retained by the Environmental Consultant and shall remain on-site for inspection.

E. Upon arrival at the Disposal Site, the Manifest shall be signed by the Disposal Facility operator to certify receipt of PCB materials covered by the manifest.

F. The Disposal Facility operator shall return the original Manifest to the Owner's Representative or the disposal facility state as required by the DEC in 6 NYCRR 372 within 35 days. The Environmental Consultant must call the facility to investigate if the Manifest is not returned within 35 days and contact the DEC and file an Exception report if not returned within 45 days.

G. The PCB Contractor shall utilize the Waste Disposal Log provided by the Owner. This log shall be maintained by the Project Supervisor and shall be kept on-site at all times. (See Appendix A.)

H. Copies of all waste disposal manifests and disposal logs (copies are acceptable for electronic closeout submittal review) shall be submitted by the PCB Contractor to the Owner with the final close-out documentation.

I. The PCB Contractor must also submit reports and records per the requirements of 6 NYCRR 372.2.

J. Payment for disposal of hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of hazardous waste delivered is returned for each load of waste removed from the site. The waste disposal log originals must be provided to the Owner, and copies provided to DASNY Code Compliance.

K. The Owner shall be provided the necessary information to file the annual report and fee report, if applicable, for the hazardous waste shipped.

END OF SECTION

APPENDIX A

WASTE DISPOSAL LOG

DORMITORY AUTHORITY STATE OF NEW YORK
WASTE DISPOSAL LOG

Facility: _____ **Building:** _____

Project: _____ **DASNY Project Number:** _____

PCB Contractor: _____ **Environmental Consultant:** _____

Load No.	Hauler Name	NYSDEC #	License Plate No.	Size of Container	Disposal Facility Name	Date Depart from Site	Date Received at Disposal Site	Date Shipment Record Returned

Comments:

Page _____ of _____

APPENDIX B

PCB CONTRACTOR’S ACKNOWLEDGEMENT STATEMENT

PCB CONTRACTOR'S ACKNOWLEDGEMENT STATEMENT

Re: Removal of Non-Liquid PCB Materials

_____
(DASNY Project Title)

_____
(Project Location-Campus, Building ID, Floor)

_____ _____
(DASNY Project Number) Project Date(s) (Start/End)

_____
(PCB Contractor)

In consideration of the following individuals' employment in connection with the removal, handling, and disposal of Non-Liquid PCB Materials at the referenced project, I hereby certify that the employees: a) have received the medical examinations required by OSHA 29 CFR 1926.134; b) have been fit tested specifically for respirators used on the Project; and c) have received training in the proper handling of Non-Liquid PCB materials, including the health implications and risks involved, as well as the use and limitations of the personal protective equipment to be used.

Employee Name (Supervisor and Handlers) (Print Name)	Social Security Number (last four digits)	State Driver License ID#
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Project Supervisor: _____ _____
Print Name Signature

Notary block here) Notary Name: _____

Page __ of ___

APPENDIX C

SAMPLE BLANK PCB LDR FORM

NEW YORK STATE GENERATOR RESTRICTED WASTE NOTIFICATION/CERTIFICATION FOR PCB WASTES

ALL NEW YORK STATE GENERATORS WHO GENERATE PCB WASTES MUST ATTACH THIS ADDENDUM TO THE UNIFORM HAZARDOUS WASTE MANIFEST
(THIS NOTIFICATION/CERTIFICATION IS ONLY APPLICABLE WITHIN THE STATE OF NEW YORK)

GENERATOR NAME: EPA ID NO.:

SIGNATURE: DATED:

MANIFEST NO:

This addendum to the uniform hazardous waste manifest must be completed for any New York State regulated hazardous waste generated in the State of New York. This form ensures that New York State generators comply with the notification requirements of 6 NYCCR Part 376. All New York State generators shipping PCB waste which is a New York State regulated hazardous waste must check the box and indicate the applicable waste code below.

☐ Check Here: The waste associated with the above manifest includes New York State Regulated PCB waste which is land restricted in the State of New York and is subject to 6 NYCRR Part 376.4(f). This waste shall be disposed of in accordance with 40 CFR 761. Pursuant to 376.4(f) (l) (i), B002 waste from any source other than a spill may not be stabilized or mixed with any other substance to conform with any provision of 40 CFR Part 761 regarding land disposal if the disposal occurs in the state of New York.

Check all which apply:

☐ B001 - PCB oil (concentrated) from transformers, capacitors, etc.

☐ B002 - Petroleum oil or other liquid containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs.

☐ B003 - Petroleum oil or other liquid containing 500 ppm or greater of PCBs.

☐ B004 - PCB articles containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs, excluding small capacitors.

☐ B005 - PCB articles, other than transformers, that contain 500 ppm or greater of PCBs, excluding small capacitors.

☐ B006* - PCB transformers. *PCB transformers* means any transformer that contains 500 ppm PCB or greater.

☐ B007* - Other PCB wastes, including contaminated soil, solids, sludges, clothing, rags and dredge material.

* Generators are required to certify that their B006 and/or B007 waste can be land disposed in accordance with 40 CFR Part 761 without further treatment if:

a. The waste is a B006 and is a transformer which has been drained and flushed pursuant to 40CFR761.60(b)(l)(i)(B) or

b. The waste is a B007 and does not contain PCBs which have been deliberately solicited.

☐ Check here if the B006 and/or B007 waste associated with this manifest conforms with either “a” or “b” and is intended for land disposal and sign this form at the top of the page. In accordance with 6 NYCRR Part 376.1 (g) (l)(ii) the generator makes the following certification:

“I certify under penalty of law that I personally have examined and am familiar with the waste, through analysis and testing or through knowledge of the waste, to support this certification that the waste complies with the treatment standards specified in part 376, section 376.4 and all applicable prohibitions set forth in subdivision 376.3(b) of Part 376 or RCRA section 3..04(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a find and imprisonment. “

SECTION 02 86 00

IDENTIFICATION AND DISPOSAL OF HAZARDOUS WASTE

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. This specification covers the identification and disposal of hazardous waste, and related hazardous materials at **Bronx Psychiatric Center, Building 1, 1500 Waters Place, Bronx, NY, DASNY Project Number 3816609999).** Demolition and removal of materials shall be as required to support the work.

B. Special Wastes:
   1. Asbestos-Containing Materials (ACM): ACM is regulated by United States Environmental Protection Agency (EPA) Toxic Substances Control Act (TSCA) Rules, NY Code Rule 56 and United State Occupational Safety and Health Administration (OSHA) standards and is not Hazardous Waste. Asbestos-Containing materials are governed under DASNY Specification 028200 Asbestos Removal.
   2. PCB Bulk Waste and non-liquid PCB materials (NLPCB): Interior and exterior caulk / sealant and glazing materials may contain NLPCB; if so, when disposed these materials are EPA-regulated PCB Bulk Waste under TSCA and are NYS hazardous waste. PCB light ballasts are also to be disposed of as NYS Hazardous Waste. NLPCB are governed under DASNY Specification 028400 Non-liquid PCB Material Removal.

C: The work shall include but not be limited to the removal of the following.

Building & Floor	Description of Material	Approximate Quantity (lbs/units)
Building 1 Transformer Room 1	PCB Remediation Waste Concrete Slab	60,000 Lbs
Building 1 Transformer Room 2	PCB Remediation Waste Concrete Slab	60,000 Lbs
Building 1 Transformer Room 1	PCB Remediation Waste Soil	370,000 Lbs.
Building 1 Transformer Room 2	PCB Remediation Waste Soil	370,000 Lbs.
	Total Quantity	860,000 Lbs.

D. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed (See General Conditions Article 3 – Site Conditions). Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

E. If any hidden materials are encountered during construction that when impacted by the project may generate hazardous waste, these materials shall be adequately assessed by the environmental consultant. This specification section shall be followed as appropriate for any impact to these hidden materials.

F. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

G. Working hours shall be as required and approved by the Owner. Removal activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions are described below:
"None".

1.03 DEFINITIONS

A. Hazardous waste shall be any generated waste stream that possesses at least one of four characteristics (ignitability, corrosivity, reactivity or toxicity) as defined and regulated by the Resource Conservation and Recovery Act (RCRA) and applicable state and federal regulations, or a material specifically identified as hazardous waste by applicable Federal or State lists, in 40 CFR 261 or 6 NYCRR 371, respectively.

1. Exception – Hazardous waste metal scrap, lead shielding, and metal with lead-based paint that has been segregated for recycling. A blank C7 NYS DEC notification form is included in appendices.

B. A Conditionally Exempt/Very Small Quantity Generator (CESQ/VSQG) of hazardous waste shall be a waste handler who generates no more than 100 kilograms per month of listed and/or characteristic hazardous waste, generates no more than 1 kilogram of acute hazardous waste in any calendar month, and stores no more than 1,000 kilograms of listed and/or characteristic hazardous waste or more than 1 kilogram of acutely hazardous waste.

C. A Small Quantity Generator (SQG) of hazardous waste shall be a waste handler who generates more than 100 kilograms but less than 1,000 kilograms per month of listed and/or characteristic hazardous waste, generates no more than 1 kilogram of acute hazardous waste per month, and stores no more than 6,000 kilograms of listed and/or characteristic hazardous waste or more than 1 kilogram of acutely hazardous waste.

D. Large Quantity Generator (LQG) of hazardous waste shall be a waste handler who generates more than 1,000 kilograms per month of listed and/or characteristic hazardous waste, generates more than 1 kilogram of acute hazardous waste per month, or stores more than 6,000 kilograms of hazardous waste or 1 kilogram of acutely hazardous waste.

E. The Owner's Environmental Consultant: The Owner shall provide a third-party environmental consultant to provide pre-work assessments, project monitoring assessments for the construction procedures for the work area, surrounding areas waste sampling, and container storage area, submittal review, and inspection and signoff of all hazardous waste shipments as well as final clearance assessments. The Contractor shall be responsible for the worker protection requirements.

1.04 SUBMITTALS

A. Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the Contractor shall submit an electronic copy of the documents listed below to the DASNY Project Manager, the DASNY Code Compliance Unit and the Environmental Consultant for review. Code Compliance approval must be obtained, prior to the commencement of removal activities.

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
1. Training & Certifications			
a) List of the employees scheduled to perform this work and their project function (Supervisor or Worker)	X	X	X
b) Certificate of on-site supervisor, for successful completion of OSHA 40-hour Health and Safety course [29 CFR 1910.120/1926.65] for handling hazardous waste and spills, including most recent refresher training.	X	X	X
c) OSHA 8-hour supervisor training [29 CFR 1910.120(e)(4)/1926.65(e)(4)] for hazardous waste.	X	X	X
d) Certificates of workers, for successful completion of OSHA 40-hour Health and Safety course [29 CFR 1910.120/1926.65] for handling hazardous waste and spills, including most recent refresher training.	X	X	X
e) Valid United States Department of Transportation (DOT) training [49 CFR172.704] for supervisor and all employees loading waste and maintaining on-site waste storage area. This training shall include: general awareness / familiarization training; function specific training; safety training; security awareness training; and in-depth security training.	X	X	X
f) Annual hazardous waste RCRA training as per 40 CFR 260.10, 262.17(a)(7), 264.16 & 265.16. Submit sign-in sheets for all employees and supervisors working on the project. This training may be either 2 hours, 4 hours or 8 hours, as applicable.	X	X	X
g) For projects involving Lead-based Paint, Lead Paint certification for each of the employees and supervisors per EPA, as applicable.	X	X	X
h) Employees managing Hazardous Waste must also meet the Personnel training requirements in section 6 NYCRR 373-3.2, 3.3, 3.4 & 376(g)(1)(v), as applicable. OSHA HAZWOPER training should suffice for this requirement along with the addition of site-specific required training.	X	X	X
2. Transportation & Disposal			
a) Valid Hazardous Waste Transporter NYS Part 364 permit for all transporters.	X	X	X
b) Valid Hazardous Waste Transport vehicle permit for all transporters for each state the waste is being transported through to reach the Treatment, Storage and Disposal Facility (TSDF), as applicable.	X	X	X
c) Valid US DOT vehicle registration for EACH Transporter.	X	X	X
d) Transfer Facility Permit (if used) including the name, address and EPA ID No. of the facility, phone number and contact person. Include an acknowledgement letter stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)].Transfer Facilities must be located within the US.	X	X	X
e) Final Disposal Facility permit including the name, address, phone number and EPA ID No. of the facility, and contact person. Include an acknowledgement letter from the disposal facility stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)]. **The final destination of waste must be within the United States.**	X	X	X
f) The TSDF permit(s) must identify the waste material(s) to be received.	X	X	X
g) Draft Land Disposal Restriction (LDR) form (See Appendix A for PCB LDR).	X	X	X

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
h) Draft Waste Profile(s).	X	X	X
i) Draft Waste Manifest.	X	X	X
j) Draft C7 NYSDEC Notification form for any metals to be recycled, if applicable (See Appendix B).	X	X	X
3. Site-specific:			
a) Safety Data Sheet (SDS) for all materials to be removed.	X	X	X
b) If the Contractor introduces any chemical into the work environment, a SDS for each chemical must be presented to the Owner's Representative prior to use.	X	X	X
4. Progress Schedule:			
a) Show the complete sequencing of removal activities and the sequencing of Work within each building, wing or section of building. *The schedules will be utilized to schedule facility and third-party environmental consultant requirements.*	X	X	X
b) Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building or phase.	X	X	X
5. Scope of Work Plan:			
Removal Work Plan and Drawing(s) Provide a written work plan description of work and drawing(s) that clearly indicates the following:			
a) All work areas/phases numbered sequentially.	X	X	X
b) Locations and types of all decontamination enclosures for each work area/phase.	X	X	X
c) Proposed location and construction of storage facilities and field office (when applicable).	X	X	X
d) Type of removal activity/technique for each work area/phase.	X	X	X
e) List waste types and quantity being generated and stored (refer to 1.01, C).	X	X	X
f) Site/work area preparation and cleanup procedures.	X	X	X
g) Include in the plan, eating, drinking, and sanitary procedures, interface of trades and sequencing of hazardous waste generation.		X	X
h) Include occupational and environmental sampling (if any by the Contractor), frequency and duration of sampling.		X	X
~~i)~~ Contractor's Health and Safety Plan		X	X
j) Contractor's Facility Contingency Plan revision information for material handling and emergency procedures, that has been accepted by owner.			X
k) Container Storage Area (CSA) location and construction details. (refer to 3.03.H.) [How is the waste being stored? (indoors or outdoors, drums, containers, or dumpsters, types, with cover?).]	X	X	X
l) Include waste transport routes to the CSA from each work area/phase	X	X	X
m) Collected wastewater disposal/treatment plan.			X
n) Include plan for hazardous waste segregation and minimization including metal recycling, as necessary.	X	X	X
o) Contractor waste generation details (amount per day, per week or per quarter) in kgs or pounds.			X
p) Contractor emergency evacuation plan requirements and evacuation route for the project specific work areas/phases.			X

Pre-work Submittals	VSQG (CESQG)	SQG	LQG
q) DASNY PM, Facility Representative, and Project team emergency contact numbers. [to be posted at CSA (interior and exterior).]	X	X	X
Do not start work until submittals are returned with the Owner's Representative approval for unrestricted use.	X	X	X

VSQG: <220 lbs.; SQG: 220lbs – 2200lbs (180 Days); LQG - >2,200lbs (90 Day).

B. On-Site and During Construction Submittal Requirements.

On-Site & During Construction	VSQG (CESQG)	SQG	LQG
The following submittals, documentation, and postings shall be maintained on-site by the Contractor during abatement activities at a location approved by the Environmental Consultant:			
1. Approved pre-work submittals.	X	X	X
2. Project Documents (environmental reports, specifications and drawings).	X	X	X
3. Applicable regulations.	X	X	X
4. Updated licenses/permits and acknowledgement letters for any changes in transporter or disposal site.	X	X	X
5. For each employee, current annual medical respiratory clearance.		X	X
6. For each employee, current satisfactory respiratory fit test results.		X	X
7. Confined Space training certificates as per 29 CFR 1910.146 or 1926.1207, as applicable.	X	X	X
8. Coordinate with facility for a 30-minute training on the facility contingency plan requirements and contractors emergency action plan. Submit proof of contingency plan training. A copy of the contingency plan, including any revisions, shall be posted at each CSA			X
9. Contractor shall provide weekly update, including initial container storage dates for each container stored, an approximate estimate of amount of waste being generated during each work-day, week or month that it is stored on-site. The actual weight of the waste, excluding the weight of the dumpster / container, shall be identified.			X
10. Toxicity Characteristic Leaching Procedure (TCLP) waste sample results. Contractor shall notify DASNY and Environmental Consultant for waste stream sampling prior to any waste being removed from the site. Painted component waste streams shall be tested by the 8 RCRA Metals TCLP methodology.	X	X	X
11. Completed Waste Profile form(s). Contractor shall utilize analytical test results from the survey report and / or TCLP results provided by Environmental Consultant, as appropriate, to generate waste profile and LDR form.	X	X	X
12. Completed LDR form.		X	X
13. Completed C7 form along with NYS DEC submission documentation (email delivery), if applicable	X	X	X
14. List of emergency phone numbers.	X	X	X
15. Waste disposal log.		X	X
16. Daily Project Log.	X	X	X

On-Site & During Construction	VSQG (CESQG)	SQG	LQG
17. Copy of Waste manifest for each load of waste that is removed from site.	X	X	X
18. Copy of completed hazardous waste manifest including legible transporter and disposal facility information, dates and times of waste shipment departures / arrivals, and signatures, for each load of waste, within 35 days of waste being removed from site.	X	X	X
The following documentation shall be maintained on-site by the **Environmental Consultant** during abatement activities:			
19. Valid Environmental Consultant personnel OSHA, RCRA, and DOT training certifications.	X	X	X
20. Proof of current Facility Contingency Plan Training.			X
21. Consultant Daily Log.	X	X	X
22. Listing of all visual inspections with the date of inspection and the date of signoff on the supervisor's log.	X	X	X
23. Hazardous Materials Survey Report.	X	X	X
24. All TCLP waste sample laboratory results including completed chain of custody forms and valid laboratory NYS DOH ELAP certifications.	X	X	X
25. CSA Inspections – Initial Inspection and Weekly Inspections Thereafter.	X	X	X
26. All applicable waste documentation, including but not limited to Universal Hazardous Waste Manifests, waste profiles, LDR forms, c7 forms and disposal facility letter(s).	X	X	X

C. Project Close-out Submittal Requirements:

1. Within 30 days after project and/or phase completion, the **Contractor** shall submit one electronic copy of the closeout-out submittal (requirements listed below) to DASNY Code Compliance and one copy to the Environmental Consultant for review and approval prior to the Contractor's final payment. Once DASNY Code Compliance approves the electronic close-out submittal, the Contractor shall provide hardcopy or e-copy of the approved close-out documents, as per DASNY Project Management. DASNY Project Management shall provide the Facility with a copy of the approved closeout submittals.
   a. **Fully Executed Copies** of all completed hazardous waste disposal manifests, recycling certificates for recycled metal and disposal logs (see Appendix C), not yet submitted and approved, shall be sent to DASNY Code Compliance including legible transporter and disposal facility information, departure / arrival times and dates, and signatures. Original hazardous waste manifests shall be sent to the Owner/Generator.
   b. Copies of all executed waste profile forms, disposal facility acknowledgement letters and LDR forms.
   c. Daily progress log.
   d. Entry/Exit Logs. Decontamination unit entry/exit log for Hazardous Waste generation work areas (must be separate from any documentation associated with Asbestos removals, unless the material is both Hazardous and ACM).
   e. If TSDF transfer facility is utilized, completed hazardous waste manifest from final destination must also be provided along with a certificate of disposal/recycling. Final destination of waste must be within the United States.
   f. Documentation (i.e. daily log) of Container Storage Area (CSA) closure (if applicable) in accordance with applicable federal and state regulations.

2. Within 30 days of project and/or phase completion, the **Environmental Consultant** shall submit one electronic copy of the documents listed below to DASNY Code Compliance for

review and approval prior to Environmental Consultant's final payment. Once DASNY Code Compliance approves the electronic close-out submittal, the Environmental Consultant shall provide three sets of the approved close-out documents (double-sided and bound) to DASNY Project Management. Project Management shall provide the Facility with one copy of the approved closeout submittals.

a. Upon completion of the Project, the Environmental Consultant shall certify to the Owner, in writing, that the work is complete and acceptable in an Executive Summary of the work.
b. The Environmental Consultant shall review and approve or disapprove all necessary guarantees, certificates of compliance, and all other close-out documentation, which the Contractor is required to submit.
c. The Environmental Consultant shall provide to the Owner the final Project data binder to include:
    1) All daily logs.
    2) Summary of all visual inspections with the date of inspection and the date of signoff on the supervisor's log.
    3) Sampling logs, Laboratory results, chain of custody forms, and sample location plans, if applicable.
    4) Daily worker rosters.
    5) All TCLP waste sample laboratory results including completed chain of custody forms and valid laboratory NYS DOH ELAP certifications, if applicable.
    6) All applicable waste documentation, including but not limited to Uniform Hazardous Waste Manifests, waste profiles, LDR forms, C7 forms, certificate of disposal/recycling and disposal facility acknowledgment/acceptance letter(s)/documentation.
    7) All pertinent correspondence related to the Project including but not limited to clearance letters and supplemental inspection findings performed during construction, copies of all weekly hazardous waste storage location inspections, etc.

D. Hazardous Waste Project Submittals shall be submitted as separate packages, not included with any other environmental or hazardous materials submittals.

1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by Owner, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:
1. Contractor's scope of Work, Work plan, and schedule to include number of workers and shift days and times.
2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
3. Environmental Consultant's duties, functions, and authority.
4. Contractor's Work procedures including:
    a. Methods of job site preparation and removal methods.
    b. Respiratory protection.
    c. Disposal procedures.
    d. Cleanup procedures.
    e. Fire exits and emergency procedures.
5. Contractor's required pre-work and on-site submittals, documentation, and postings.
6. Contractor's plan for 24-hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.

7. Temporary utilities.
8. Handling of furniture and other movable objects.
9. Hazardous waste segregation and minimization plan, including metals intended for recycling.
10. Storage of Hazardous waste in CSA.
11. Waste disposal requirements and procedures, including Contractor notification to DASNY project management and Environmental Consultant for TCLP waste stream sampling, once waste stream generation has commenced, and prior to any waste being removed from site.
12. If applicable, contingency plan training information.

C. In conjunction with the conference, the Contractor shall accompany the Owner and Environmental Consultant on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of CSA, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

1.06 APPLICABLE STANDARDS AND REGULATIONS

A. All activities related to the work shall be conducted in compliance with all applicable laws, regulations, and requirements which may include, but not be limited to: EPA, DOT, RCRA, TSCA, OSHA, New York State Department of Environmental Conservation (NYS DEC), New York City Department of Environmental Protection (NYC DEP), and New York City Fire Department.

B. The Contractor is required to secure and maintain all required regulatory permits necessary to perform all aspects of the work.

C. The Contractor shall containerize and store waste in accordance with all applicable regulations. All containers shall be appropriately marked/labeled, including the accumulation start date indicated on each package.

1.07 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
1. The Project Supervisor shall be trained in hazardous waste removal/generation procedures and hazardous waste management in NYS, via a 40-hour HAZWOPER and 8-hour Supervisor training course, as well as appropriate RCRA and DOT training.
2. The Project Supervisor shall have a minimum of one year experience as a supervisor.
3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by the Owner or DASNY.

C. The Project Supervisor shall maintain a Daily Project Log that includes the Waste Disposal Log required by section 4.03 of this specification.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the Contractor primary point of contact for the Environmental Consultant.

E. As required by applicable regulations, prior to assignment to hazardous waste work, instruct each employee with regard to the hazards of the generated waste, safety and health precautions, and the

use and requirements of protective clothing and equipment, as well as the facility contingency plan and/or Contractor emergency action plan. The contractor shall also determine whether work will be performed in confined spaces. If so, properly trained personnel shall be required. Valid initial and refresher confined space training documentation shall be maintained at the site.

PART 2 PRODUCTS

2.01 PROTECTIVE CLOTHING

A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, and foot coverings. Provide appropriate disposable gloves (i.e. neoprene or butyl gloves for handling PCBs), suitable to prevent hazardous waste skin contact, to protect hands.

B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing abatement Work.

C. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

D. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, gloves, and footwear whenever they enter the Work Area.

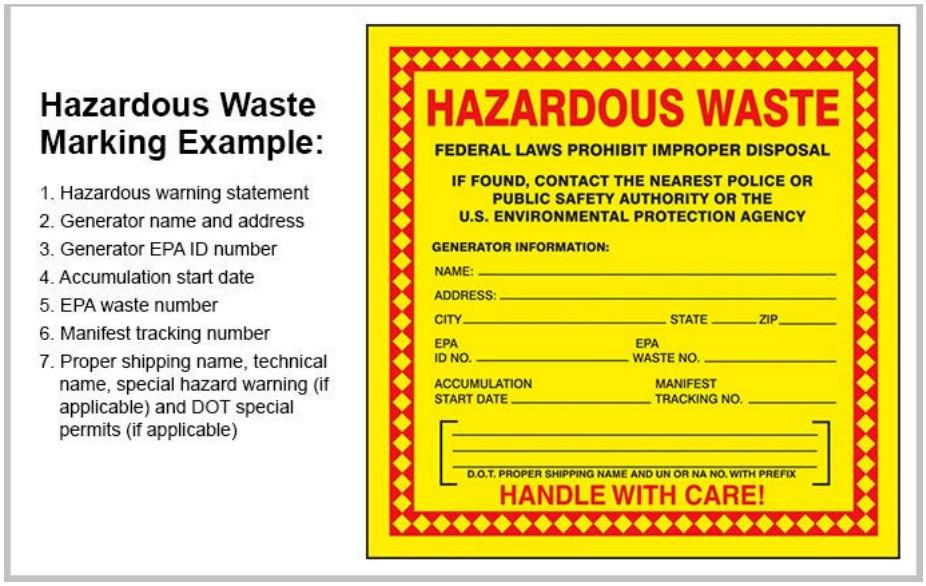
2.02 SIGNS AND LABELS, CONTAINERS

A. Products for signs, labels and containers shall be as indicated in this section, or as directed by the Owner and / or their representative.

B. Provide warning signs and barrier tapes at all approaches to Hazardous Waste generation Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

C. Each container used for on-site hazardous waste accumulation must be labeled or marked clearly with the words "Hazardous Waste," an indication of the hazards of the contents, and the date on which accumulation began (sections 262.16(b)(6) and 262.17(a)(5)).

Example:

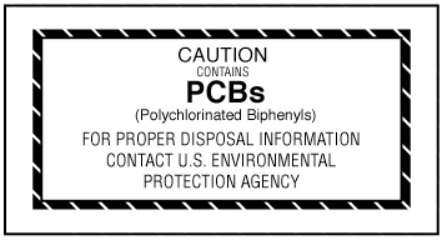


D. For PCB Hazardous Waste, provide the appropriate "Large PCB Mark" or "Small PCB Mark" (M_L or M_S per 40 CFR 761) as shown below, of sufficient size to be clearly legible, for display on waste containers (bags, boxes, rolloffs or drums) which will be used to contain or transport PCB contaminated material, in accordance with 40 CFR 761. In addition, U.S. Department of Transportation (DOT) 49 CFR Parts 171 and 172 requires the name and UN number of the material to be on the bags or drums, and, if shipped in bulk (rolloffs, Gaylord boxes, etc.), the bulk container must also be labeled: Polychlorinated Biphenyl, solid mixture UN 3432.

M_L



M_S



E. The PCB materials are also NYS Hazardous Waste, and must have a label stating the following on each container :

HAZARDOUS WASTE—Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority, or the U.S. Environmental Protection Agency.

Proper DOT Shipping Name_____
Generator's Name, Address, City, State, ZIP and phone_____
Generator's EPA Identification Number, Waste code_____
Accumulation Start Date _____
Manifest Tracking Number _____

F. Provide 6 mil clear plastic disposal bags with PCB caution labels.
1. The "Small PCB Label" (M_S per 40 CFR 761) may be used as shown above. Bags shall also be labeled with U.S. DOT required markings per 49 CFR 172, Polychlorinated Biphenyl, solid mixture UN 3432.
2. Labeled PCB waste containers or bags shall not be used for non-PCB waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not, shall be handled and disposed of as PCB waste.

2.03 DAILY PROJECT LOG

A. Provide a Daily Project Log. The log shall contain on title page the DASNY Project name, phase (if applicable) and number; name, address and phone number of Owner; name, address and phone number of Environmental Consultant; name, address and phone number of Abatement Contractor; and emergency numbers including, but not limited to, local Fire/Rescue department.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. The Project Supervisor shall document all Work performed daily and note all inspections.

2.04 SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.

B. Provide scaffolding and ladders as required by the Environmental Consultant for the purposes of performing required inspections.

2.05 SHIPPING CONTAINERS AND PACKAGING

A. Products for containerization and packaging shall be as indicated in this section, or as directed by the Owner and / or their representative.

B. Provide packaging in accordance with 49 CFR 173 Packaging Group 9, such as 30 or 55 gallon capacity fiber, plastic, or metal drums, Gaylord Boxes or other Intermediate Bulk Containers (IBCs), or non-siftable bulk containers, capable of being sealed air and water tight if hazardous waste has the potential to damage or puncture disposal bags. Affix hazardous waste caution labels on lids of drums, and opposite sides of drums or bulk containers, as well as the ends of bulk containers. Recovery or salvage drums must be acceptable for disposal of hazardous waste. Prior approval of drums is required. Drums or containers must meet the required OSHA, EPA (40 CFR Parts 260-264 and 300), and DOT Regulations (49 CFR Parts 171-178). Use of damaged containers shall not be allowed.

2.06 EQUIPMENT AND MATERIALS

A. All dry vacuuming performed under this contract shall be performed with HEPA filter equipped industrial vacuums conforming to ANSI Z9.2.

B. Any power tools used to drill, cut into, or otherwise disturb hazardous material shall be manufacturer equipped with HEPA filtered local exhaust ventilation, unless specified otherwise.

C. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, and waste container) shall be at least 6 mil clear fire retardant sheeting.

D. Absorbent Material: : Clay, soil or any commercially available absorbent used for the purpose of absorbing hazardous or potentially hazardous materials.

2.07 RESPIRATORY PROTECTION

A. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134. Provide respirator training.

B. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134.

C. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist initially and on a yearly basis thereafter. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual.

D. A storage area for respirators shall be provided by the Contractor in the clean portion of the decontamination enclosure where they will be kept in a clean, dry environment.

E. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters will be removed and discarded during the decontamination process. Filters cannot be reused. Filters must be changed if breathing becomes difficult. Filters provided to the personnel shall be appropriate to the hazardous waste(s) being handled as well as any chemicals brought on site and used to facilitate the removals.

F. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day.

G. Any authorized visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and shall not be permitted to return.

H. The Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the Contractor.

PART 3 EXECUTION

3.01 HAZARDOUS WASTE GENERATION AND ON-SITE STORAGE

A. All waste shall be stored, handled, transported and disposed of in accordance with all federal, state, and local guidelines and regulations. The Contractor shall obtain all permits, licenses, etc., which are necessary for the storing, transporting and disposing of hazardous waste. The Contractor shall develop all applicable manifests, Waste Profile Sheets, LDR Forms, C7 forms and any other documentation and coordinate with the Owner regarding proper signatures.

B. All hazardous waste generated shall be placed into 6 mil clear plastic disposal bags or other suitable container upon detachment from the substrate. Large components with residue shall be wrapped in one layer of clear 6 mil plastic sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with clear 6 mil plastic sheeting.

C. All construction and demolition debris determined by the Environmental Consultant to be potentially contaminated with hazardous waste shall be handled and disposed of as hazardous waste. If the project is at an OPWDD hostel and hazardous waste is limited to lead based paint from non-demolition/deconstruction activity, the owner may elect to have waste temporarily stored on-site, transported and disposed of as household waste, at a Municipal Solid Waste (MSW) permitted landfill, as per all pertinent NYS DEC requirements. If the owner selects this option, the owner would be responsible for transport to an MSW as well as appropriate disposal at the MSW. TCLP samples are not necessary for characterization of household waste.

D. All generated hazardous waste must be stored at or near the point of generation, under the control of the Project Supervisor. Up to 55 gallons may be stored at the point of generation for an indefinite period, but any greater than 55 gallons must be moved within three (3) days to a CSA as specified in 6 NYCRR Section 372.2 “Standards Applicable to Generators of Hazardous Waste”, or off-site. Waste may be stored at the CSA for 90 days (large quantity generator), 180 days (small quantity generator with TSDF within 200 miles of site), or 270 days (small quantity generator with TSDF greater than 200 miles from the site) during which labeling, inspections, and other requirements must be met as described in 6 NYCRR Section 372.2, Section 373-3.1(d) and Subpart 373-3.

E. The Contractor shall identify and classify the hazardous waste generated through the performance of the work as per the governing regulations, and in accordance with the waste stream TCLP results provided by the Owner's third-party Environmental Consultant. The Contractor shall utilize the TCLP results to confirm the requirements for handling, storing, transporting and disposing of the hazardous waste.

F. The Third-Party Environmental Consultant shall sample all potential hazardous waste streams for TCLP listed hazardous and characteristic (if applicable) analyses prior to disposal, in accordance with 40 CFR 261 for hazardous waste. It should be noted that the disposal facility may have more stringent requirements for hazardous waste acceptance (i.e. PCB testing for painted wastes). Therefore, the Environmental Consultant shall be informed in writing, so that they may indicate analytical testing accordingly. The waste profile, LDR and C7 forms and waste transporter permit must be reviewed and approved by the Owner's Environmental Consultant prior to any hazardous waste leaving the site. The DOT-trained Environmental Consultant must be on-site for all hazardous waste shipment removals and will be responsible for inspection of the waste shipment as well as signoff on the hazardous waste manifest, on behalf of the owner and DASNY, to allow the hazardous waste shipment to leave the site. If at an Office of Mental Health (OMH) facility, a properly trained OMH site representative must also be present for the waste pickup.

G. On-site Storage Requirements.
1. Each waste dumpster\container shall have completed hazardous waste label with facility name, correct EPA ID number, full address, waste codes, and waste information.
2. Appropriate hazardous waste storage and contents labels shall also be posted on the containers.
3. Since this is considered a main storage area for the project, the third-party DASNY Environmental Consultant shall be completing an initial and weekly hazardous waste storage area inspection logs and these records shall be provided to DASNY and the facility each week. Weekly inspection records shall be maintained for three (3) years.
4. Each dumpster\container shall also post all relevant DOT labels to indicate proper waste types.
5. Each dumpster\container shall identify the accumulation start date. Maximum storage limit is 90-270 days from the date of accumulation.
6. All dumpsters and containers being stored outside shall meet EPA RCRA container requirements and shall not leak. All dumpsters and containers must be fully covered and protected from the elements as well as secured by lock when not in use.
7. A spill kit shall be maintained in the CSA.
8. Regarding the posting of emergency numbers, Contractor shall coordinate with facility and DASNY and post all required emergency numbers including facility contact(s), DASNY field office, Contractor emergency numbers and local fire, police and medical facility numbers. Signage shall be posted on the lockable CSA.

H. The CSA and personnel managing it must also meet the following requirements of 6 NYCRR 373:
1. Preparedness and Prevention provisions of Section 373-3.3
2. Secondary containment requirements of 373-2.9(f)(1)
3. Personnel training in section 373-3.2
4. Contingency plans and emergency procedures in section 373-3.4 subparagraph 376.1(g)(1)(v)
5. The containers must be dated when placed in storage, and accumulation times must be observed.
6. The total amount of hazardous waste stored in the CSA at any given time must not exceed the maximum for the current generator status (6,000 kg-SQG, no limit-LQG).
7. A label or sign stating "Hazardous Waste" must identify all areas and containers used to accumulate hazardous waste.

I. Closure of the CSA. If a CSA was created specifically for the Hazardous waste generation work, once the work is complete, the Contractor shall immediately close out the CSA, as per 373-3.7(b) and (e). This shall be observed and documented by the Environmental Consultant.

J. The Contractor is required to provide temporary protection of the building (i.e. roof, window openings, construction joints, etc.) as applicable for the work, at the end of each Work shift so as to maintain the building in a watertight condition. Any damage to the facility caused by inadequate Contractor protection shall be the responsibility of the contractor.

PART 4 DISPOSAL OF HAZARDOUS WASTE

4.01 TRANSPORTATION AND DISPOSAL SITE

A. The Contractor's Hauler and Disposal Facility shall be approved by the Owner. Prior to the hazardous waste being removed from the site, written communication from the disposal facility must be provided, confirming proper authority to receive the particular hazardous waste, as well as the ultimate disposal method for the waste. The written communication shall be from a disposal facility representative including signature, printed name and title, as well as phone number, in compliance with 6 NYCRR 372.2(b)(2). For disposal within New York State, facilities must be specifically permitted to accept hazardous waste. In addition, the Contractor is responsible for securing appropriate treatment or disposal for the generated hazardous waste streams at a permitted TSDF, if necessary, in compliance with all regulatory requirements, and for obtaining a copy of the waste manifest and waste profile of the treated waste as executed by the TSDF. If the manifest is not returned within 35 calendar days from removal from the site, the contractor shall notify the Owner and the NYS DEC, and initiate an investigation as required.

B. The Contractor shall give at least 24-hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste shall be removed from the site unless the Contractor, Environmental Consultant and authorized/qualified facility personnel are present, and the Environmental Consultant authorizes the release of the waste. The DOT-trained Environmental Consultant must be on-site for all hazardous waste shipment removals and will be responsible for inspection of the waste shipment. They may also be required to signoff on the hazardous waste manifest on behalf of the owner and DASNY, if the authorized/qualified facility personnel is unavailable, to allow the hazardous waste shipment to leave the site. This responsibility shall be coordinated and executed in accordance with the Owner’s direction.

C. The Contractor shall supply all required placard and labeling and shall have an appropriately DOT - trained individual to prepare the waste container and inspect the packaging of the hazardous waste.

D. All hazardous waste generated as part of the project shall be removed from the site within ten (10) calendar days after successful completion of all hazardous waste generation work. However, all disposal facility permits/licenses, waste profiles, LDR forms, C7 forms, hauler permit(s), and all other necessary paperwork must be submitted to and approved by the Environmental Consultant before the waste is removed from the site. Waste stream samples shall be collected by the Environmental Consultant for TCLP analysis and the results utilized by the Contractor for proper waste stream characterization and appropriate disposal determination.

E. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant a valid DEC Part 364 Waste Hauler's Permit. The Environmental Consultant may verify the authenticity of the hauler's permit with the proper authority.

F. The Hauler, with the Contractor and the Environmental Consultant, shall inspect all material in the transport container prior to taking possession and signing the Hazardous Waste Manifests.

G. Transporters shall maintain waste manifest and shipment record forms. All transporters are required to obtain and maintain NYS DEC Part 364 Waste Transporter permits and, if applicable, a NYC Fire Department permit for transporting flammables. The Part 364 Permit shall have the license plate number of the vehicle, the expiration date of the permit, the type of waste the hauler can transport and the TSDF to which the hauler can transport the waste. The transporter must also have all applicable, current waste transportation permits for the states where the proposed disposal facilities are located.

4.02 WASTE SHIPMENT STORAGE CONTAINERS

A. All waste shipment storage containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.).

B. The Environmental Consultant shall verify that the waste shipment storage container and/or truck tags (license plates) match that listed on the DEC Part 364 permit. Any waste shipment storage container not listed on the permit shall be removed from the site immediately.

C. The valid waste shipment storage container shall be plasticized and sealed with one layer of clear 6 mil plastic. Once on-site, it shall be kept locked at all times, except during load out. The waste shipment storage container shall not be used for storage of equipment or contractor supplies.

D. While on-site, the waste shipment storage container shall be labeled with DEC Hazardous Waste Warning Labels as specified in Section 2.02.

E. The New York State Department of Environmental Conservation Hauler's Permit number shall be displayed on both sides and back of the container. The permit number shall be at least 3 inches high and in a color that contrasts with the container / vehicle background color.

F. Waste generated off-site or from a different, on-site non-DASNY project is not permitted to be brought onto the Project site and/or loaded into the waste container.

G. The waste shipment storage container is not permitted to be loaded unless it is properly plasticized, (C above) has the appropriate danger signage affixed, and has the permit number appropriately displayed on the container. (B above)

H. The Owner may initiate random checks at the Disposal Site to ensure that the procedures outlined herein are complied with.

4.03 HAZARDOUS WASTE MANIFESTS & DISPOSAL DOCUMENTATION

A. The Contractor is responsible for securing appropriate treatment or disposal for the waste streams at a permitted TSDF, in compliance with all requirements, and for obtaining a copy of the waste manifest (interim storage and final disposal) as executed by the TSDF. If the manifest is not returned within 35 calendar days from removal from the site, the Contractor shall notify the Owner and the NYS DEC, and initiate an investigation as required. The Contractor shall contact the EPA and file an Exception report if the manifest is not returned within 45 days. All hazardous waste metals intended for recycling, shall have the appropriate completed C7 form accompanying the shipment and this form must be emailed to the DEC one (1) to two (2) weeks prior to the shipment leaving the site. Documentation of submission (i.e. delivery receipt and read receipt) shall be provided upon request.

B. A Uniform Hazardous Waste Manifest shall be utilized solely as the waste Manifest for transportation. A hauler billing form or bill of lading may be used if the hauler needs an independent record, but shall not be used as the sole shipping document.

C. The Manifest shall be completed by the Contractor and verified by the Environmental Consultant that all the information and amounts are accurate and the proper signatures are in place.

D. The Manifest shall have the appropriate signatures of the Owner's Representative (the Generator) and the Hauler representative prior to any waste being removed from the site.

E. Copies of the completed Manifest, shall be retained by the Environmental Consultant and shall remain on-site for inspection.

F. Upon arrival at the Disposal Site, the Manifest shall be signed by the Disposal Facility operator to certify receipt of hazardous and asbestos (if appliable) wastes covered by the manifest.

G. The Disposal Facility operator shall return the original Manifest and certificate of recycling for recycled metals to the Owner's Representative or the project facility as required by the DEC in 6 NYCRR 372 within 35 days. The Environmental Consultant must call the facility to investigate if the Manifest is not returned within 35 days and contact the DEC and file an Exception report if not returned within 45 days.

H. The Contractor shall utilize the Waste Disposal Log provided by the Owner. This log shall be maintained by the Project Supervisor and shall be kept on-site at all times. (See Appendix C.)

I. Copies of all waste disposal manifests, C7 forms, certificates of recycling, as well as originals of all manifests and disposal logs (copies are acceptable for electronic closeout submittal review) shall be submitted by the Contractor to the Owner with the final close-out documentation.

J. The Contractor must also submit reports and records per the requirements of 6 NYCRR 372.2.

K. Payment for disposal of hazardous waste will not be made until a fully executed signed copy of the manifest and certificate of recycling from the treatment or disposal facility certifying the amount of hazardous waste delivered is returned for each load of waste removed from the site and proof the original hazardous waste manifest was provided to the Owner, and copies provided to DASNY Code Compliance.

L. The Owner shall file the annual report and fee report, if applicable, for the hazardous waste shipped.

END OF SECTION 02 86 00

APPENDIX A

SAMPLE BLANK PCB LDR FORM

NEW YORK STATE GENERATOR RESTRICTED WASTE NOTIFICATION/CERTIFICATION FOR PCB WASTES

ALL NEW YORK STATE GENERATORS WHO GENERATE PCB WASTES MUST ATTACH THIS ADDENDUM TO THE UNIFORM HAZARDOUS WASTE MANIFEST
(THIS NOTIFICATION/CERTIFICATION IS ONLY APPLICABLE WITHIN THE STATE OF NEW YORK)

GENERATOR NAME: EPA ID NO.:

SIGNATURE: DATED:

MANIFEST NO:

This addendum to the uniform hazardous waste manifest must be completed for any New York State regulated hazardous waste generated in the State of New York. This form ensures that New York State generators comply with the notification requirements of 6 NYCCR Part 376. All New York State generators shipping PCB waste which is a New York State regulated hazardous waste must check the box and indicate the applicable waste code below.

☐ Check Here: The waste associated with the above manifest includes New York State Regulated PCB waste which is land restricted in the State of New York and is subject to 6 NYCRR Part 376.4(f). This waste shall be disposed of in accordance with 40 CFR 761. Pursuant to 376.4(f) (l) (i), B002 waste from any source other than a spill may not be stabilized or mixed with any other substance to conform with any provision of 40 CFR Part 761 regarding land disposal if the disposal occurs in the state of New York.

Check all which apply:

☐ B001 - PCB oil (concentrated) from transformers, capacitors, etc.

☐ B002 - Petroleum oil or other liquid containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs.

☐ B003 - Petroleum oil or other liquid containing 500 ppm or greater of PCBs.

☐ B004 - PCB articles containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs, excluding small capacitors.

☐ B005 - PCB articles, other than transformers, that contain 500 ppm or greater of PCBs, excluding small capacitors.

☐ B006* - PCB transformers. *PCB transformers* means any transformer that contains 500 ppm PCB or greater.

☐ B007* - Other PCB wastes, including contaminated soil, solids, sludges, clothing, rags and dredge material.

* Generators are required to certify that their B006 and/or B007 waste can be land disposed in accordance with 40 CFR Part 761 without further treatment if:

a. The waste is a B006 and is a transformer which has been drained and flushed pursuant to 40CFR761.60(b)(l)(i)(B) or

b. The waste is a B007 and does not contain PCBs which have been deliberately solicited.

☐ Check here if the B006 and/or B007 waste associated with this manifest conforms with either "a" or "b" and is intended for land disposal and sign this form at the top of the page. In accordance with 6 NYCRR Part 376.1 (g) (l)(ii) the generator makes the following certification:

"I certify under penalty of law that I personally have examined and am familiar with the waste, through analysis and testing or through knowledge of the waste, to support this certification that the waste complies with the treatment standards specified in part 376, section 376.4 and all applicable prohibitions set forth in subdivision 376.3(b) of Part 376 or RCRA section 3..04(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a find and imprisonment. "

APPENDIX B

SAMPLE BLANK C7 NYSDEC NOTIFICATION FORM

"C7" NOTIFICATION FOR GENERATORS

To: Training & Technical Support Section Date: _____
Bureau of Technical Support
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7020

Please be advised that _____
(generator's company name)

_____
(generator's street address)

intends to use the

_____
(description and citation of exemption or exclusion; e.g., scrap metal exemption of 6 NYCRR 371.1(g)(1)(iii)(b)) for

_____
(describe waste stream)

that will be shipped from the above address to _____
(receiving company e.g., scrap metal dealer, recycler or smelter)

_____
(receiving company address)

Please contact the undersigned at _____ if you have any questions.
(phone number)

Sincerely,

_____
(print name of generator company representative)

_____
(Optional – email address)

_____
(signature of generator company representative)

Submission by email to info.sqg@dec.ny.gov is preferred.
If submitting by mail to the address above or by fax to 518-402-9020, please direct to Attn: Training & Technical Support Section

Please call (518) 402-9553 if you have any questions about how to complete this form.

APPENDIX C

WASTE DISPOSAL LOG

DORMITORY AUTHORITY STATE OF NEW YORK
WASTE DISPOSAL LOG

Facility Name:_____ **Building Name/Number:** _____

Project Name: _____ **DASNY Project Number:** _____

Abatement/Remediation Contractor: _____ **Project Monitor Firm:** _____

Load No.	Hauler Name	NYSDEC #	License Plate No.	Size of Con-tainer	Disposal Facility Name	Date Depart from Site	Date Received at Disposal Site	Date Shipment Record Returned

Comments:

Page _____ of _____

SECTION 02 87 00

REMOVAL AND DISPOSAL OF UNIVERSAL WASTE

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

A. This specification covers the removal and disposal of Universal Waste, including lamps such as fluorescent and high-intensity discharge (HID) lamps, mercury-containing equipment (MCE) such as thermostats, switches, batteries and pesticides (not PCB lighting ballasts), as well as aerosol cans, at Transformer Rooms Nos. 1 & 2 – BLDG. 1 Bronx Psychiatric Center **1500 Waters Place, Bronx, NY 10461 DASNY Project Number 3816609999**

The federal universal waste regulations are found in Title 40 of the Code of Federal Regulations (CFR) in part 273 and apply to five types of universal waste:

- Batteries
- Pesticides
- Mercury-Containing Equipment (To be recycled as per NYS DEC – see details below
- Lamps
- Aerosol Cans

Universal Wastes are regulated by the United States Environmental Protection Agency (EPA) under 40 CFR Part 273 and by New York State Department of Environmental Conservation (NYS DEC) under 6 NYCRR (New York Codes, Rules and Regulations) Part 374-3. Both the EPA and DEC regulations identify Universal Waste that includes MCE and aerosol cans. MCE shall be recycled as per current regulations, instead of disposed as Universal Waste. Demolition and removal of materials shall be as required to support the work.

B. The work shall include but not be limited to the removal of the following.

Building & Floor	Description of Material	Approximate Quantity (lbs/units)
Transformer Room No. 1	Fluorescent Light Bulbs	To Be Determined
Transformer Room No. 1	Mercury Switches	To Be Determined
Transformer Room No. 2	Fluorescent Light Bulbs	To Be Determined
Transformer Room No. 2	Mercury Switches	To Be Determined
	Total Quantity	

C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. Working hours shall be as required and approved by the Owner. Removal activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. and may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions are described below:
Describe in detail or indicate “None”.

1.03 DEFINITIONS

A. Universal Waste consists of the following discarded materials, as identified in 40 CFR Part 273 and 6 NYCRR 374-3: Fluorescent light and high-intensity discharge (HID) lamps, MCE, batteries, aerosol cans and pesticides. Removed or replaced MCE must be delivered to a designated mercury collection site as per current NYC DEC regulations. Disposal of MCE in a solid waste management facility is prohibited. PCB ballasts/capacitors from light fixtures shall not be treated as Universal Waste; they shall be handled and disposed of as hazardous waste. See the Hazardous Waste Disposal Specification for these wastes.

B. Large Quantity Handler (LQH) of Universal Waste shall be a waste handler who accumulates 5,000 kilograms or more of Universal Waste at any time. This designation as a large quantity handler of Universal Waste is retained through the end of the calendar year in which 5,000 kilograms (11,000 pounds) or more total of Universal Waste is accumulated. The LQH shall notify the EPA, acquire or coordinate with a facility regarding an EPA identification number, and provide records for each shipment. The LQH shall ensure all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

C. Small Quantity Handler of Universal Waste (SQH) shall be a waste handler who does not accumulate 5,000 kilograms (11,000 pounds) or more of total Universal Waste (batteries, pesticides, MCE, or lamps, calculated collectively) at any time.

D. Destination Facility shall be a facility that can legally accept Universal Waste from off-site so that the Universal Waste can be treated, disposed, or recycled in accordance with regulatory requirements.

E. Universal Waste Transporter shall be anyone who transports Universal Waste. In New York, Universal Waste Transporters that transport greater than 500 pounds of Universal Waste in a single shipment must be a permitted Universal Waste Transporter pursuant to Federal and State regulations. Proper notification with the receiving handler agreeing to receive the shipment is required by the Universal Waste Transporter.

F. The Owner’s Environmental Consultant: The Owner shall provide a third-party environmental consultant to provide pre-work assessments, project monitoring assessments for the construction procedures for the work area, surrounding areas waste sampling, and container storage area, submittal review, and inspection and signoff of all universal waste shipments as well as final clearance assessments. The Contractor shall be responsible for the worker protection requirements.

G. Battery: a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy.

H. Pesticide: a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.

I. Mercury-containing equipment: a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.

J. Lamp: a bulb or tube portion of an electric lighting device.

K. Aerosol can: a non-refillable receptacle containing a gas compressed, liquefied, or dissolved under pressure, the sole purpose of which is to expel a liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas.

1.04 SUBMITTALS

A. Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the Contractor shall submit an electronic copy of the documents listed below to the DASNY Project Manager, the DASNY Code Compliance Unit and the Environmental Consultant for review and Code Compliance approval prior to the commencement of removal activities:

Pre-work Submittals	SQH	LQH
1. Training & Certifications		
a) List of the employees scheduled to perform this work and their project function (Supervisor or Worker)	X	X
b) Certificates of on-site workers and supervisor, for successful completion of OSHA 40-hour Health and Safety course [29 CFR 1910.120/1926.65] for handling hazardous waste and spills, including most recent refresher training.	X	X
c) OSHA 8-hour supervisor training [29 CFR 1910.120(e)(4)/1926.65(e)(4)] for hazardous waste.	X	X
d) Valid United States Department of Transportation (DOT) training [49 CFR172.704] for supervisor and all employees loading waste and maintaining on-site waste storage area. This training shall include: general awareness / familiarization training; function specific training; safety training; security awareness training; and in-depth security training.	X	X
e) Employees managing Universal Waste as large quantity handler must also meet the Personnel training requirements of EPA 40 CFR Section 273.36. Provide proof of training for these employees.		X
f) Employees managing Universal Waste as small quantity handler must also meet the Personnel training requirements of EPA 40 CFR Section 273.16. Provide proof of training for these employees.	X	
2. Transportation & Disposal		
a) Valid Waste Transporter NYS Part 364 permit for all transporters.	X	X
b) Valid Waste Transport vehicle permit for all transporters for each State the waste is being transported through to reach the Treatment, Storage and Disposal Facility (TSDF).	X	X
c) Valid US DOT vehicle permit for all transporters.	X	X
d) Transfer Facility Permit (if used) including the name, address and EPA ID No. of the facility, contact person. Include an acknowledgement letter stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)].	X	X
e) Final Disposal Facility permit including the name, address and EPA ID No. of the facility, contact person. Include an acknowledgement letter from the disposal facility stating that the facility has the capacity and is permitted to accept the waste from the project site and how the waste will be disposed [i.e. treatment (T) landfill (L), incineration (B), recycled (R)]. **The final destination of waste must be within the United States.**	X	X
f) The TSDF permit(s) must identify the waste material(s) to be received.		X
g) Draft waste profile form.	X	X
h) Draft waste shipment record/manifest.	X	X

Pre-work Submittals	SQH	LQH
3. **Site-specific**		
a) Safety Data Sheet (SDS) for all materials to be removed.	X	X
b) If the Contractor introduces any chemical into the work environment, a SDS for each chemical must be presented to the Owner's Representative for review and approval prior to use.	X	X
4. Progress Schedule:		
a) Show the complete sequencing of removal activities and the sequencing of Work within each building, wing or section of building. *The schedules will be utilized to schedule facility and third-party environmental consultant requirements.*	X	X
b) Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building or phase.	X	X
5. Scope of Work Plan:		
Removal Work Plan and Drawing(s) Provide a written work plan description of work and drawing(s) that clearly indicates the following:		
a) All work areas/phases numbered sequentially.	X	X
b) Locations and types of all decontamination enclosures for each work area/phase, if necessary	X	X
c) Proposed location and construction of storage facilities and field office (when applicable).	X	X
d) Type of removal activity/technique for each work area/phase.	X	X
e) List waste types and quantity being generated and stored (refer to 1.01, B).	X	X
f) Site/work area preparation and cleanup procedures.	X	X
g) Include in the plan, eating, drinking, and sanitary procedures, interface of trades and sequencing of Universal waste generation.	X	X
h) Include occupational and environmental sampling (if any by the Contractor), frequency and duration of sampling.	X	X
i) Container Storage Area (CSA) construction details). [How is the waste being stored? (indoors or outdoors, drums, containers, or dumpsters, types, with cover?).]	X	X
j) Include waste transport routes to the CSA from each work area/phase.	X	X
k) Include plan for universal waste segregation and minimization including metal recycling, as necessary.	X	X
l) Contractor waste generation details (amount per day, per week or per quarter) in kgs or tons.		X
m) Contractor emergency evacuation plan requirements and evacuation route for the project specific work areas/phases.	X	X
n) DASNY PM, Facility Representative, and Project team emergency contact numbers. [to be posted at CSA (interior and exterior).]	X	X
Do not start work until submittals are returned with the Owner's Representative stamp indicating that the submittal is approved for unrestricted use.	X	X

A. On-Site & During Construction:

1. The following submittals, documentation, and postings shall be maintained on-site by the Contractor during removal activities at a location approved by the Environmental Consultant:
   a. Approved pre-work submittals.
   b. Project Documents (specifications and drawings).
   c. Applicable regulations.
   d. Updated licenses/permits and acknowledgement letters for any changes in transporter or disposal site.

e. For each employee, current annual medical respiratory clearance and current satisfactory respiratory fit test results, if required.
f. Contractor shall provide weekly update, including initial container storage dates for each container stored, an approximate estimate of amount of waste being generated during each workday, week or month that it is stored on-site. The actual weight of the waste, excluding the weight of the dumpster, shall be identified.
g. Completed and signed Waste Profile form(s).
h. List of emergency phone numbers.
i. Waste disposal log.
j. Daily Project Log.
k. Copy of completed Universal Waste manifest(s)/shipment record(s) including legible transporter and disposal facility information, dates and times of waste shipment departures / arrivals, and signatures, for each load of waste, within 35 days of waste being removed from site.

2. The following documentation shall be maintained on-site by the Environmental Consultant during removal activities:
a. Valid Environmental Consultant personnel OSHA and DOT training certifications.
b. Consultant Daily Log.
c. Listing of all visual inspections with the date of inspection and the date of signoff.
d. Environmental Survey Report.
e. All applicable waste documentation, including but not limited to Universal Waste Manifest/shipment records, waste profiles, and disposal facility letter(s).

C. Close-out:

1. Within 30 days after phase or project completion, the **Contractor** shall submit one electronic copy of the closeout-out submittal (requirements listed below) to DASNY Code Compliance and one copy to the Environmental Consultant for review and approval prior to the Contractor's final payment. Once DASNY Code Compliance approves the complete electronic close-out submittal, the Contractor shall provide three (3) hardcopy sets of the approved close-out documents (double-sided and bound) to DASNY Project Management, including one set to be distributed to the facility. DASNY Project Management shall provide the Facility with one copy of the approved closeout submittals.
a. **Fully Executed Copies** of all completed waste disposal manifests, recycling certificates, disposal facility letter(s), disposal logs shall be sent to DASNY Code Compliance including legible transporter and disposal facility information, departure / arrival times, dates, and signatures. Original waste manifests shall be sent to the Owner or disposal facility state with proof of this submission, as applicable.
b. Copies of all executed waste profile forms and disposal facility acknowledgement letters.
c. Daily progress log.
d. If TSDF transfer facility is utilized, provide valid permit including name, address, EPA number of facility and contact person along with completed waste manifest from final destination must also be provided. Final destination of waste must be within the United States.
e. Valid Waste Transporter NYS Part 364 permit for all transporters.
f. Valid Waste Transport vehicle permit for all transporters for each state the waste is being transported through to reach the Treatment, Storage and Disposal Facility (TSDF).
g. Valid US DOT vehicle permit for Transporters, if applicable.
h. Final Disposal Facility permit including the name, address and EPA ID No. of the facility, and contact person.

2. Within 30 days of the completion of each removal phase, the **Environmental Consultant** shall submit one electronic copy of the documents listed below to DASNY code compliance for review and approval prior to Environmental Consultant's final payment. Once DASNY Code Compliance approves the complete electronic close-out submittal, the Environmental

Consultant shall provide three sets of the approved close-out documents (double-sided and bound) to DASNY Project Management, including one set to be distributed to the facility.

a. Upon completion of each phase or Project, the Environmental Consultant shall certify to the Owner, in writing, that the work is complete and acceptable in an Executive Summary of the work.
b. The Environmental Consultant shall review and approve or disapprove all necessary guarantees, certificates of compliance, and all other close-out documentation, which the Contractor is required to submit, or note that the documents were never received.
c. The Environmental Consultant shall provide to the Owner the final Project data binder to include:
    1) All daily logs.
    2) Summary of all visual inspections with the date of inspection, if applicable.
    3) Any applicable sampling logs, results, chain of custody forms, and sample location plans.
    4) All applicable waste documentation, including but not limited to Universal Waste manifests, completed and signed waste profile forms, LDR forms, and disposal facility acknowledgment/acceptance letter(s)/documentation.
    5) All pertinent correspondence related to the Project including but not limited to supplemental inspection findings performed during construction, prior submittal reviews, etc.

D. Universal Waste Project Submittals shall be submitted as separate packages, not included with any other environmental or hazardous waste submittals.

1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference with the Owner, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:

1. Contractor's scope of Work, Work plan, and schedule to include number of workers, shift days and times.
2. Contractor's safety and health precautions including protective clothing, equipment and decontamination procedures.
3. Environmental Consultant's duties, functions, and authority.
4. Contractor's Work procedures including:
    a. Methods of job site preparation and removal methods.
    b. Respiratory protection.
    c. Disposal procedures.
    d. Cleanup procedures.
    e. Fire exits and emergency procedures.
5. Contractor’s required pre-work and on-site submittals, documentation, and postings.
6. Contractor's plan for 24-hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.
7. Temporary utilities.
8. Handling of furniture and other movable objects.
9. Universal waste segregation and minimization plan, including metals intended for recycling.
10. Storage of Universal waste in CSA.
11. Waste disposal requirements and procedures, including Contractor notification to DASNY project management and Environmental Consultant once waste stream generation has commenced, and prior to any waste being removed from site.
12. If applicable, contingency plan training information.

1.06 APPLICABLE STANDARDS AND REGULATIONS

A. All activities related to the work shall be conducted in compliance with all applicable laws, regulations, and requirements which may include, but not be limited to: EPA, DOT, RCRA, TSCA, OSHA, New York State Department of Environmental Conservation (NYS DEC), New York City Department of Environmental Protection (NYC DEP), and New York City Fire Department.

B. The Contractor is required to secure and maintain all required regulatory permits necessary to perform all aspects of the work.

C. The Contractor shall containerize and store waste in accordance with all applicable regulations. All containers shall be appropriately marked/labeled.

1.07 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
   1. The Project Supervisor shall be trained in hazardous waste removal/generation procedures and hazardous waste management in NYS, via a 40-hour HAZWOPER and 8-hour Supervisor training course, as well as appropriate DOT training.
   2. The Project Supervisor shall have a minimum of one year experience as a supervisor.
   3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by the Owner or DASNY.

C. The Project Supervisor shall maintain a bound Daily Project Log that includes the Waste Disposal Log required by section 4.03 of this specification.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the Contractor primary point of contact for the Environmental Consultant.

E. As required by applicable regulations, prior to assignment to Universal Waste work, instruct each employee with regard to the hazards of the generated waste, safety and health precautions, and the use and requirements of protective clothing and equipment, as well as the Contractor emergency action plan.

PART 2 - PRODUCTS

2.01 PROTECTIVE CLOTHING

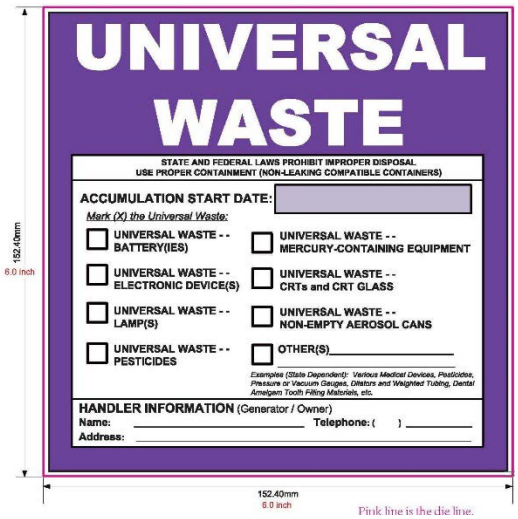
A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, and foot coverings, as applicable. Provide appropriate disposable gloves, suitable to prevent skin contact, to protect hands.

B. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

2.02 SIGNS AND LABELS, CONTAINERS

A. Provide warning signs and barrier tapes at all approaches to Universal Waste generation Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

B. Universal waste containers must be marked with the words that clearly indicate the type of waste in the container, for example, **"Universal waste – Batteries" or "Universal waste – Bulbs"** as per 40 CFR 273.13 and 273.34;



2.03 DAILY PROJECT LOG

A. Provide a Daily Project Log. The log shall contain on the title page; the DASNY Project name and number; name, address, and phone number of Owner; name, address and phone number of Environmental Consultant; name, address and phone number of Contractor; and emergency numbers including, but not limited to, local Fire/Rescue department.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. The Project Supervisor shall document all Work performed daily and note all inspections.

2.04 SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.

B. Provide scaffolding and ladders as required by the Environmental Consultant for the purposes of performing required inspections.

2.05 SHIPPING CONTAINERS AND PACKAGING

A. Provide packaging in accordance with 49 CFR 173 Packaging Group 9, such as 30- or 55-gallon capacity fiber, plastic, or metal drums, Gaylord Boxes or other Intermediate Bulk Containers (IBCs), or non-siftable bulk containers. Affix Universal Waste caution labels on lids of drums, and opposite sides of drums or bulk containers, as well as the ends of bulk containers. Recovery or salvage drums must be acceptable for disposal of Universal Waste. Prior approval of drums is required. Drums or containers must meet the required OSHA, EPA (40 CFR Parts 260-264, 273 and 300), and DOT Regulations (49 CFR Parts 171-180). Use of damaged containers shall not be allowed.

2.06 EQUIPMENT AND MATERIALS

A. All dry vacuuming performed under this contract shall be performed with HEPA filter equipped industrial vacuums conforming to ANSI Z9.2.

B. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, waste container) shall be at least 6 mil clear fire retardant sheeting.

C. Absorbent Material shall be Clay, soil or any commercially available absorbent used for the purpose of absorbing hazardous or potentially hazardous materials.

2.07 RESPIRATORY PROTECTION

A. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134. Provide respirator training.

B. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134.

C. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist initially and on a yearly basis thereafter. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual.

D. A storage area for respirators shall be provided by the Contractor in the clean portion of the decontamination enclosure where they will be kept in a clean, dry environment.

E. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters will be removed and discarded during the decontamination process. Filters cannot be reused. Filters must be changed if breathing becomes difficult. Filters provided to the personnel shall be appropriate to the hazardous waste(s) being handled as well as any chemicals brought on site and used to facilitate the removals.

F. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day.

G. Any authorized visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and shall not be permitted to return.

H. The Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the Contractor.

PART 3 EXECUTION

3.01 GENERATING UNIVERSAL WASTE AND ON-SITE STORAGE

A. Employee training shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal operations and emergencies, as well as to the type of waste they are handling.

B. MCE shall be segregated from other Universal Wastes to allow for required recycling.

C. Battery Labels: The container(s) holding intact batteries shall be labeled or marked as “Universal Waste – Battery(ies)”, “Waste Battery(ies)”, or “Used Battery(ies)”.

D. Lamp Labels: The container(s) holding lamps shall be labeled or marked as “Universal Waste – Lamp(s)”, “Waste Lamp(s)”, or “Used Lamp(s)”.

E. MCE Labels: The container(s) holding MCE shall be labeled or marked as “Universal Waste – Mercury-Containing Equipment”, “Waste - Mercury-Containing Equipment”, or “Used Mercury-Containing Equipment”.

F. Mercury Thermostat Labels: The container(s) holding mercury thermostats only may be labeled or marked as “Universal Waste – Mercury Thermostat(s)”, “Waste Mercury Thermostat(s)”, or “Used Mercury Thermostat(s)”.

G. Pesticide Labels: The container(s) holding pesticides shall be labeled or marked as “Universal Waste – Pesticide(s)” or “Waste Pesticide(s)”.

H. Aerosol Cans: The container(s) holding aerosol cans shall be labeled or marked as “Universal Waste – Aerosol Cans” or “Waste Aerosol Cans”.

I. Once the properly labeled containers holding the Universal Waste have been filled and sealed, they shall be stored in designated accumulation areas as agreed upon by the Owner’s Representative and Contractor. They shall not be stored in transportation vehicles, or on-site for more than one year from the date the waste storage was initiated.

J. Documentation when Universal Waste in storage was first accumulated shall be provided. This is to be done by labeling the waste with the date of the earliest accumulation. Thus, the length of time the Universal Waste has been accumulated can be readily determined / documented.

K. Maintenance of an inventory system on-site that identifies the earliest date that any Universal Waste in a group of Universal Waste items became a waste was received.

L. Any waste developed from the work that exhibits one or more characteristics of hazardous waste, that are not specifically identified by EPA and NYS DEC as Universal Waste, must be handled accordingly and not as a Universal Waste. See the Hazardous Waste Disposal Specification section 02 86 00 for those waste types.

M. On-site Storage Requirements.

1. Each waste dumpster\container shall have completed universal waste label with facility name, correct EPA ID number (if required), full address, and waste information.

2. Appropriate universal waste storage and contents labels shall also be posted on the containers.
3. Since this is considered a main storage area for the project, the third-party DASNY Environmental Consultant shall be completing an initial and thence weekly hazardous waste storage area inspection logs and these records shall be provided to DASNY and the facility each week. Weekly inspection records shall be maintained for three (3) years.
4. Each dumpster\container shall also post all relevant DOT labels to indicate proper waste types.
5. Each dumpster\container shall identify the accumulation start date. Maximum storage limit is 360 days from the date of accumulation.
6. All dumpsters and containers being stored outside shall meet EPA RCRA container requirements and shall not leak. All dumpsters and containers must be fully covered and protected from the elements as well as locked when not in use.
7. A spill kit shall be maintained in the CSA.
8. Regarding the posting of emergency numbers, Contractor shall coordinate with facility and DASNY and post all required emergency numbers including facility contact(s), DASNY field office, Contractor emergency numbers, local fire, police and medical facility numbers. Signage shall be posted on the lockable CSA.

PART 4 DISPOSAL OF UNIVERSAL WASTE

4.01 TRANSPORTATION AND DISPOSAL

A. The Contractor's Hauler and Disposal Facility shall be approved by the Owner. The Contractor is responsible for securing appropriate treatment or disposal for the generated Universal Waste streams at a permitted TSDF, if necessary, in compliance with all regulatory requirements, and for obtaining a copy of the waste manifest/shipping record and waste profile of the treated waste as executed by the TSDF.

B. The Contractor shall give at least 24-hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present, and the Environmental Consultant authorizes the release of the waste. The DOT-trained Environmental Consultant must be on-site for all Universal Waste shipment removals and will be responsible for inspection of the waste shipment as well as signoff on the Universal Waste manifest/shipping record on behalf of the owner and DASNY to allow the Universal Waste shipment to leave the site.

C. All Universal Waste generated as part of the project shall be removed from the site within 10 calendar days after successful completion of work. However, all disposal facility permits/licenses, waste profiles, hauler permit(s), and all other necessary paperwork must be submitted and approved by the Environmental Consultant before the Universal Waste is removed from the site. Waste stream samples, if required, shall be collected by the Environmental Consultant for TCLP analysis and the results utilized by the Contractor for waste stream characterization and disposal determination.

D. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant a valid NYSDEC Part 364 Waste Hauler's Permit. The Environmental Consultant may verify the authenticity of the hauler's permit with the proper authority.

E. The Hauler, with the Contractor and the Environmental Consultant, shall inspect all material in the transport container prior to taking possession and signing the Universal Waste Manifest/shipping record.

4.02 WASTE SHIPMENT STORAGE CONTAINERS

A. All waste shipment storage containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.).

B. The Environmental Consultant shall verify that the waste shipment storage container and/or truck tags (license plates) match that listed on the NYSDEC Part 364 permit. Any waste shipment storage container and/or truck not listed on the permit shall be removed from the site immediately prior to storage of any material from the site.

C. Once on-site, it shall be kept locked at all times, except during load out. The waste shipment storage container shall not be used for storage of equipment or contractor supplies.

D. While on-site, the waste shipment storage container shall be labeled with Universal Waste Labels.

E. The waste shipment storage container is not permitted to be loaded unless it is properly plasticized and has the appropriate danger signage affixed.

F. The Owner may initiate random checks at the Disposal Site to ensure that the procedures outlined herein are complied with.

4.03 WASTE MANIFEST/SHIPMENT RECORDS & DISPOSAL DOCUMENTATION

A. A Universal Waste Manifest/Shipping Record (UWMSR) shall be utilized solely as the waste record documentation for transportation. A hauler billing form or bill of lading may be used if the hauler needs an independent record, but it shall not be used as the sole shipping document.

B. The UWMSR shall be completed by the Contractor and verified by the Environmental Consultant that all the information and amounts are accurate, and the proper signatures are in place.

C. The UWMSR, if applicable, shall have the appropriate signatures of the Owner's Representative and the Hauler representative prior to any waste being removed from the site.

D. Copies of the UWMSR shall be retained by the Environmental Consultant and shall remain on-site for inspection.

E. The Contractor shall utilize the Waste Disposal Log provided by the Owner. This log shall be maintained by the Project Supervisor and shall be kept on-site at all times (See Appendix A).

F. Originals of all UWMSRs and disposal logs (copies are acceptable for electronic closeout submittal review) shall be submitted by the Contractor to the Owner with the final close-out documentation.

G. Payment for disposal of Universal Waste will not be made until a signed copy of the manifest/shipment record from the treatment or disposal facility certifying the amount of Universal Waste delivered is returned for each load of waste removed from site, the originals are furnished to the Owner, and fully executed copies provided to DASNY Code Compliance.

H. Off-Site Shipment of Universal Waste
   1. Off-Site shipments shall meet the requirements for off-site shipments and handlers / transporters are prohibited from sending or taking Universal Waste to a place other than a designated Universal Waste handler or a Universal Waste destination facility.
   2. LQHs of Universal Waste must notify EPA in writing and develop an EPA identification number or coordinate with the facility regarding use of their EPA identification number, prior to exceeding 5,000 kilograms of Universal Waste on-site.

3. SQHs do not need to notify EPA, receive an EPA identification number or keep records of shipments of Universal Waste.
4. LQHs must keep a record of all Universal Waste shipments received or sent off-site and must retain those records for at least three (3) years from the date of receipt or shipment. Records may include invoices, manifest/shipment records, logs, bills of lading, or other shipping documents.
5. The Contractor shall provide certified copies of all receipts obtained from designated mercury recycling collection sites within 30 days of MCE acceptance by collection, as applicable.
6. The Contractor shall furnish all certified copies of manifest/shipment records (interim storage and final disposal) within regulatory requirements. Within 30 days from acceptance of the waste by the disposal facility, the Contractor shall provide the Owner with Certificate of Disposal documents, as a requirement for final payment.

END OF SECTION 02 87 00

APPENDIX A

WASTE DISPOSAL LOG

DORMITORY AUTHORITY STATE OF NEW YORK
WASTE SHIPMENT RECORD LOG

Facility Name: _____

Building Name/Number: _____

Project Name: _____

DASNY Project Number: _____

Contractor: _____

Environmental Consultant: _____

Load No.	Hauler Name	NYSDEC #	License Plate No.	Size of Container	Disposal Facility Name	Date Depart from Site	Date Received at Disposal Site	Date Shipment Record Returned

Comments:

Page _____ of _____

SECTION 02 61 00

REMOVAL, TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This Project will include the excavation, handling, stockpiling, temporary on-site storage, transportation and disposal of soils generated during construction activities that will not be reused on-site at Bronx Psychiatric Center, Building 1, 1500 Waters Place, Bronx, NY, DASNY Project Number 3816609999. Soils eligible for reuse at the Site are discussed under Section 1.02 Special Job Conditions.

B. The work shall include but not be limited to the removal of the following materials:

Excavation Area	Description of Soil to be Removed (Category of waste/type of contaminant)	Depth of Soil Removal	Approximate Quantity (cubic yards and tons)
Building 1 Transformer Room 1	PCB Remediation Waste Soil	10 Feet	100 Cubic Yards 200 Tons
Building 1 Transformer Room 2	PCB Remediation Waste Soil	10 Feet	100 Cubic Yards 200 Tons
		Total	200 Cubic Yards 400 Tons

C. Preliminary waste characterization sampling was completed by **Remedial Investigation Report, dated November 2016, prepared by URS** (see Appendix A). A brief description of soil boring locations and sampling scheme is provided below.

1. **Details of soil boring locations and sample results, as compared to current New York State Department of Environmental Conservation (NYSDEC) Soil Cleanup Objectives (SCOs) or current guidance are provided in the November 2016 (Original August 2012- Revised January 2015) - Remedial Investigation Report.**

2. The results of the laboratory analyses were compared to [6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs), Residential Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs and Industrial Use SCOs] or current guidance. A summary of the contaminants and levels exceeding any of the SCOs listed above in section 1.01 B. is presented below in section 1.01 C. 3. **Remedial Investigation Report, dated November 2016, prepared by URS** complete Soil Report is provided in Appendix A of this Section.

D. Soil sample results of contaminants and levels exceeding any of the SCOsPCB Remediation Waste. The Contractor shall be aware of all conditions of the Project and is responsible for

verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of their obligation to furnish all labor and materials necessary to perform the Work.

E. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

F. Working hours shall be as required and approved by the Owner. Soil excavation activities including, but not limited to, pre-work area preparation, excavation activities, stockpiling, waste removal, etc. may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this Project. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

G. The Contractor shall provide labor, materials, equipment and incidentals required for the excavation, transportation and disposal of materials generated during construction activities that are deemed unsuitable for reuse.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions are described below.

1. Add special job coditions here or indicate there are no special job conditions. **Groundwater Dewatering and Treatment Plan Required. Secure NYCDEP de-watering permit and required approval from NYSDEC pursuant to the existing Order on Consent.**

1.03 STANDARDS AND REFERENCES

The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

A. Federal Regulations:
   1. 42 USC §6901 et. Seq.
   2. 15 USC §2601
   3. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
   4. 29 CFR 1926, "Construction Industry" (OSHA)
   5. 29 CFR 1926 Subpart P "Excavations"
   6. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
   7. 49 CFR 171-172, Transportation Standards (DOT)
   8. 29 CFR 1910.146 Confined Space
   9. 29 CFR 1926.21 Safety Training and Education

B. New York State Regulations:
   1. 6 NYCRR, Parts 360, 364, Disposal and Transportation (NYSDEC)
   2. 6 NYCRR Parts 370-374
   3. 6 NYCRR Parts 610-614

C. Latest version of the New York State Uniform Fire Prevention and Building Code.

D. Latest version of American Society for Testing and Materials (ASTM) standards.

E. ACI-318 latest edition-Building Code Requirements. (NYC ONLY)

1. All work shall comply with requirements of the New York City Building Code (NYCBC), requirements of the New York State Department of Labor, requirements of United States Department of Labor Occupational Safety and Health Administration (OSHA), requirements of New York State Department of Health (NYSDOH), requirements of the New York State Department of Environmental Conservation (NYSDEC), requirements of the New York City Department of Environmental Protection (NYCDEP), requirements of the New York State Department of Transportation (NYSDOT), requirements of New York City Department of Transportation (NYCDOT), the requirements of the New York City Transit Authority (NYCTA), the requirements of United States Environmental Protection Agency (USEPA), requirements under the Resource Conservation and Recovery Act (RCRA), applicable requirements under 6 NYCRR Parts 360, 364, and 370 through 375 and with applicable requirements of all other authorities having jurisdiction.

1.04 PERMITS AND COMPLIANCE

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and Local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the Site, persons, and property adjacent to the Work.

B. Obtain all required permits and notifications for removals (excavation/dewatering), on-site storage, transportation and disposal of contamnated wastes, including sanitary sewer discharge.

C. Perform contaminated soil excavation related Work in accordance with NYS DEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation. Where more stringent requirements are specified, adhere to the more stringent requirements. See Section 1.01 E.

D. The Contractor shall comply with all applicable regulations of the OSHA in performance of the work and take all required precautions to ensure the safety and health of personnel. The Contractor has been provided with information on current Site conditions for the Contractor to prepare a Site Health and Safety Plan (HASP) for the execution of the work.

E. The Contractor shall be responsible for compliance with The New York State Uniform Fire Prevention and Building Code, or its successor during all Work at the Site.

F. Contractor shall be responsible for notification to the Environmental Consultant for the collection and sampling of wastewater (for permit compliance or disposal facility requirements). Contractor is responsible for treatment (if necessary), and disposal of generated waste water. Waste water disposal may be permitted for sanitary sewer discharge or taken off-site for disposal at a licensed facility.

1.05 SUBMITTALS

A. Pre-Work Submittals: Within seven (7) days prior to the pre-construction conference, the Contractor shall submit an electronic copy of the documents listed below to the DASNY Project Manager, the DASNY Code Compliance Unit and the Environmental Consultant for review and approval prior to the commencement of removal/excavation activities:

1. The Contractor shall submit a schedule, arranged in chronological order, by dates required by the construction schedule.

2. The Contractor shall prepare and submit to the Owner a Health and Safety Plan (HASP) for work associated with any potential contaminated soils at the Site, as defined in Section 1.07. This plan shall address all of the activities which the Contractor will perform in fulfillment of the contract, and shall comply in all aspects with OSHA regulations for solid and hazardous waste operations (29 CFR 1910.120). The Contractor shall make the HASP available to authorized personnel who require access to any contaminated area or exclusion zone. The health and safety of the Contractor's employees remains solely the responsibility of the Contractor.
3. The Contractor shall perform excavation markouts and contact Dig Safely New York (DSNY) as required by law. Contractor shall provide valid DSNY ticket number along with associated documentation.
4. An Excavated Soils Management Plan including re-use and disposal options prepared in accordance with Section 4.01 B. of this Specification.
    a. Work Plan requirements should include a site plan showing stock pile locations and protection methods, soil grid, equipment decon locations, excavation methods, dewatering, wasterwater storage, and traffic direction at the site for trucks.
5. The Contractor shall prepare and maintain all material shipment records required by applicable Federal, State, and Local laws and regulations. These records shall include but not be limited to: scale tickets, bill of ladings, and manifests. The Contractor shall provide copies of all documentation to the Owner/Owner's Representative. Drafts of the following documents (as applicable) related to waste soil transport shall be submitted for prior review and approval:
    a. A draft shipping document.
    b. NYSDEC waste tracking document.
    c. NYSDEC Notification of Fill Material Reuse form.
    d. NYSDEC Use of Predetermined Beneficial Use Determination form.

    Copies of these forms are provided in Appendix B.

6. Transfer Facility Permit (if applicable) and letter of acknowledgement from the Transfer Facility stating they intend to accept the material.
7. Treatment Facility Permit (if applicable) and letter of acknowledgement from the Treatment Facility stating they intend to accept the material.
8. Disposal Facility Permit for material disposed of at an off-site facility (if applicable) and letter of acknowledgement from the Disposal Facility stating they intend to accept the material.
9. Copy of a valid NYSDEC Waste Transporter Permit and permits for any other State(s) the material will travel through to reach the disposal facility.
10. Valid US DOT permit for hauler, if applicable.
11. Spills Management Plan and a Spills Kit to be accessible on-site.

B. On-Site Submittals: The following documentation shall be maintained on-site by the Contractor during site activities at a location approved by the Project Manager.
    1. Copy of the Approved Pre-Work Submittal, as described in Section 1.05 A.
    2. Health and Safety Plan (HASP) for work associated with any potential contaminated soils at the Site. This plan shall address all of the activities which the Contractor will perform in fulfillment of the contract and shall comply with all aspects of applicable OSHA regulations for solid and hazardous waste operations (29 CFR 1910.120).
    3. Copy of DSNY ticket documentation.

4. Proof of worker training in accordance with OSHA 29 CFR 1910.120 for all workers with the potential to come in contact with contaminated soils and hazardous materials.

5. Soil Management Plan (SMP). This plan should include, at a minimum: equipment specifications; methods of excavation, waste water management plan for dewatering, waste water storage, on-site drainage, and decontamination of equipment; procedures for management of soil designated for off-site disposal; methods for documenting tracking of contaminated soil/material from the origin to disposal; methods for removal, loading and transport of the contaminated soil; certification of clean fill in accordance with NYSDEC if applicable; contractor health and safety procedures including personnel certifications; and identification of licensed transporter(s) and disposal facility or facilities to be used by the Contractor.

C. Close-Out Submittals

1. Within two (2) business days of receipt from the facility, the Contractor shall submit copies of all receipts and other paperwork from disposal/treatment facilities which indicate the actual quantity of waste received.
2. Within 30 days of the completion of the project, the Contractor shall submit 1 electronic copy of the documents listed below to DASNY and the Environmental Consultant for review and approval prior to Contractor's final payment. Once DASNY Code Compliance approves the electronic close-out submittal, the Contractor shall provide 3 hard copy sets of the approved close-out documents (double-sided and bound) to DASNY Project Management, including 1 set to be distributed to the facility.
   a. All Waste Shipment Records, Forms, and Waste Shipment Record Logs.
   b. Completed waste tracking documents, as applicable.
   c. Daily progress log.
   d. Transfer/Treatment/Disposal Site/Landfill Permits from applicable regulatory agency.
   e. Copy of NYSDEC Waste Transporter Permit and permits for any other State(s) the material traveled through to reach the disposal facility.

1.06 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by the Owner, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:

1. Contractor's scope of Work, Work plan, and schedule.
2. Contractor's safety and health precautions including protective clothing, equipment, and decontamination procedures.
3. OSHA excavation and trenching requirements if applicable ($\geq$ 4 feet and $\geq$ 5 feet in depth, respectively)
4. Environmental Consultant's duties, functions, and authority.
5. Contractor's Work procedures including:
   a) Methods of job site preparation and removal methods.
   b) Contacting Dig Safely New York for Utility Clearance (if necessary).
   c) Equipment and process of initial clearing of vegetation (if necessary).
   d) Process of clearing the construction areas, excavation pathways for subgrade materials, stockping soil, separating waste from earthen materials, etc.
   e) Truck loading procedure near active roadway/traffic controls/safety.
   f) Disposal procedures.

g) Cleanup procedures.
h) Emergency procedures.

6. Contractor's required pre-work and on-site submittals, and documentation.
7. Contractor's plan for 24-hour Project security both for prevention of theft and for barring entry of unauthorized personnel into work areas.
8. Waste disposal requirements and procedures.

C. In conjunction with the conference, the Contractor shall accompany the Owner and Environmental Consultant on a pre-construction walk-through documenting work to be completed at the Site.

1.07 DEFINITIONS

A. Wherever the word "excavating", "excavate", "excavation", "carried down", or "remove" are used, they shall be understood to include the removal of all existing work, including brick work, rubble work, former foundation remnants, rubbish, and earth as well as rock, boulders, steel grillages, concrete and all other materials and obstructions encountered. They shall also be understood to include all sheet piling, bracing, pumping, operations and items needed for the proper execution of the work. Excavation is considered unclassified.

B. Rough grading consists of cutting or filling to the elevation established on the Contract Drawings.

C. Material Definitions

1. Non-Hazardous Excavated Contaminated Soil:

   Soil that may include or contain mixtures of the following: soil (including, but not limited to, natural undisturbed soil), Clean (below SCOs), and Contaminated (above SCOs). This material includes material that will exceed 6 NYCRR 375-6 Restricted Residential Use Soil Cleanup Objectives and NYSDEC CP-51: Soil Cleanup Guidance Supplemental Soil Cleanup Objectives.

2. Non-Hazardous Excavated Soil (Clean Fill):

   Soil that is at or below the SCOs for unrestricted use. This material includes material defined in Title 6 NYCRR 375-6.3 and does not exceed NYSDEC CP-51: Soil Cleanup Guidance Supplemental Soil Cleanup Objectives.

3. Petroleum-Contaminated Soil:

   Material (soil, concrete, sediment, UST contents, fill, debris, etc.) that meets the NYSDEC STARS Memo #1 definition of petroleum-contaminated material from known source areas. Petroleum-contaminated material shall be evidenced by the following observations and be from a known source area: producing higher than background responses on a portable vapor meter such as a photo ionization detector or flame ionization detector, petroleum-like odor, visual impacts (e.g., staining or discoloration), proximity to known releases from existing or historic petroleum storage tanks or systems, and exceed the soil cleanup levels for gasoline and/or fuel oil contaminated soil provided in the NYSDEC CP-51: Soil Cleanup Guidance. The determination as to whether the excavated material is petroleum-contaminated or is non-petroleum contaminated material will be made by analytical testing of representative material samples. The Environmental Constulant shall perform all required testing. The Environmental Consultant shall make the final determination as to whether or not the material is petroleum-contaminated and the appropriate disposal.

4. Hazardous Waste:

   Material meeting the definition of a Resource Conservation and Recovery Act (RCRA) hazardous waste as defined in 40 CFR Part 261, New York State ECL Section 27-09 or 6 NYCRR Part 371.

1.08 PROJECT CONDITIONS

A. Preliminary waste characterization sampling was completed (see Appendix A). Any additional waste characterization sampling required to complete the excavation and disposal of material generated during the project will be directed by the Contractor and, upon concurrence with the Architect/Owner, will be performed by DASNY's on-site Environmental Consultant.

B. The Contractor, by careful examination, shall inform themselves as to the nature and location of the work; the conformation of the ground; the nature of the subsurface conditions; the locations of the groundwater table; the character, quality and quantity of the materials to be encountered; the character of the equipment and facilities needed preliminary to and during the execution of the work; and all other matters which can in any way affect the work.

C. The Contractor shall have visited the site and familiarized themselves with the existing conditions of adjoining properties, utilities and buildings.

D. The Contractor shall investigate the conditions of public thoroughfares and roads as to availability, clearances, loads, limits, restrictions, and other limitations affecting transportation to, ingress and egress of the site of the work. The Contractor shall conform to all Federal, State and Local regulations in regard to the transportation of materials to and from and at the job site and shall secure in advance such permits as may be required.

E. Existing Utilities: The Contractor shall locate existing underground utilities in and beyond the areas of work. This shall include, at a minimum, notification to Dig Safely New York (DSNY) as required by law. The Contractor shall mark out the project areas and allot 3 business days for the ticket request to be completed; such off-set time shall be included in the proposed schedule. The DSNY ticket number shall be recorded for inclusion in project record documentation. If utilities are indicated to remain in place, provide adequate means of support and protection during the work.

   1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, immediately cease excavation activities and consult with the utility owner for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner or compensate repair of same at Contractor's cost.

   2. Do not interrupt existing utilities serving facilities occupied by Owner or others, during occupied hours, except when permitted in writing by the Construction Manager and then only after acceptable temporary utility services have been provided. Provide minimum of 48-hour notice to the Construction Manager, and receive written notice to proceed before interrupting any utility.

F. The Contractor shall examine drawings to determine sequence of operations, and relation to work of other trades. Start of work will signify acceptance of field conditions and will acknowledge coordination with other trades.

G. The Contractor shall comply with the Work Plan and associated documentation in the Approved Pre-Work Submittal, all Federal, State and Local environmental regulations, and health and safety regulations, including but not limited to OSHA.

1.09 PROTECTION

A. The work shall be executed so that no damage or injury will occur to the existing public and adjoining or adjacent structures, streets, paving, sewers, gas, water, electric or any other pipes. Should any damage or injury be caused by the Contractor, or anyone in the Contractor's employ, or by the work under this Contract occur, the Contractor shall repair such damage and shall assume all responsibility for such injury and costs.

B. The above shall also include the protection of all existing utilities (including but not limited to sewers, water lines, electrical lines and telecommunication lines) to remain in use within and adjacent to the area affected by the work of this project.

C. Monuments, bench marks and other reference features on streets bounding this project, shall be protected. Should these be disturbed in any manner, the Contractor shall have them replaced.

D. Excavation sides of any pits within the site and adjacent structure foundations shall be protected by means of adequate bracing, shoring and anchoring at all times in accordance with applicable OSHA regulations. No site excavation shall proceed until adequate support for excavation sides is provided. The Contractor is solely responsible for the stability, safety and protection of excavation sides.

E. The Contractor shall provide barricades, warning lights, and barriers to prevent accidents, and to prevent all hazards to protect the public and property at all times, including Saturdays, Sundays, and Holidays.

F. It is the Contractor's responsibility to ensure that contaminated materials will not be spilled, placed, or otherwise discharged into areas other than those specified in the Contract Documents. Any unauthorized placement, spill, or discharge of contaminated material by the Contractor will be completely and properly removed by the Contractor at their own expense.

G. It is the Contractor's responsibility to ensure that adequate erosion control and stockpile protection measures are put in place and maintained at the Site.

H. Any unauthorized placement, spill, or discharge of contaminated material by the Contractor must be reported immediately to DASNY, the Construction Manager, and the Owner's Engineer.

I. All costs associated with repairing any damage will be the Contractor's sole responsibility, and such repairs will be made to the satisfaction of the respective Owner(s).

1.10 ERRORS IN DEPTH

A. In the event that any part of the excavation is carried, through error, beyond the depth and the dimensions indicated on the drawings or called for in the specifications, then the Contractor, at his own expense, shall furnish and install certified clean fill, gravel, stone, or structural concrete

with which to backfill to the required level at all locations, subject to approval of the Owner and Geotechnical Engineer.

1.11 SUBSURFACE STRUCTURES AND UTILITIES

A. The Contractor shall become acquainted with the existence and location of all surface and subsurface structures and utilities within the project area and beneath the surrounding streets. The Contractor shall not damage any of those utilities that are to remain and shall leave them accessible and make the necessary provision by sheeting, hanging, supporting or other means necessary to obtain this result, subject to the approval of the New York City Building Department (NYC only), the New York State Department of Transportation, and the utility companies involved.

1.12 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
   1. If excavated soils are determined by sample analysis to be contaminated, the Project Supervisor shall be an OSHA competent person for excavation. The OSHA Construction Standard defines a competent person as someone who is: capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
   2. The Project Supervisor shall have a minimum of one year experience as a supervisor.
   3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by the Owner or DASNY.

C. The Project Supervisor shall maintain a bound Daily Project Log that includes a Waste Shipment Record Log included in Appendix C.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the Contractor primary point of contact for the Environmental Consultant.

E. As required by applicable regulations, prior to assignment of work, instruct each employee with regard to the hazards of the generated waste, safety and health precautions, and the use and requirements of protective clothing and equipment, as well as the Contractor's HASP.

PART 2 EXECUTION

2.01 PREPARATION OF PROJECT SITE

A. Obtain all necessary permits to perform the work from the appropriate authorities and agencies prior to start of such work. Obey all applicable Federal, State, and Local work safety rules and

regulations. Ensure DSNY markings indicative of utilities are maintained and visible in areas not impacted by the work.

B. Install all necessary protection equipment and structures such as fences, signs, scaffolding, etc. prior to start of work.

C. Remove all existing structures, utilities, and pavement in accordance with the Contract Documents.

D. Protect all utility lines, which are not to be disturbed or abandoned. Contractor shall be solely responsible for any damage to utilities that may occur.

E. Protective Clothing.

1. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, and foot coverings. Provide appropriate disposable gloves suitable to protect hands and prevent skin contact.

2. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

3. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Area, if necessary.

4. Provide ladders as required by the Environmental Consultant for the purposes of performing required inspections.

2.02 DAILY PROJECT LOG

A. Provide a Daily Project Log. The log shall contain on the title page the DASNY Project name and number; the name, address and phone number of the Owner; the name, address and phone number of the Environmental Consultant; the name, address and phone number of the Contractor; and emergency numbers including, but not limited to, local Fire/Rescue department. The log shall also include the DSNY Ticket number along with a summary of the utilities in the vicinity of the work.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. The Project Supervisor shall document all Work performed daily and note all inspections.

2.03 GENERAL EXCAVATION

A. General

1. Contractor shall perform all excavation required to complete the Work as shown and specified. All material excavated shall be non-classified. It shall include all materials such as

but not limited to earth, sand, clay, gravel, hardpan, boulders, organic materials, rock, miscellaneous fill and debris.

2. Excavations shall be open type, sheeted, shored and braced or sloped where necessary to prevent injury to workmen and to new and existing structures or pipelines.
3. All excavations shall be made in dry material.
4. All equipment shall be decontaminated and free from debris, caked soil, contamination, and any other foreign materials prior to mobilization to the site. Equipment utilized during the excavating of contaminated materials shall be decontaminated in accordance with project decontamination requirements.
5. The bottom of excavations shall be leveled off and graded to receive foundations, slabs, pits, trenches and grade beams.
6. All excavation work must also adhere to the Construction Health and Safety Plan.

PART 3 HANDLING AND MANAGEMENT OF CONTAMINATED MATERIALS

3.01 GENERAL INSTRUCTIONS

A. This Section is a description of responsibilities for proper handling and management of contaminated materials on Site. The requirements of the Contract Documents, including Scope of Work, will apply to the Work in this Section.

B. The Contractor will be required to handle environmentally contaminated materials at the Site in compliance with all Federal, State and Local regulations. Contractor's Work will include handling of these contaminated materials.

1. For the purpose of this Specification, contaminant levels shall be compared to NYSDEC USCOs and RSCOs (NYSDEC Regulation 6 NYCRR Subpart 375-6) and the approved disposal facility acceptance criteria.

C. The Environmental Consultant shall create and implement a Community Air Monitoring Plan (CAMP), if required by DASNY Project Management, to manage real-time monitoring for particulates at the upwind and downwind perimeters and adjacent to the nearest structure within the work area when particulate-generating activities are in progress at the Site. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on-site may generate fugitive dust from exposed waste or contaminated soil.

D. Engineering Inspections and Observations:

1. The Owner's Engineer will inspect the movement and handling of all contaminated materials. Contractor will notify Construction Manager and Owner's Engineer a minimum of 72 hours prior to start of Work involving handling of contaminated materials.
2. Owner's Engineer will observe the contaminated material removal procedures and methods and will notify the Contractor, Construction Manager, and Owner of any part of the Work of this Section not in compliance with these specifications. Such notification will not relieve the Contractor from the responsibility of properly implementing, performing, and maintaining contaminated material removal as specified herein and as required by the Work.
3. Contractor will cooperate with the Construction Manager and Owner's Engineer to facilitate the progress of the Work.

4. Contractor will provide at least one supervisory person who must be present at all times during execution of the Work and who is thoroughly familiar with the type of work being performed and its best methods for completion. This person will have the authority to act on behalf of Contractor.

PART 4 SOIL CHARACTERIZATION, MANAGEMENT AND DISPOSAL

4.01 SOIL CHARACTERIZATION

A. Soil Characterization

1. The Contractor shall confirm with the disposal facility that a sufficient quantity of soil samples was obtained to fully characterize the site soils scheduled for disposal prior to removing any soils from the site. The contractor shall notify the DASNY on-site representative if additional waste characterization samples are needed to satisfy targeted disposal facility requirements. Any additional samples that are required will be collected by DASNY's on-site Environmental Consultant. The results of all waste characterization analyses shall be submitted to DASNY Code Compliance prior to removal of soils from Site.

2. In-situ soil characterization should be completed in accordance with the sampling procedures in the Soil Management Plan (SMP), described in Section 4.02 B. of this Specification. Sampling should be biased to soil encountered that exhibits staining, free product and/or elevated photo-ionization detector (PID) readings.

3. Soils proposed for reuse on-Site will be managed as directed by the Environmental Consultant.

B. Uncontaminated, non-hazardous soil (i.e. soil meeting NYSDEC's Unrestricted Use Soil Cleanup Objectives cited in 6 NYCRR Part 375-6.3) is not subject to approval from NYSDEC's Division of Hazardous Materials Management. If the material is stockpiled on-Site, it must follow the stockpiling procedures set forth in the SMP.

C. The Contractor shall protect and maintain excavation areas until completion of the work and acceptance by the Environmental Consultant. Excavated contaminated soil designated for off-site management may be containerized in roll-off containers at designated area(s), as directed by the Environmental Consultant.

4.02 TRANSPORTATION AND DISPOSAL OF EXCAVATED MATERIAL

A. Description of Work

1. Non-Hazardous Excavated Material, as defined in Section 1.07, that has been excavated as part of the construction project and slated for disposal shall be transported to an off-site disposal facility meeting the requirements of 6 NYCRR Part 360, or equivalent out-of-state facility, approved by the appropriate regulatory agency of that State with a permit to receive non-hazardous excavated material. This facility shall be identified and approved in the Pre-Work Submittal referenced in Section 1.05 A. prior to the start of work.

2. Clean Fill for reuse, as defined by NYSDEC under 6 NYRR Part 360 Article 12 Beneficial Use as material that is not considered Solid Waste when a Pre-determined Beneficial Use or a Case-specific Beneficial Use is determined for the excavated material.

3. All petroleum-contaminated material, as defined in 6 NYCRR Part 360 Article 1.5, if discovered, shall be transported to an off-site disposal facility permitted to receive petroleum-contaminated material from known source areas. All hazardous waste, as defined in Article

1.5, if discovered, shall be transported to an off-site disposal facility meeting the requirements of 40 CFR Part 265 and 6 NYCRR Part 373, or equivalent out-of-state facility, approved by the appropriate regulatory agency of that State with a permit to receive hazardous waste. This facility shall be identified and approved in the Pre-Work Submittal referenced in Section 1.05 A. prior to the start of work.

4. Soils may be reused on-site, if the criteria are met for pre-determined (SCO).

5. The Contractor must inform the Owner a minimum of one week prior to the start of excavation activities. Excavation and disposal activities must be supervised by the Owner or Owner's representative.

B. Excavated Soil Management Plan

An Excavated Soil Management Plan (SMP) shall be prepared by the Contractor and approved by the Owner for non-hazardous excavated material a minimum of 7 days prior to the start of excavation. A separate Excavated Material Disposal Plan for any additional categories of material (petroleum-contaminated or hazardous), as defined in Section 1.07 C. 3. and 1.07 C. 4., if encountered during excavation, shall be prepared by the Contractor and approved by the Owner prior to removing the material off-site. Soil may be re-used on-site in accordance with NYSDEC Beneficial Use Determination (BUD) regulation. There are 28 predetermined BUDs listed in 6 NYCRR Part 360.12(c). Refer to Section 1.04 for submittal requirements. In the Excavated Soil Management Plan, the Contractor shall, at a minimum:

1. Indicate how buried utilities (e.g. electric, gas, water, sewers, telephone, etc.) will be located and provide copies of the resulting information to the Owner.

2. Provide a to-scale figure indicating the excavation areas, the estimated depths of excavation, and estimated quantities of excavated material.

3. Provide a listing, including company name, name of owner contact, phone number, and address of facility, of the off-site disposal facility(ies) meeting the requirements listed in Item A above, for each specific material to be disposed and a copy of each facility's permit (NYSDEC or equivalent out of state).

4. Provide a listing, including company contact name, phone number and address, of proposed waste haulers. Provide a copy of the valid 6 NYCRR 364 Waste Transporter Permit for each proposed waste hauler.

5. Provide a certification from the proposed waste disposal facility(ies) that material from the site is acceptable for disposal. This letter must be on the disposal facility letterhead and must be received prior to removal of excavation material from the site.

6. Provide a plan for re-use of uncontaminated soil on-site, dependent upon the appropriate SCO determination, prior to excavation.

C. All excess material, including earth, rock, and fill, shall be removed from site and legally disposed of by the Contractor.

D. All lumber, forms and metal work shall be removed immediately after completion of local areas. The Contractor shall be responsible for removal of all debris produced by work to this section from the site.

E. Sidewalk and streets adjoining the property shall be broom cleaned and free of debris, rubbish, trash and obstructions of any kind caused by the work of this Section by the Contractor.

F. The Contractor must confirm characterizing for disposal has been performed on all material prior to removing material from the Site. DASNY's on-site Environmental Consultant will collect additional waste characterization samples, if needed, to satisfy targeted disposal facility requirements. The results of all waste characterization analyses shall be submitted to the Owner prior to removal of waste from the Site.

G. The Contractor shall be responsible for handling and transporting contaminated materials removed from the Site to a permitted disposal/treatment facility licensed to accept such waste soil. Materials removed from the Site shall only be transported to facilities which have received prior approval of the Owner and which have provided written approvals indicating they are permitted to accept such materials.

H. No materials shall be added to or removed from transport vehicles between their time of departure from the Site and their time of arrival at the approved facility for their disposal.

I. The Contractor shall use only properly permitted Owner-approved waste transporters. All vehicles and drivers shall be permitted and licensed in accordance with all applicable Federal, State and Local laws and regulations including the laws and regulations of governing agencies which have jurisdiction over areas through which the waste will be transported.

J. Vehicles shall be designed, equipped, operated and maintained to prevent leakage, spillage or airborne emissions of waste during transport. Appropriate controls shall be used to contain odors during loading and shipping of waste. Only safe, suitable and well-maintained vehicles, which are properly labeled/placarded, manned, permitted and registered to perform the required transportation services shall be used. All vehicles shall be decontaminated as necessary, including truck tires and undercarriages, prior to leaving the Site. The Contractor shall be responsible for supplying all labor, materials, equipment and supplies for decontaminating the vehicles used and shall be responsible for the off-site disposal of wastes resulting from any decontamination.

K. Certified weight scale tickets showing the weight of the vehicle at the time of arrival and departure from the disposal facility shall be provided for all waste material transported off-site. The weight tickets shall be signed and dated by a representative of the Contractor certifying the accuracy of all measurements, the date and time of arrival and departure of each vehicle, the disposal location and the vehicle identification number.

L. The Contractor shall continuously monitor the regulatory compliance status of all waste transporters and disposal facilities used and proposed for use. If, at any time, the Contractor becomes aware of a potential or actual change in the regulatory compliance status of any waste transporters or disposal facilities used or proposed for use, the Contractor shall immediately notify the Architect, Owner or Owner's Representative of such potential or actual change and, in consultation with the Owner, make arrangements to divert waste to alternate approved transporters and disposal facilities.

M. The Contractor shall complete all required manifest forms and bills of lading as required by applicable laws and regulations for transportation and disposal of materials off-site. The Contractor shall provide completed copies of all required manifests and bills of lading to the Owner along with all requested backup documentation. DASNY's on-site Environmental Consultant shall sign manifests and bills of lading. The Contractor shall be responsible for assuring that all notifications, labeling, documentation, sampling, analysis, transportation and disposal requirements of the disposal facility, and Federal, State and Local governments are complied with and properly documented.

N. The Contractor's Hauler and Disposal Site shall be approved by the Owner.

O. The Contractor shall give 24-hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present and the Environmental Consultant authorizes the release of the waste as described herein.

P. The Environmental Consultant shall verify the landfill to be used for waste disposal with the waste transporter (driver) and Contractor prior to the waste storage trailer/dumpster leaving the site. The Environmental Consultant shall confirm the waste transporter firm and landfill are listed on the regulatory notifications for the Project and the waste transport vehicle license number is listed on the current NYS DEC Waste Transporter permit.

Q. Payment for disposal of contaminated soils will not be made until a signed copy of all required manifests and bills of lading from the treatment or disposal facility certifying the amount of contaminated soils delivered is returned for each load removed from the site. This original manifest and bill of lading documentation as well as the waste disposal log originals must be provided to the Owner or appropriate state if applicable, and copies provided to DASNY Code compliance.

END OF SECTION 02 61 00

APPENDIX A

SOIL REPORT

APPENDIX B

SOIL TRANSPORT FORMS

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Division of Materials Management

(08/18)

NOTIFICATION OF FILL MATERIAL REUSE

OFFICIAL USE ONLY

DATE RECEIVED

GENERATOR NUMBER

DESTINATION NUMBER

STAFF INITIALS

6 NYCRR Part 360.13 requires notification to the Department for the use of fill material in the following cases:

- At least five days in advance of transfers of general fill, restricted-use fill and limited-use fill generated in, imported to, or relocated within the City of New York in amounts greater than 10 cubic yards.
- At least five days in advance of delivery of restricted-use fill and limited-use fill in amounts greater than 10 cubic yards anywhere in the State of New York.

Notification to the Department is not required when the destination is a facility authorized under6 NYCRR Part 361-5; however, the facility may request information required by this form as part of its waste control plan.

1. Generating Site Location and Contact

Project Name: _____

Location of Generating Site: _____ *Street Address* _____ *City/Town*

_____ *County* _____ *Zip Code*

Contact: _____

Last *First* *M.I.*

Office Phone: ( ) _____ **Mobile Phone:** ( ) _____

E-mail _____

Company Name: _____

Company Address: _____

Street Address

_____ *City* *State* *Zip*

2. Fill Material Generated at Remediation Sites

a. Is the fill material generated from a site being remediated pursuant to a program administered by the Department or EPA? ☐ Yes ☐ No

b. If Yes to question 2a, do you have approval from the Department or EPA to reuse this material at the proposed destination? ☐ Yes ☐ No

If No to question 2b, contact the Department prior to transporting fill material to the destination site.

3. Generating Site Information

a. Overall quantity of fill material this project will generate _____ Cubic yards

b. Indicate fill material classifications found on the site:

☐ General Fill ☐ Limited use fill ☐ Restricted use fill ☐ Other

c. Quantity of fill material covered under this notification _____ Cubic yards

d. Indicate fill material classifications proposed to be reused under this notification:

☐ General Fill ☐ Limited use fill ☐ Restricted use fill ☐ Other

e. Have other notifications for this project been submitted to the Department? ☐ Yes ☐ No

If yes, indicate destination region(s). _____

f. Will additional notifications be sent in the future? ☐ Yes ☐ No

g. Estimated start date and end date of overall project: _____ _____

(Start Date) *(End Date)*

h. Estimated start and end date of fill transfer for reuse under this notification: _____

(Start Date) *(End Date)*

4. Fill Material Physical Characteristics

Describe Fill Material

Provide a description of the fill material, including estimated composition by percent volume of soil, rock, concrete,brick, ash, cinders, slag, etc.). If more space is needed, attach an additional sheet.

5. Qualified Environmental Professional

Contact: _____

Last *First* *M.I.*

Office Phone: ( ) _____ **Mobile Phone:** ( ) _____

E-mail: _____

Company Name: _____

Company Address: _____

Street Address

_____

City *State* *Zip*

6. Destination Site Location and Contact

Project Name: _____

Location of Destination Site: _____ _____

Street Address *City/Town*

_____ _____

County *Zip Code*

Contact: _____

Last *First* *M.I.*

Phone: ( ) _____ **Mobile Phone:** ( ) _____

E-mail: _____

Company Name: _____

Company Address: _____

Street Address

_____

City *State* *Zip*

7. Destination Site Information

a. Quantity of fill material required for this project? _____ **Cubic Yards**

b. Type(s) of fill material to be used (check all that apply):

☐ General Fill ☐ Limited use fill ☐ Restricted use fill ☐ Other

c. For restricted- and limited-use fill, has a local building permit or other municipal authorization been issued for this project that includes need for fill? ☐ Yes ☐ No

d. Are additional fill material notifications to be submitted for this project? ☐ Yes ☐ No

e. Describe the area(s) on the site where this fill material is to be used:

Please note that both the generator and the receiver of the fill material must retain records of fill material quantities, with analytical data, for a minimum of three years after fill material is removed or received, as applicable. To demonstrate compliance with applicable requirements of this notification, a log of all loads of fill material and corresponding tracking documents should be maintained as part of these records. The Department reserves the right to inspect any site of generation or placement of fill material.

Transport of fill material that originates in the City of New York, or limited-use fill and restricted-use fill generated outside of New York City, is also subject to the requirements of Part 364.

8. Certification by Qualified Environmental Professional

I certify, under penalty of law that the data and other information provided in this notification have been prepared under my direction and supervision in compliance with the system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in this notification is punishable pursuant to Section 71-2703(2) of the Environmental Conservation Law and Section 210.45 of the Penal Law.

Name: _____

Last Name *First Name* *M.I.*

Signature: _____

Date

License Information: _____ _____

Number *State*

Profession: ☐ Engineer ☐ Geologist ☐ Other (see 6 NYCRR 360.2(b)(213))

(Engineer or Geologist seal above)

In the event the Qualified Environmental Professional identified in Item 5 above is not a Professional Engineer or Geologist licensed in New York State, the QEP's basis for credential must be attached to this form.

All notifications must be sent to the Regional Office of the Department in which the destination is located (see http://www.dec.ny.gov/about/558.html).

Pursuant to 6 NYCRR Subdivision 360.13(g), all notifications must be made on forms and in a manner acceptable to theDepartment. Before submitting this notification, please ensure this form is complete and all supporting documentation is formatted in a manner acceptable to the Department as recommended in the checklist below.

☐ **Completed Form.** All fields of the application are complete, including the certification.

☐ **Analytical Data Comparison.** Analytical data is compared with the following, for the respective fill material typefor the receiving site, and exceedances clearly identified as follows (see also 6 NYCRR Part 360.13(f)):

- General Fill: protection of groundwater and residential soil cleanup objectives found in 6 NYCRR Part 375, Section 375-6.8.
- Restricted-Use Fill: In addition to general fill requirements, benzo (a) pyrene equivalent.
- Limited-Use Fill: In addition to restricted use requirements, commercial soil cleanup objectives for metals found in6 NYCRR Part 375, Section 375-6.8.

☐ **Summary Table - Recommended Formatting.** Summary tables are attached that show standards and analytes on the left;sample IDs, depths and locations on the top; and detection limits are indicated for those constituents that are listed as ‘non-detects’. The summary table should list all analytes. All data for the generating site should be provided, even if not to be transported, as part of this notification.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Part 360 Series Waste Tracking Document - Construction & Demolition Debris

This form may be used to satisfy the tracking document requirements of both section 361-5.6 and section 364-5.1 for the transport of C&D Debris

TYPE OF C&D DEBRIS:	☐ Limited-Use Fill ☐ Restricted-Use Fill ☐ Contaminated Fill ☐ Fill Material - Unknown ☐ General Fill ☐ Residue ☐ Construction Waste ☐ Demolition Waste ☐ Other (specify): _____
WASTE QUANTITY:	_____ Tons _____ Cubic Yards Check box to indicate quantity is estimated: ☐
LOCATION WHERE WASTE WAS PICKED UP:	Source Name: _____ Address: _____ City: _____ State: _____ Zip Code: _____

GENERATOR: Name: _____ DEC Permit/Reg. No. (if applicable): _____

Address: _____ City: _____ State: _____ Zip: _____

Authorized Representative of Generator: _____ Phone: _____

Transporter Name: _____

Receiving Facility Name: _____ Chosen by Transporter

Address: _____ City: _____ State: _____ Zip: _____

I have completed this tracking document describing the waste and identifying the transporter and receiving facility. I certify, under penalty of law, that the information provided in this waste tracking document has been prepared under my direction and supervision and further certify that the information contained herein is true and accurate. I am aware that any false statement made on this document is punishable pursuant to Section 210.45 of the Penal Law.

Signature: _____ Date: _____

TRANSPORTER: *To be completed by Transporter* DEC Permit/Registration No.: _____

Transporter Company Name: _____

Describe all Discrepancies in type or quantity of waste: _____

_____

Driver Name (print): _____ Phone: _____ Plate No.: _____

Signature: _____ Date: _____

RECEIVING FACILITY: *To be completed by Receiving site* DEC Permit/Reg. No. (if applicable): _____

Name: _____ Address: _____

City: _____ State: _____ Zip: _____ Put [X] for: interim processor, or final site

Describe all Discrepancies in type or quantity of waste: _____

_____

I certify, under penalty of law, that the information contained herein is true and accurate.
I am aware that any false statement made on this document is punishable pursuant to Section 210.45 of the Penal Law.

Print Name: _____ Phone: _____

Signature: _____ Date: _____

The completed tracking document for all waste types must be returned to the Generator <u>within two weeks</u> of receipt of the waste.
Statewide for restricted-use fill, limited-use fill and contaminated fill, and for all waste types, except residue, generated in the City of New York, a copy of the completed tracking document **must also be provided to NYS DEC within 15 days** of waste delivery to the receiving facility.
[ref: 6 NYCRR 364-5.1(b)(5)]

Rev: May2018, Ver 1

Return completed forms to NYS DEC by e-mail to transport@dec.ny.gov OR fax to 518-402-9034 OR mail to 625 Broadway, 9th Floor, Albany, NY 12233-7251.

New York State Department
of Environmental
ConservationDivision of
Materials Management

USE OF PREDETERMINED BENEFICIAL USE DETERMINATION
Pursuant to 6 NYCRR
360.12(c)

COMPANY NAME:	
COMPANY ADDRESS:	
LOCATION/ADDRESS OF SITE OF REUSE:	
This material is being used in compliance with the pre-determined beneficial use determination described at 6 NYCRR 360.12(c)(1)(ii): *"The following cease to be waste when used as described in this paragraph…. **(ii) fill material generated outside of New York City with no evidence of historical impacts such as reported spill events, or visual or other indication (odors, etc.) of chemical or physical contamination**."* Transportation of this material **does not** require a Part 364 Waste Transporter permit or registration.	
CONTACT NAME:	TITLE:
COMPANY NAME:	
PHONE:	EMAIL:
SIGNATURE:	DATE:

With any questions, please contact (518) 402-8678 or benuse@dec.ny.gov.

APPENDIX C

WASTE SHIPMENT RECORD LOG

DORMITORY AUTHORITY STATE OF NEW YORK
WASTE SHIPMENT RECORD LOG

Facility Name: _____

Building Name/Number: _____

Project Name: _____

DASNY Project Number: _____

Abatement/Remediation Contractor: _____

Project Monitor: _____

Load No.	Hauler Name	NYSDEC #	License Plate No.	Size of Container	Disposal Facility Name	Date Depart from Site	Date Received at Disposal Site	Date Shipment Record Returned

Comments:

Page _____ of _____

APPENDIX 4

HEALTH AND SAFETY PLAN

CONFIDENTIAL

HEALTH AND SAFETY PLAN

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461

Prepared For:

New York State Office of Mental Health
75 New Scotland Avenue, Albany NY 12208

Prepared by:
TRC Engineers, Inc.
1407 Broadway, 33rd Floor
New York, New York 10018
Phone: (212) 221-7822
TRC Project No. 411323.0000.0022

January 2026

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 SCOPE OF WORK 2
2.1 Concrete Pad Demolition and Removal 2
2.2 Soil Excavation 3
3.0 PROJECT PERSONNEL RESPONSIBILITIES 3
3.1 Program Director 3
3.2 Corporate Health and Safety Officer 3
3.3 Project Manager 4
3.4 Field Team Task Leader 4
3.5 TRC Employees 4
3.6 Subcontractors 5
4.0 TRAINING PROGRAM 6
4.1 Environmental Training 6
4.2 Daily Safety Meetings 6
5.0 MEDICAL SURVELIANCE 7
5.1 Medical Monitoring 7
5.2 Fit-Testing Requirements 7
6.0 HAZARD ANALYSIS 8
6.1 Chemical Exposure Hazards 8
6.1.1 Site-Specific Known and Potential Contaminants 8
6.1.2 Chemicals to be Used On-Site 9
6.1.3 Exposure Limits 9
6.2 Physical Hazards 11
6.3 Biological Hazards 18
6.4 Environmental Hazards 20
7.0 CONFINED SPACE ENTRY PLAN 24
7.1 General 24
7.2 Description Of Permit-Required Confined Space 25
7.3 Confined Space Protocol 25
7.3.1 General Protocol 25
7.3.2 Air Monitoring Instrumentation Operation and Maintenance 25
7.3.3 Air Monitoring Protocol 26
8.0 RESPIRATORY PROTECTION 27
8.1 Air Purifying Respirator 27
8.2 Fit Testing Procedures 27
8.2.1 Initial Size Selection 27
8.2.2 Positive and Negative Pressure Tests 27
8.2.3 Irritant Smoke Test 28
8.3 Cleaning 28
8.4 Storage 28
8.5 Inspection and Maintenance 28
8.6 Cartridge Selection and Replacement 29
9.0 LEVEL OF PROTECTION 30
10.0 AIR MONITORING 32
10.1 Personal Exposure Monitoring 32
11.0 PERSONNEL AND EQUIPMENT DECONTAMINATION 34

11.1 Personnel Decontamination 34
11.1.1 Suspected Contamination 34
11.1.2 Personal Hygiene 34
11.2 Heavy Equipment and Vehicle Decontamination 34
11.3 Waste Disposal 34
12.0 WORK PRACTICES AND ENGINEERING CONTROLS 35
13.0 KEY PERSONNEL AND EMERGENCY SERVICES 38
14.0 CONTINGENCY PLAN 40
14.1 Emergency Equipment 40
14.2 Personal Injury in the Work Area 40
14.3 Personal Injury within the Facility 40
14.4 Personnel Responsibilities During Emergency 40
14.5 PPE Failure 41
14.6 Emergency Phone Numbers and Hospital Information 41
14.7 Fire or Explosion 41
14.8 Evacuation Routes 41
14.9 Spill Control 41
14.10 Accident/Incident Reporting 42

APPENDICES

APPENDIX A - HEALTH AND SAFETY PLAN AMENDMENT FORM
APPENDIX B - HEALTH AND SAFETY PLAN REVIEW ACKNOWLEDGEMENT FORM
APPENDIX C - CONFINED SPACE ENTRY PERMIT
APPENDIX D - NOTIFICATION OF IMMEDIATE HEALTH RISK
APPENDIX E - ACCIDENT/INCIDENT REPORT
APPENDIX F – MATERIAL SAFETY DATA SHEETS
APPENDIX G – MAPS AND DIRECTIONS TO THE CLOSEST HOSPITALS
APPENDIX H – OMH RULES AND REGULATIONS

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Material
ANSI	American National Standards Institute
APR	Air Purifying Respirator
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
dBA	A-Weighted Decibel
EHS	Environmental Health and Safety
USEPA	U.S. Environmental Protection Agency
fiber/cc	fiber/cubic centimeter
RWP	Remedial Work Plan
GFCI	Ground Fault Circuit Interrupter
HASP	Health and Safety Plan
HSO	Health and Safety Officer
IDLH	Immediately Dangerous to Life or Health
LCP	Lead-Containing Paint
LEL	Lower Explosive Limit
mg/m^3	Milligram per cubic meter
MSHA	Mine Safety and Health Administration
NIOSH	National Institute of Occupational Safety and Health
OMH	New York Office of Mental Health
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PPE	personal protective equipment
ppm	Parts per million

ACRONYMS AND ABBREVIATIONS (cont'd)

PRCS	Permit Required Confined Space
REL	Recommended Exposure Limit
SDS	Safety Data Sheet
TLV	Threshold Limit Values
TRC	TRC Engineers, Inc.
TWA	Time Weighted Average

1.0 INTRODUCTION

This Health and Safety Plan (HASP) was prepared in accordance with Occupational Safety and Health Administration (OSHA) 1910.120 requirements to protect TRC Engineers, Inc. (TRC) employees and its subcontractors during implementation of the scope of work in support of the Transformer Room No. 1 and Transformer Room No. 2 in Building No. 1 at the Bronx Psychiatric Center (the Facility), located at 1500 Waters Place in Bronx County of New York City, tax block 4226, lot 30. The Facility is operated by the New York Office of Mental Health (OMH) referred to as the "Client."

This HASP defines the potential hazards expected to be encountered during the work activities as outlined in the Remedial Work Plan (RWP) for the Facility and also addresses the health and safety requirements and procedures to be followed by all field personnel including; appropriate exposure controls including engineering, administrative, and personal protective equipment required for each task.

Revisions and/or alterations to the HASP will be necessary as more site-specific information becomes available, such as after the commencement of the investigation and remediation activities at the Facility, per the RWP. TRC will prepare a site-specific HASP Addendum to document such revisions/alterations and include it with the submittal of the RWP. In addition, any changes in the scope of work may require that the HASP be revised. Any proposed changes to the HASP will be approved by the TRC Health and Safety Officer (HSO) and then by OMH prior to implementation, and recorded in the HASP Amendment Form, as included in Appendix A.

All on-site personnel are required to review the HASP and attachments, as well as review and sign the HASP Review Acknowledge Form in Appendix B. All personnel must strictly comply with the requirements detailed in the HASP and its addenda. It is the responsibility of the TRC Program Director, Health & Safety Officer (HSO), and Project Manager to ensure that this HASP and its subsequent addenda are implemented and enforced. Like other project-related documents, the HASP may contain sensitive or confidential information and should not generally be disclosed to persons other than those working on-site and on this project.

2.0 SCOPE OF WORK

The Transformer Rooms Nos. 1 & 2 are located at Building No. 1 on a 0.1-acre portion of the 5-acre Bronx Psychiatric Center campus, which is considered an urban area. (the "Site). The transformer rooms at the psychiatric center were operated for over 50 years for electric power supply to the building. There are transformers and associated electrical equipment in the rooms. The prior transformers used at the facility contained PCB dielectric fluid, which leaked within the rooms, impacting the concrete floors beneath and near the transformers and the soils below the floor.

Transformer Room No. 1 and Transformer Room No. 2 in Building No. 1 in October 2023. The recent monitoring event in October 2023 was planned to include the inspection and PCB wipe sampling of epoxy coatings on the concrete floors inside the Transformer Rooms. The inspection and sampling were postponed because of unforeseen vandalism which included damaged electrical equipment and other materials covering the floor areas. The epoxy coated floor area must be cleared of damaged mechanical and electrical equipment, dust and debris which is currently interfering with the facility operations, maintenance, and routine monitoring activity.

Work will include performing limited bulk sampling consisting of collecting asbestos, polychlorinated biphenyls (PCB) and RCRA Metals samples which may be mixed with the vandalized equipment and debris throughout the Transformer Rooms. Bulk sampling of the damaged/vandalized equipment and associated debris will be performed before removal and recycling/disposal.

The remediation of the Transformer Rooms aside from asbestos abatement (based on asbestos sampling and separate HASP) shall consist of the removal and clearing of all contents (transformers and equipment) from transformer rooms to prepare removal of the concrete pads. The following are sequential order for this activity.

1. Remove overgrown vegetation to create access to remove transformer and waste materials from the building.
2. Establish Egress to the Transformer Rooms. Temporary removal of Fire Rated Doors and Louvres within the existing limits of the Basement exterior foundation wall. These entry doors and Louvre panels shall be assessed for suspect materials (i.e., asbestos, lead paint) such as insulation.
3. Clean and remove non-porous scrap metal; Additional PCB-wipe sampling may be necessary to confirm the materials have been thoroughly cleaned for recycling.
4. Remove the other porous materials and debris as Toxic Substances and Control Act (TSCA) Regulated PCB Remediation Waste and/or Potentially Hazardous Waste depending on the results of waste characterization sampling activities.
5. The four (4) transformers along with all associated equipment will be de-energized and removed from Transformer Rooms 1 & 2, as non-porous scrap metal for recycling depending on waste characterization.

2.1 Concrete Pad Demolition and Removal

The maximum feasible removal of concrete slabs from Transformer Room 1 and 2 will be based upon the recommendations of the Structural Engineer. The bottom elevation of the concrete slab is expected to be above groundwater based on historical data. The maximum concrete slab area to be removed is estimated to be 800 square feet in Transformer Room 1 and approximately 850 square feet in Transformer Room 2. The total volume of concrete to be removed may vary depending on the thickness of the concrete slab which

is estimated as 6.5-inches to 18-inches thick. The estimated volume of removal is 60 cubic yards with an assumed weight of 120 tons if the slab is steel-reinforced.

2.2 Soil Excavation

To achieve re-classification of the site from a Class 3 to a Class 4 Inactive Hazardous Waste Disposal Site, the post-excavation PCB soil concentrations in the Transformer Rooms must demonstrate to NYSDEC that the PCB concentrations in subsurface soil beneath the building meet the cleanup criteria of 10 ppm.

The soils underneath the transformers will be excavated and end point samples will be collected. All on-site soils which exceed restricted-residential soil cleanup objectives (SCOs) for PCBs (1 ppm) shallow soil (0-2 feet) and 10 ppm in subsurface soil, as set forth in NYSDEC's CP-51 and Part 375-6.8, will be excavated and transported off-site for disposal.

The soil area to be removed is estimated to be less than 250 square feet in Transformer Room 1, and less than 250 square feet in Transformer Room 2. The total volume of soil to be removed will vary depending on the depth of groundwater and corresponding de-watering activity required, soil type(s), types of shoring and shielding required. The soil excavation is required to remove and safely access PCB contaminated soil greater than 10 ppm, based on remedial investigations and the ROD selected for this site.

A site map of the facility, a road map and directions to the closest hospital are presented in Appendix G. A site evacuation map (which will be provided by the OMH for the facility), and any site-specific health and safety considerations not included in this HASP, will be provided in a HASP Addendum to the OMH.

3.0 PROJECT PERSONNEL RESPONSIBILITIES

The TRC management team along with all its employees, share the responsibilities of enforcing and implementing the health and safety requirements stated in the HASP and its subsequent addenda. The following outlines the responsibilities of each of the designated key personnel, TRC employees, and subcontractors.

3.1 Program Director

The Program Director is responsible for the overall implementation of all work activities under the RWP. The Program Director has the overall responsibility for the project and to assure that the requirements of the contract are attained in a manner consistent with the required health and safety procedures. For this project, Mr. Josh Cupriks, CIH will be the designated Program Director.

3.2 Corporate Health and Safety Officer

The Corporate Health and Safety Officer (HSO) is responsible for developing and implementing appropriate health and safety policies and practices for the field personnel under the RWP.

The HSOs responsibilities include the following:

- Coordinating the overall health and safety program.
- Reviewing of HASP and its subsequent addenda.
- Ensuring that appropriate health and safety-related training is adequate.
- Developing and maintaining a database of employee training and medical surveillance.

- Managing the company health and safety records.

For this project, Mr. Daren Bryant will be the designated TRC HSO.

3.3 Project Manager

The Project Manager is responsible for the performance of all field personnel and subcontractors under the RWP. The Project Manager coordinates with the Program Director and the HSO to assure that the work is completed in a manner consistent with the HASP. Prior to beginning the project monitoring work, the Project Manager will provide project documents, such as the approved RWP as well as the HASP and its addenda, to the Field Team Task Leaders, TRC employees, and subcontractors for review and signature. In addition, the Project Manager will conduct bi-weekly and unannounced audits at the sites to ensure the work activities are conducted in accordance with the approved RWP and this HASP. In addition, the Program Manager serves as a liaison between the OMH, TRC, and works closely with the TRC HSO and Field Team Task Leader to ensure the field personnel observe the health and safety requirements specified in this HASP and its subsequent addenda. For this project, Mr. Anthony Sigona, PE, CSP, CIH is designated as the Project Manager.

3.4 Field Team Task Leader

When the HSO or the Project Manager is absent from the Site, the Field Team Task Leader, Ms. Nancy Guevara, will assume the on-site responsibilities of the HSO. The Field Team Task Leader will oversee daily safety issues and ensure that all applicable OSHA, State, and Local health and safety standards, as well as OMH environmental health and safety policies are applied. If there is any dispute with regard to health and safety or project activities, on-site personnel will attempt to resolve the issue with the Field Team Task Leader. If the issue cannot be resolved, the Project Manager will be consulted.
The Field Team Task Leader is authorized to suspend work based on safety concerns and is responsible for:

- Indoctrinating field personnel with regard to all of the information in this HASP and any other safety requirements to be observed during the performance of the RWP, including, but not limited to, decontamination procedures, designation of work areas, levels of protection, air monitoring, and emergency procedures dealing with fire and medical situations;
- Coordinating safety decisions with the Project Manager and the on-site OMH representatives;
- Maintaining the work area on a daily basis;
- Monitoring the condition and status of all known on-site hazards and maintenance and implementation of the air monitoring program specified in this HASP;
- Maintaining records of safety problems encountered, mitigative action taken, and documentation of any chemical exposure or physical injuries.

The Field Team Task Leaders will document these conditions in a bound log-book, which should be kept at the Site, when on-site, and made available to the OMH. For this project, Ms. Nancy Guevara will be the assigned Field Team Task Leaders. Additional Field Team Task Leaders may be added as the project progresses.

3.5 TRC Employees

TRC employees are responsible for their personal safety, and the safety of others, in the work area. Employees are expected to follow the procedures set forth in the HASP and its addenda. All project personnel have the authority to stop work if, in their judgment, serious injury could result from continued activity. The HSO and Project Manager should be notified immediately if this becomes necessary. Any person who observes safety concerns or potential hazards that have not been addressed in the daily safety

meetings should immediately report observations and/or concerns to the Field Team Task Leader or to other appropriate key personnel.

Safety requirements to be observed by TRC employees include:

- Reading this HASP, as well as any amendments, prior to on-site work and complying with these documents;
- Signing the HASP Review Acknowledgement Form;
- Providing documentation of medical surveillance and training to the HSO;
- Attending pre-entry briefing prior to entering site and other safety meetings;
- Bringing forth any questions or concerns regarding the content of HASP prior to start of work, and
- Reporting all potentially dangerous situations, incidents, injuries, and illnesses, regardless of their severity, to the Field Team Task Leader or appropriate key personnel.

3.6 Subcontractors

Each subcontractor is responsible for the health and safety of its own employees, in addition to following the health and safety requirements specified in this HASP.

Subcontractors will be responsible for:

- Reading the HASP and its addenda, and signing the HASP Review Acknowledgement Form;
- Reading and adhering to all OMH standard operating procedures (SOP);
- Informing TRC of the name and qualifications of its on-site safety representative;
- Providing the names of personnel and appropriate documentation of OSHA HAZWOPER training (including refreshers), and any other task-specific proof of training (e.g., confined space entry);
- Submitting for evaluation the Subcontractor's complete HASP;
- Performing work in a safe manner and observing established health and safety practices at all times while on the project site; and
- Informing HSO of any changes or recognized hazards identified during the project.

TRC will be responsible for providing the Subcontractors with all information related to health and safety requirements as specified in the HASP and ensuring that Subcontractor adheres to HASP, HASP addenda and all OMH OPs.

Contact telephone numbers for key personnel are included in Section 13.0.

4.0 TRAINING PROGRAM

4.1 Environmental Training

All environmental field personnel, including subcontractors, who will be involved in the RWP shall have previously received the following training on handling potential exposure to toxic chemicals or hazardous environments. The training must be taught by experienced professionals and promotes safe work conditions through both classroom and field instructions.

- HAZWOPER – for those employees performing sampling of building materials;
- NYSDOL/NYCDEP Certified Asbestos Inspector – for those employees involved in sampling of asbestos-containing materials;
- NYSDOL Certified Asbestos Project Monitor – for those employees involved in overseeing asbestos abatement activities, if applicable;
- NYSDOL Certified Asbestos Air Sampling Technician – for those employees performing asbestos abatement project air sampling; if applicable.
- USEPA Lead Inspector – for those employees performing lead sampling;
- Hazard Communication Training (Right-to-Know);
- Training required under specific OSHA Standards, State, Local, and OMH environmental health and safety policies.

In addition, the following training is required for the specific hazards, as dictated by the scope of work, such as:

- Biological hazards (including mold, bacteria and blood borne pathogens)
- Electrical hazards
- Lift equipment/working at elevation
- Lock out/Tag out

TRC will maintain documentation that shows that each on-site employee or subcontractor has the necessary health and safety training.

Subcontractors involved in project work acknowledging the HASP must provide the TRC HSO with documentation of their employees OSHA training prior to commencing site work. If this training is inadequate, these personnel may be excluded from certain aspects of this project.

In addition, all visitors are required to check in with the on-site TRC HSO or Field Team Task Leader to be briefed on the hazards associated with the site; to explain emergency procedures; train them in the use of protective gear, if required during the visit; and if they are to enter the work area to verify that they have received, prior to the site visit, the required preliminary training and medical surveillance.

Personnel of TRC and its subcontractors will follow OMH Rules and Regulations presented in Appendix H.

4.2 Daily Safety Meetings

A brief safety meeting will be held each day before work begins to ensure that all field personnel understand any changing activity or new site conditions or operating procedures and to address safety questions and concerns. The meetings will be called and conducted by the Project Manager or the Field Team Task Leader. Daily safety meeting time and attendance will be recorded in the field log book along with a log of daily site activities. All field personnel must attend the meeting. All visitors and assigned OMH personnel will also attend the meetings.

5.0 MEDICAL SURVELIANCE

5.1 Medical Monitoring

All personnel and visitors entering the work areas must have completed appropriate medical monitoring requirements required under OSHA 29 CFR 1910.120 (f). Medical monitoring enables a physician to monitor each employee's health and physical condition, fitness to wear respiratory protective equipment and fitness to carry out on-site tasks.

If there are additional medical monitoring requirements for this project, evidence of compliance must be included. Documentation of all field personnel medical monitoring is maintained on file by the HSO. Subcontractors working on this project must provide the HSO with documentation on their medical monitoring programs. The HSO will also be responsible for maintaining documentation of all subcontractor medical monitoring.

As stated in Section 4.0, all visitors are required to check in with the HSO prior to visiting the Site. The HSO will verify if the visitors have the required medical surveillance.

5.2 Fit-Testing Requirements

TRC monitoring teams will utilize respiratory protection in the event hazardous materials are anticipated to be encountered. Therefore, TRC personnel will observe the fit testing requirements in Section 8.0 – Respiratory Protection of this HASP. TRC personnel have been successfully fit-tested and trained with the respirator they are to wear within the previous 12 months in accordance with OSHA 29 CFR 1910.134 or the American National Standards Institute (ANSI). Documentation of all field personnel fit-testing and training are maintained on file by the HSO.

6.0 HAZARD ANALYSIS

The potential for exposure to hazards will vary depending on the location where the monitoring work is being performed. The buildings within the scope of work are varied, therefore, the associated hazards potentially encountered will vary as well. Although the potential for exposure to hazards also exists withing the Facility, they generally are not expected to vary widely during the implementation the RWP. As stated previously, the approach to the RWP includes preparation of this HASP, followed by completion of Phase 1 outlined in the RWP. Based on the results of the initial reconnaissance and Phase 1, TRC shall develop site specific HASP addenda that address the specific hazards identified in the Walk-through that are anticipated to be encountered during the subsequent Hazardous Materials Assessment. The following is a summary of the currently identified hazards that are anticipated to be encountered during scoped work at the Facility.

Building No.	Chemical Hazards identified in 6.1	Physical Hazards identified in 6.2	Biological Hazards identified in 6.3	Environmental Hazards identified in 6.4
Transformer Room No. 1 in Building No. 1	All	All except Confined Spaces & Water Hazards	All except bloodborne pathogens	All except noise
Transformer Room No. 2 in Building No. 1	All	All except Confined Spaces & Water Hazards	All except bloodborne pathogens	All except noise

6.1 Chemical Exposure Hazards

6.1.1 Site-Specific Known and Potential Contaminants

Based on the scope of services for the RWP, TRC assumes the following compounds as potential contaminants:

- Asbestos
- Select metals (e.g. lead, mercury, nickel, lithium, silver)
- PCBs
- Dielectric oil
- Carbon Monoxide
- Carbon Dioxide
- Hydrogen Sulfide
- Pesticides

The source of these potential contaminants of concern may be from on-site building components, as well as from historical operations within the facility.

Analytical methods to be utilized in the analyses of samples collected during this sampling event shall comply with federal, state, and local requirements.

6.1.2 Chemicals to be Used On-Site

For the purposes of equipment calibration, the following table summarizes the chemicals that could be brought on-site:

- Cleaning detergent (Simple Green®)
- Nitrogen
- Carbon Monoxide mixture in air
- Carbon Dioxide
- Hydrogen Sulfide in air
- Hexane
- Chlorine Compound

Safety Data Sheets (SDS) for these chemicals are provided in Appendix F.

6.1.3 Exposure Limits

The following chemical hazards are anticipated for this project:

X	Inhalation	X	Ingestion	X	Skin/Eye Contact
X	Water Reactive	___	Explosive	X	Flammable
___	Radioactive	___	Pressure Sensitive	___	Other:

The following table provides a summary of chemical hazards that could potentially be encountered by personnel during the implementation of the field tasks. Based on the scope of the field work activities, the anticipated routes of exposure for the following listed potential contaminants are inhalation, ingestion, skin and/or eye contact. Appropriate PPEs by all field personnel and air monitoring, as specified in Section 9 in this HASP, will be employed during field activities to minimize exposure to the following contaminants.

Potential Contaminant	**Exposure Limits**	**Symptoms of Over-Exposure**
Asbestos	TLV: 0.1 fibers/cc OSHA PEL: 0.1 fibers/cc NIOSH REL: 0.1 fibers/cc IDLH: not established	No acute symptoms
Lead	TLV: 0.05 mg/m^3 OSHA PEL: 0.05 mg/m^3 NIOSH REL: 0.05 mg/m^3 IDLH: 100 mg/m^3	Fatigue, personality changes, gastrointestinal discomfort, headache, hearing loss, tremors, seizures, coma, reduced sensation, constipation.
Mercury	TLV: 0.025 mg/m^3 OSHA PEL Ceiling: 0.1 mg/m^3 NIOSH REL: 0.05 mg/m^3 (skin) IDLH: 10 mg/m^3	Eye irritation, headaches, cough, chest pain, breathing difficulty, mental disturbances, memory loss, skin rashes, weakness, speech, vision, and hearing impairment, lack of coordination, sensation disturbances.

Potential Contaminant	Exposure Limits	Symptoms of Over-Exposure
Nickel	TLV: 0.1 mg/m^3 OSHA PEL: 1 mg/m^3 NIOSH REL: 0.015 mg/m^3 (skin) IDLH: 10 mg/m^3	Sensitization dermatitis, allergic asthma, pneumonitis
Lithium	TLV: 0.025 mg/m^3 OSHA PEL: 0.025 mg/m^3 NIOSH REL: 0.025 mg/m^3 (skin) IDLH: 0.5 mg/m^3	Irritation eyes, skin; eye, skin burns; mouth, esophagus burns (if ingested); nausea; muscle twitches; mental confusion; blurred vision
Silver	TLV: 0.01 mg/m^3 OSHA PEL: 0.01 mg/m^3 NIOSH REL: 0.01 mg/m^3 (skin) IDLH: 10 mg Ag/m^3	Blue-gray eyes, nasal septum, throat, skin; irritation, ulceration skin; gastrointestinal disturbance
PCBs	TLV: 0.5 mg/m^3 OSHA PEL: 0.5 mg/m^3 NIOSH REL: 0.001 mg/m^3 IDLH: 5 mg/m^3	Eye irritation, nausea, vomiting, abdominal pain, jaundice.
Carbon Monoxide	TLV: 25 ppm OSHA PEL: 50 ppm NIOSH REL: 35 ppm IDLH: 1,200 ppm	Headaches, nausea, weakness, dizziness, confusion, hallucinations, depression, angina
Carbon Dioxide	TLV: 5,000 ppm OSHA PEL: 5,000 ppm NIOSH REL: 5,000 ppm IDLH: 40,000 ppm	Headaches, dizziness, restlessness, sweating, increased heart rate, elevated blood pressure, pulse pressure, coma, asphyxia, convulsions, frostbite (dry ice).
Hydrogen Sulfide	TLV: 10 ppm OSHA PEL Ceiling: 20 ppm NIOSH REL: 10 ppm IDLH: 100 ppm	Apnea, coma, convulsions, irritated eyes, conjunctivitis pain, photophobia, respiratory system irritation, dizziness, headaches, fatigue, insomnia, GI disturbances.
Chlorine Compound	TLV: 0.5 ppm OSHA PEL Ceiling: 1 ppm NIOSH REL: 0.5 ppm IDLH: 10 ppm	Eye, nose, mouth, skin burns; lacrimation; rhinorrhea; coughing, choking; nausea, vomiting; headache; dizziness, syncope; pulmonary edema; persistent airways obstruction, bronchial hyper-responsiveness; hypoxemia; dermatitis; CNS impairment; decreased grip strength.

Notes:

fibers/cc	fibers per cubic centimeter
mg/m^3	milligram per cubic meter
ppm	parts per million
Ceiling	An airborne concentration that cannot be exceeded at any time
OSHA PEL	OSHA, Permissible Exposure Limit - Time Weighted Average (8-hour shift, 40 hours per week)

TLV	ACGIH, Threshold Limit Value - Time Weighted Average
NIOSH REL	NIOSH, Recommended Exposure Limit
IDLH	Immediately Dangerous to Life or Health Concentration

6.2 Physical Hazards

Hot Work ___	Lift Equipment _X_	Heavy Machinery _X_
Hand Tools X	Utilities X	Working at Elevations X
Overhead hazard X	Unguarded floor opening X	
Weights/Lifting X	Pressured Air __	Rough Terrain
Compressed Gases ___	Ladders X	Scaffolds X
Excavation ___	Water Hazards/Drowning	
Confined Space X	Electrical Hazard X	Lockout/Tag Out X
Other:		

The following table provides a summary of physical hazards that could potentially be encountered by personnel during the implementation of the field tasks.

Physical Hazard	Exposure Control Procedures
Hand Tools	• Inspect hand tools for defects that will impair their strength or render them unsafe. Unsafe hand tools will not be used. • Maintain tools in good repair. • Use tools only for their designed purpose.
Rough Terrain	• May include uneven surfaces; changes in grade; and excessive ground cover or vegetation. This also increases risk for vehicle and foot passage. • Clear vegetation in heavy traffic (vehicle, foot) areas, where possible. • Mark excessively rough areas and minimize travel to and through such areas. Plan equipment placement and activities accordingly. • Wear ankle high (or higher) steel-toe/shank work boots. • Discuss slip/trip/fall hazards associated with daily tasks at pre-work job planning and safety meetings

Physical Hazard	Exposure Control Procedures
Confined Spaces	• Evaluate space to determine if meets criteria for identification as Permit-Required Confined Space: 1. Large enough and so configured that an employee can enter and perform assigned work, AND 2. Limited access/egress, AND 3. Not originally designed for continuous human occupancy. • If space meets all three of the above criteria, then the space is considered a confined space. Determine if Confined Space exhibits any of the following four characteristics: 1. Contains or has the potential to contain a hazardous atmosphere (toxic, oxygen deficient, flammable) 2. Contains a material that has the potential to engulf an entrant (cave-in, water, stored product) 3. Has an internal configuration that the entrant could be trapped or asphyxiated by inwardly converging walls or a downward sloping floor (physical design and inner mechanisms) 4. Contain any other recognized serious health and safety hazard (electrical, mechanical) • If the space exhibits any of the above four characteristics, then the space is a Permit-Required Confined Space. A permit system must be in place and the Confined Space Entry Plan in Section 7.0 must be followed. Special training is required. • Observe requirements in OMH EHS Policies and Procedures: Confined Space Entry Program.
Unguarded Floor Opening	• Floor openings must be protected with standard railings, defined as a top railing mounted about 42 inches from the floor and an intermediate railing located midway between the top railing and floor. • A toe board must be provided to prevent tools and debris from accidentally being kicked into the opening. • Open sided floors and wall openings must be similarly guarded. • Do not enter floor openings that are not protected with standard railings.
Overhead Utilities	• Identify all overhead utilities around the work area before work commences. • Appropriately-rated hard hats will be worn by personnel working with or near the heavy equipment for protection against overhead hazards.

Physical Hazard	Exposure Control Procedures
Lift Equipment Operation – Manlifts	• Lift must be operated by competent individuals familiar with safety and operating instructions. • Daily inspections must be conducted and recorded by the competent individuals utilizing the equipment. Observations should include: structural welds, lifting cables/chains, control lines, lift controls, and electrical connections. • Lift must be equipped with a device to prevent free-fall if power or primary suspension system fails. • Lift must be equipped with secondary controls capable of overriding platform controls, and emergency decent systems must be provided in case of failure of primary systems. • Capacity, height limits, restrictions/warnings/cautions must be displayed or outlined in a manual kept with or near the lift. • Operator must have unobstructed view of path (vertical and horizontal path) prior to and during movement. • Driver must always maintain a safe speed. • Observe requirements in OMH EHS Policies and Procedures: Walking/Working Surfaces – Scaffolding and Aerial Lifts. • Observe requirements in OMH General Guidance: Fall Protection.
Heavy Machinery	• Heavy machinery must be operated by competent individuals familiar with safety and operating instructions. • Daily inspections must be conducted and recorded by the competent individuals utilizing the equipment. • Ensure all moving parts are safeguarded. • Train workers on equipment risks. • Use protective gear and follow safety guidelines. • Operator must have unobstructed view of path prior to and during movement. • Machine operators must always maintain a safe speed. • Observe requirements in OMH EHS Policies and Procedures.

Physical Hazard	Exposure Control Procedures
Electrical Hazards	• Coordinate with OMH personnel for de-energizing equipment. • Work in electrically hazardous locations requires intrinsically safe equipment. Non-conductive protective footwear and gloves should be used. • Any work performed on live electrical system must be performed by licensed electrician. Any electrical installations, repairs, inspections, as well as startup and shut down must be performed by licensed electricians. No work will be done without onsite approval from OMH representative. • Consider all electrical systems as energized until verified, de-energized and grounded. • Do not work on or in close proximity to electrical circuits unless the circuit is de-energized, grounded, or guarded. • Keep work areas dry so water cannot become an electrical conductor. • Only fiberglass or wood ladders are used when working near electrical hazards. • Electrical insulating gloves with leather protectors, a face shield, safety glasses, a hard hat and flame retardant clothing are to be used by electricians working on energized circuits. • Insulation mats are placed on floors and on frames of equipment when working on energized equipment. • Observe requirements in OMH EHS Policies and Procedures: Control of Hazardous Energy, Lock Out/Tag Out.
Lock Out/Tag Out	• Coordinate with OMH personnel for de-energizing equipment. • Turn off all point of operation controls. • After the supply of power has been disconnected by a qualified person, the person working on the equipment must put their personal lock on the disconnect switch and any other hazard. • Test the equipment to ensure that the equipment is de-energized. • The personal locks will have signed OSHA-acceptable tag identification on them. • The employee working on the equipment will remove the lock upon completion of the work. • Before de-energizing, a check must be made to ensure that all employees are clear. • A personal lock must not be removed by any other person except for the person who attached it. • Observe requirements in OMH EHS Policies and Procedures: Control of Hazardous Energy, Lock Out/Tag Out.

Physical Hazard	Exposure Control Procedures
Working at Elevations	• Fall protection provisions will be instituted when working on platforms (greater than 4 feet), scaffolding, or in situations where a fall of greater than 6 feet may occur. • Provide handrails and toe boards on all open sides of work platforms and scaffolding 4 feet above grade. Place handrails at 42 inches with midrail, toe boards should be 4 inches high, supports must be at intervals greater than or equal to 8 feet. Hand rail should extend around the entire platform/scaffold. Mesh should be placed between and affixed to the midrail and toe board to prevent falling objects from striking individuals working below. • Use personal protective equipment (PPE) when handrails cannot be used. PPE must meet the following requirements: 1. Lifeline system anchorage point (tie off or securing point) will be able to support a shock load of 5,000 pounds. 2. Lifelines will be of ¾ inch manila or equivalent and will have a minimum shock load of 5,000 pounds. One life line will be provided for each worker. 3. Safety lanyard will possess a shock absorber and meet the requirements of ANSI Z359.1. Lanyards will be able to withstand a shock load of 5,000 pounds. 4. D-rings, double locking snap hooks and carabineers and metal links will be able to bear a shock load of 5,000 pounds. 5. All hardware shall be drop forged or pressed steel. 6. System will include a full body harness for connection and tie-off with 6 feet safety lanyard. 7. All system components will be inspected prior to and after use. Lifeline system components which show signs of stress or damage, or which have been used to break a free fall will be removed from service and destroyed. • Observe requirements in OMH EHS Policies and Procedures: Walking/Working Surfaces – Scaffolding and Aerial Lifts. • Observe requirements in OMH General Guidance: Fall Protection.

Physical Hazard	Exposure Control Procedures
Scaffolds	• Implement OSHA's Scaffold Safety Standard during scaffold erection, use, and dismantling. • Ensure scaffold design by a qualified person. • Conduct daily inspection of scaffolds by a competent person before work commences. • Implement Fall Protection: – Utilizing personal fall arrest systems. – Installing guardrails, mid-rails, and top rails on open sides of scaffolds. – Using personal protective equipment (PPE) like hardhats and anti-slip boots. – Avoiding work on snow-covered or iced scaffolds during winter weather conditions. • Implement protection Against Falling Objects – Employing PPE such as hardhats. – Installing toe-boards or screens to prevent materials from sliding off platforms. – Maintaining guardrail systems with small openings to prevent object slipping. – Employing debris nets, catch platforms, or canopies to stop falling objects. – Keeping hand tools and objects away from scaffold edges. • Comprehensive worker training is crucial for scaffold safety. Workers should be well-versed in scaffold types, requirements, safe access, fall protection, and hazard mitigation. OSHA's Scaffolding Safety course follows the relevant regulations and provides necessary training to ensure worker safety. • Observe requirements in OMH EHS Policies and Procedures.

Physical Hazard	Exposure Control Procedures
Using Ladders	PORTABLE LADDERS • Portable ladders must be inspected prior to use. Inspection should include observations for: 1. Tight, secure rungs and steps that are free from defects. 2. Secure hardware, fittings, and rivets. 3. Lubricated metal bearings of locks, wheels, and pulleys. 4. Adequate rope (if necessary) in good condition. • Defective ladders should be tagged and taken out of service. • Portable ladders should be placed such that: 1. Bottom located on flat firm surface. 2. Secured through one of two means: a) individual holding bottom, b) top tied off/bottom safety feet. 3. Vertical to Horizontal ratio is 4:1. 4. Ladders are to extend 36 inches above the landing. 5. Metal ladders are not used near electrical conductors. 6. Ladders are not to be placed in front of, or immediately adjacent to, an operating door (block pen, post guard or lock closed) 7. Workers are not to lean over the ladder rails. Portable ladders must meet ANSI A-14.1 and 14.2, and OSHA 29 CFR 1910.25 and 1910.26 requirements: a. 12 inches between rails and rung b. Metal ladders-corrosion treatment c. Metal ladders-slip resistant treatment on rungs d. Single section less than 30 feet, 2-section less than 48 feet, 3+ section less than 60 feet. e. Overlap requirements: 36 inches for up to 36 feet, 48 inches for 36-48 feet, and 60 inches for 48-60 feet. FIXED LADDERS • Fixed ladders must be inspected prior to use: 1. Secure, corrosion-free handrails and rungs 2. Adequate clearance on both non-climbing (7 inches behind) and climbing (30-36 inches) side of the ladder. 3. Adequate extension of hand rails above the landing surface (40 inches0 4. Cages or other fall protection if more than 20 feet in height • Fixed ladders which do not meet OSHA 29 CFR 1910.27 requirements upon inspection shall not be used. A substitute ladder of lift device will be used to access elevated surface. • Observe requirements in OMH EHS Policies and Procedures: Crane and Hoist Safety.

Physical Hazard	Exposure Control Procedures
Housekeeping	• Provide adequate storage space for site equipment and supplies. • Assign time and responsibilities for daily clean-up prior to departure from the site. • Ensure lunch areas are maintained free of empty bottle, containers and paper. Provide trash receptacles with enclosed tops/covers in the designated lunch area and throughout the site as necessary. • Do not accumulate flammable or combustible liquids on floors, walls, etc. Spill must be cleaned immediately. • Provide adequate lighting in and around all work areas, passageways, stairs and ladders. Keep all such areas clear of debris, supplies, and any other objects. • Mark and/or secure any object (extension cord) which must traverse a passageway. • Ensure that supplies are stored in neat stockpiles and that access aisles are created and kept clear of stored objects. • Remove combustible materials routinely, do not allow accumulation in areas where flammable and combustible liquids are stored, handled or processed. • Paint chips and other work debris will not be disposed in common trash.
Vehicular Travel	• All drivers must be appropriately licensed when operating a vehicle. • All traffic rules and regulations, and all traffic control signs and devices should be followed. • Drivers of rental or unfamiliar vehicles should become familiar with all controls before operating the vehicle. • Drivers should operate vehicles defensively, exercise special care when operating on unfamiliar roads or during inclement weather, and should yield to pedestrians. • Trucks are to be backed under the direction of a signal person when operator cannot view rear area clearly. • Seat belts should be provided and used by each individual in the vehicle. • Personnel must not ride on outside or back of vehicles. • Materials should be loaded within limits of vehicle weight capacity, should be secured, and should not protrude from rear of truck. • Maintain road flares, fire extinguishers, first aid kits, and other safety equipment where necessary.

6.3 Biological Hazards

The following biological hazards are anticipated for this project:

Poison Plant: X Insect Bites: X Animal Bites: X
Blood Borne Pathogen: X Wasps and Stingers: X Guano: X
Mold and Bacteria: X

The following table provides a summary of biological hazards that could potentially be encountered by personnel during the implementation of the field tasks.

Biological Hazard	Exposure Control Procedures
Poison Plant	• Giant Hogweed: Avoid direct contact, wear long sleeve/pants. • Poison Ivy: Avoid direct contact, wear long sleeve/pants. If contacted, wash affected area immediately with cold water.
Insect Bites	• Insects: Be aware of insect born disease outbreaks in the facility. Use insect repellant and wear long sleeves/pants. • Ticks: same as those for insects, tuck pant leg into socks and boots, conduct tick checks during breaks and at end of shift, wear light colored clothing, remove and save tick immediately. • Fire ants: same as those for insects, tuck pant leg into socks and boots. Avoid fire ants. Severe reactions to fire ant bites (chest pain, nausea, sweating, loss of breath, serious swelling and/or slurred speech) require immediate medical treatment.
Bloodborne Pathogen	• Avoid direct contact with blood or potentially affected materials. • Contact HSO for the use of appropriate PPE. • Dispose potentially infectious waste in accordance with applicable medical waste regulation. • Observe requirements in OMH EHS Policy and Procedures: Bloodborne Pathogens.
Mold and Bacteria	• Avoid direct contact with visible mold or bacteria or generating dust wherever possible. • Wet all contaminated materials before disturbing them. • Handle or remove contaminated materials in a way that minimizes dust or debris. • No eating, drinking, or smoking should take place in contaminated areas. • Wash up thoroughly after work with soap and water. • Contact HSO for the use of appropriate PPE.
Bees, Wasps and Hornets	• Avoid insect nest areas and habitats inside and outside work areas. • Report bites/stings and obtain medical treatment.
Guano	• Avoid areas and habitats inside and outside work areas that are contaminated with bat or bird droppings. • Employ work practices and dust control measures that eliminate or reduce dust generation during the removal and disposal of the bat or bird manure. • Contact HSO for the use of appropriate PPE.

Biological Hazard	Exposure Control Procedures
Animal Bites	• Rodents and Wild or Stray Animals o Avoid contact with wild or stray animals. o Avoid contact with rats or rat-contaminated buildings. If you can't avoid contact, wear protective gloves and wash your hands regularly. o If bitten/scratched, get medical attention immediately. • Snakes o Watch where you place your hands and feet when removing debris. If possible, don't place your fingers under debris you are moving. Wear heavy gloves. o If you see a snake, step back and allow it to proceed. o Wear boots at least 10 inches high. o Watch for snakes sunning on fallen trees, limbs or other debris. o A snake's striking distance is about 1/2 the total length of the snake. o If bitten, note the color and shape of the snake's head to help with treatment. o Keep bite victims still and calm to slow the spread of venom in case the snake is poisonous. Seek medical attention as soon as possible. o Do not cut the wound or attempt to suck out the venom. Apply first aid: lay the person down so that the bite is below the level of the heart, and cover the bite with a clean, dry dressing.

6.4 Environmental Hazards

The following environmental hazards are anticipated for this project:

Noise: X Cold: X Heat: X
Near Water: Rain: X Snow: X
Other: ___

The following tables provide a summary of environmental hazards that could potentially be encountered by personnel during the implementation of the field tasks.

Environmental Hazard	Exposure Control Procedures
Noise	• Hearing protection will be worn when working around heavy equipment and appropriate powered hand tools. • Hearing protection must be able to attenuate noise below 85 dBA (8 hour TWA). • Non-mandatory personnel will maintain clearance from excessive noise generating equipment. • Personnel will use the following rule of thumb to determine the need for hearing protection under other circumstances i.e. worn when normal conversation is not audible at a distance of 2 feet. • Observe requirements in OMH EHS Policies and Procedures: Hearing Conservation.
Cold	• Prevention protocol will be instituted at air temperature below 40ºF. • Clothing should include: loose layers, masks, woolen scarves, and hats in extreme cold weather. Clothing should be kept dry by wearing water and wind resistant layers and footwear. • Rest breaks should be taken in a warm, sheltered area (van, trailer, etc.). The outer layer of clothing should be removed, and remaining clothing should be loosened. • Where appropriate, wind breaks will be designed and constructed at individual work locations. • Non-caffeinated warm liquids (water, juice, decaffeinated teas) will be maintained on-site throughout the work shift. Dehydration may increase the susceptibility of employees to cold injury due to the change in blood flow to the extremities. • Signs of frost bite and hypothermia will be reviewed (attached). Employees will monitor each other for observance of these signs.
Snow	• To prevent slips, trips, and falls on snow and ice, employers should clear snow and ice from walking surfaces, and spread deicer, as quickly as possible after a winter storm. When walking on snow or ice is unavoidable workers should be trained to: • Clothing should include: loose layers, masks, woolen scarves, and hats in extreme cold weather. Clothing should be kept dry by wearing water and wind resistant layers and footwear. • Wear footwear that has good traction and insulation (e.g. insulated and water resistant boots or rubber over-shoes with good rubber treads) • Take short steps and walk at a slower pace to react quickly to changes in traction • Ensure equipment are used safely (e.g. clearing snow and ice from surfaces) • Use extreme caution when working near power lines • Prevent harmful exposure to cold temperatures and physical exertion

Environmental Hazard	Exposure Control Procedures
Heat	• Prevention protocol and biological monitoring will be instituted at temperatures exceeding 70ºF. • Physiological monitoring will be conducted. • Work/Rest cycles will be instituted based on physiological monitoring results. • Personnel should consume 16 ounces of water prior to beginning work and at intervals (breaks and lunches) throughout the day. • Non-caffeinated liquids (water, electrolyte drinks, juice kept at 50º-60ºF) will be maintained on site throughout the work shift. • Signs of heat exhaustion and stroke will be reviewed (attached). Employees will monitor each other for observance of these signs.
Rain	• May increase risk of hypothermia, see hazard preventions listed in the "Cold" Section of this table. • Rain repellant outer gear should be worn by employees. An additional change of clothing should be maintained for removal and replacement of wet clothing. • Rest breaks shall be taken in a warm, sheltered area (van, trailer, nearby commercial space). • Work areas where water may accumulate and create additional slip/trip/fall hazards should be provided with drainage or barriers. • Employees should maintain and increase awareness of their physical surrounding, particularly when working outside around heavy equipment.

TEMPERATURE EXTREMES: SIGNS OF EXCESSIVE EXPOSURE

Temperature Extremes	Sign/Symptom of Excessive Exposure
Heat Exhaustion	State of weakness or exhaustion caused by the loss of fluids form the body: Pale, clammy, moist skin; profuse perspiration and extreme weakness; body temperature may be normal; weak/rapid pulse; shallow breath. **Treatment:** Remove individual to cool, air-conditioned, or temperature controlled area; loosen clothing; place in head-low position; provide rest. Have patient drink 1-2 cups of water immediately, and every 20 minutes until symptoms subside.

Heat Stroke	Acute, dangerous reaction to heat stress caused by failure of body's heat regulating mechanisms resulting in a rapid rise in body temperature, brain damage, and death: red, hot, dry skin; confusion; extremely high body temperature; rapid respiratory and pulse rate; unconsciousness or coma. **Treatment:** Remove from heat source and cool victim rapidly by placing cool wet towels on the extremities and forehead. Contact emergency medical services and transport to the hospital immediately.
Heat Cramps	Acute painful spasms of voluntary muscles caused by inadequate electrolyte intake: muscle spasms, most notably the abdomen and extremities. **Treatment:** Remove victim to cool area and loosen clothing. Provide salted liquids.
Cold-Frostbite	Local freezing of tissue resulting when heat loss from an extremity is faster than heat replacement by the circulating blood. Frost bite occurs in stages; incipient (sudden blanching or whitening of skin); superficial (waxy or white skin which is firm to the touch, underlying tissue is resilient); and deep (cold, pale or darkened skin which is solid). **Treatment:** Move individual to warm environment, warm affected area by placing next to warm skin (avoid fires, hot water, external heaters) provide warm non-caffeinated drinks. After re-warming affected area evaluate, bandage (if necessary) and do not allow blisters to be broken. Do not rub frostbitten area, obtain medical care as necessary.
Cold-Hypothermia	Occurs when a heat loss in excess of heat gain results in a core body temperature drop. Most cases develop in air temperatures between 30º-50ºF when compounded with water immersion or soaking and windy conditions. Symptoms include: uncontrolled fits of shivering; vague, slow, slurred speech; irrational actions; memory lapses; incoherence; fumbling hands, frequent stumbling, lurching gait; apathy, listlessness, and sleepiness; glassy stare; slow pulse and respiration. **Treatment:** Move individual to warm environment, remove any wet clothing, provide additional heat sources (warm blanket, bath, body contact); provide warm non-caffeinated fluids, candy and sweetened food, obtain medical assistance.

7.0 CONFINED SPACE ENTRY PLAN

7.1 General

OSHA published its Final Rule on Permit Required Confined Spaces (PRCSs) for General Industry at 29 CFR 1910.146 et seq., on January 14, 1993, with an effective compliance date of April 15, 1993. The Final Rule defines confined space as a space that:

- Is large enough and so configured that an employee can bodily enter it and perform assigned work;
- Has limited or restricted areas for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits may have limited entry); and
- Is not designed for continuous employee occupancy.

OSHA further requires that an "Entry Supervisor is to decide whether the space is permit required or non-permit required space at the time of entry."

A PRCS is defined as a confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential to engulf the entrant;
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly covering walls or by a floor which slopes downward tapers to a smaller cross section; or
- Contains any other recognized serious or health hazard. OSHA defined a hazardous atmosphere as:
    - Flammable gas, vapor, or mist in excess of 10 percent of its LEL;
        - **NOTE:** This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 meter) or less.
    - Airborne combustible dust at a concentration that meets or exceeds its LEL;
    - Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
    - Atmospheric concentration of any substance for which a dose or permissible exposure limit is published in 29 CFR 1910 Subpart G, Occupational Health Environmental Control, or in Subpart Z, Toxic and Hazardous Substances (Appendix B), of 29 CFR 1910 and which could result in employee exposure in excess of its dose or permissible exposure limit; or
    - Any other atmospheric condition that is immediately dangerous to life or health (IDLH).

Select field personnel may be required to enter PRCSs, such as manholes and steam tunnels, as part of their duties in carrying out this project. All personnel involve with confined space entry will follow the requirements in the OMH EHS Policies and Procedures: Confined Space Entry Program. TRC may utilize rescue equipment (i.e. tripod) provided by OMH due to logistical concern regarding multiple equipment in one confined location. TRC will provide a competent person to inspect OMH equipment prior to TRC use. The HSO will be consulted to determine the necessity for entering a confined space. Rescue procedures and operations associated within a confined space entry will be performed by TRC personnel utilizing appropriate confined space retrieval mechanisms. If the PRCS does not require/allow a retrieval line, TRC's policy is to notify the Fire Department of the intent to enter a confined space and contact them in

the event of an emergency. In addition, a telephone call will be placed to 911 for assistance, if deemed necessary by the HSO.

As stated previously, the approach to the RWP includes preparation of this HASP, followed by performing an initial reconnaissance. Based on the results of the initial reconnaissance and Phase 1, TRC shall develop site specific HASP addenda that address the specific confined space hazards identified initial reconnaissance that are anticipated to be encountered during the subsequent Hazardous Materials Assessment.

All management and field personnel conducting sampling activities have experience in the implementation of field sampling programs.

7.2 Description Of Permit-Required Confined Space

Physical entry into any existing space over 5 feet deep is considered PRCS entry work.

7.3 Confined Space Protocol

Field personnel may enter a PRCS during their normal work activities. This section outlines site-specific protocol, which will be followed in relation to PCRS entry.

7.3.1 General Protocol

Only specific, qualified field personnel will be allowed to enter a PRCS. These persons will be trained in accordance with 29 CFR 1910.146 (g) prior to any PRCS entry and will receive site-specific briefing on the project PRCS.

The only hazard expected to be associated with the PRCS described in this HASP is a potentially hazardous atmosphere (e.g., oxygen deficiency), which will be checked using a multigas personal protection meter prior to entry. Atmospheric monitoring and training of entry personnel are required in all cases.

The following general protocol will be followed during all PRCS entries. A PRCS will only be opened during the scheduled work period. At all other times, a PRCS will be secured from unauthorized entry.

Prior to any PRCS entry, the space will be monitored using appropriate instrumentation to measure hazardous atmospheres. Trained field personnel will be responsible for utilizing and maintaining air monitoring equipment. Once the PRCS has been monitored and it is determined that the atmosphere is not hazardous, a written certification will be made by the individual who monitored the space on the Confined Space Entry Permit (Appendix C). During entry, the space will be periodically monitored every 15 minutes for all the parameters indicated on the entry permit by an attendant outside of the PRCS and the monitoring results will be recorded on the pre-entry/entry checklist.

If a hazardous atmosphere forms at any point, the space will be evacuated immediately and TRC will notify the OMH. A Notification of Immediate Health Risk, as shown in Appendix D, will be generated by the Field Team Task Leader and submitted to the TRC Project Manager within 24 hours for further evaluation. If TRC Project Director agrees with the assessment, the form will be completed and submitted to the OMH Manager within 24 hours. TRC will not enter the confined space until the hazardous atmosphere is abated.

7.3.2 Air Monitoring Instrumentation Operation and Maintenance

TRC will be responsible for the operation and maintenance of the multigas personal protection meter used for all PRCS work. All instrumentation utilized for evaluating environmental conditions related to PRCS work shall be intrinsically safe. The instrument will be calibrated twice a day, prior to morning start up and prior to start up after lunchtime break. Calibration efforts will be recorded in a bound instrument calibration log book, which will remain with the instrument case. The instrument will be battery operated/or rechargeable. If the instrument is rechargeable, a back-up instrument will be available. If the instrument is non-operational, the work will be shut down. The field team task leader will have on-site necessary back-up supplies to ensure an operational multigas personal protection meter. The HSO, or an appropriately trained designee, will confirm the hazardous levels of activity.

7.3.3 Air Monitoring Protocol

A specific regimen of hazardous atmospheres must be monitored prior to entering the PRCS. The hazards associated with entering PRCS are the result of potential lack of oxygen, the presence of combustible gases, the presence of carbon monoxide, and/or the presence of hydrogen sulfide. These spaces will be monitored using a multigas personal protection meter prior to and during all entries. The meter will be operated, available, and maintained by the trained field personnel. Initial measurements of the confined space's atmosphere prior to entry will be recorded and then every 15 minutes until he/she determines the atmosphere is stable and the monitoring frequency can be reduced. All readings and reports that are conducted will be reviewed by HSO, or an appropriately trained designee, prior to, and during, any confined space entry. The following action levels will apply.

1. **Percent oxygen greater than 19.5 and less than 23.5** - Entry may occur.

   Percent oxygen less than 19.5 or greater than 23.5 - Space must be evacuated.

2. **Percent combustible gas less than 5 percent LEL** - Entry may occur.

   Percent combustible gas between 5 and 10 percent LEL - Proceed with caution, determine the source of combustible gas, and mitigate.

   Percent combustible gas greater than 10 percent LEL - Space must be evacuated.

3. **Reading of 0 ppm to 5 ppm hydrogen sulfide** – Entry may occur.

   Reading of 5 to 10 ppm hydrogen sulfide - Proceed with caution, determine the source of the hydrogen sulfide, and mitigate.

   Reading over 10 ppm hydrogen sulfide - Space must be evacuated.

4. **Reading of 0 ppm to 20 ppm carbon monoxide** - Entry may occur.

   Reading of 20 to 35 ppm carbon monoxide - Proceed with caution, determine the source of carbon monoxide gas, and mitigate.

   Reading of over 35 ppm carbon monoxide - Space must be evacuated.

8.0 RESPIRATORY PROTECTION

In any work areas where respirators are necessary to help protect the health of the TRC monitoring personnel, TRC will implement a written respiratory protection program with site-specific procedures, following the provisions of OSHA 29 CFR 1910.134. In addition, TRC will also observe OMH EHS Policies and Procedures for Respiratory Protection.

The overall implementation of this program is the responsibility of the TRC HSO. TRC will provide its field personnel with all necessary respiratory protective equipment whenever such equipment is required for the protection of the personnel. TRC will provide, repair, or replace respiratory protective equipment, as necessary, due to wear and deterioration.

8.1 Air Purifying Respirator

All air purifying respirators (APRs) and their parts utilized by TRC personnel will be approved by the National Institute of Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA). Proper selection of respirators will be made in accordance with the guidance of the ANSI/ASSE Z88.2-2015.

8.2 Fit Testing Procedures

Before using any APR, TRC personnel must first successfully pass a qualitative fit test to ensure the selection of the proper make, model, and size respirator. From then on, the personnel will undergo the fit test procedure at least annually to ensure a continued proper fit. The entire qualitative fit test procedure consists of the initial size selection, negative pressure test, positive pressure test, and irritant smoke test. Upon successful completion of the fit test procedure, the test instructor will fill out a "Respirator Fit Test Record", which will be maintained in the TRC personnel's health and safety file.

8.2.1 Initial Size Selection

Various sizes and types of APRs will be made available to the TRC personnel for initial size selection. A competent person will assist in choosing the proper size. TRC personnel will be properly instructed on how to don the respirator including how to put it on, set the strap tension, and determine a comfortable fit. Particular attention will be paid to the seal across the forehead and beneath the chin. If the fit seems faulty to the TRC personnel or the observer, another size, make, or model respirator will be tried. When a comfortable fit has been achieved, initial size selection will be considered complete.

8.2.2 Positive and Negative Pressure Tests

Following the initial size selection, a positive and negative pressure test will be conducted. TRC personnel will perform the positive and negative test each time they don their respirators.

Positive Pressure Test

With face piece on and the exhalation valve closed by covering it with his hand, the TRC personnel exhales gently into the face piece. The fit is considered satisfactory if a slight positive pressure can be maintained inside the face piece and there is no evidence of outward leakage.

Negative Pressure Test

This test can be performed on any respirator with an intake that can be covered with the palm of the hand. The TRC employee dons the face piece and covers the intakes with his/her hands. He/she inhales so that the face piece collapses slightly and holds his/her breath for 10 seconds. The face seal is considered satisfactory if the face piece remains slightly collapsed and no inward leakage of air is noted.

Various sizes and types of APRs will be made available to the TRC personnel for initial size selection. A competent person will assist in choosing the proper size. TRC personnel will be properly instructed on how to don the respirator including how to put it on, set the strap tension, and determine a comfortable fit. Particular attention will be paid to the seal across the forehead and beneath the chin. If the fit seems faulty to the TRC personnel or the observer, another size, make, or model respirator will be tried. When a comfortable fit has been achieved, initial size selection will be considered complete.

8.2.3 Irritant Smoke Test

Upon completion of the positive and negative pressure tests, an irritant smoke test will be performed. For this protocol, the APR will be equipped with high efficiency particulate air (HEPA) filters. Irritant smoke is injected around the facepiece to test the seal and fit of the respirator while the personnel are asked to perform the following exercises:

- Practice normal breathing for 30 seconds by taking deep, regular breaths.
- Turn the head from side to side, making sure the chin line is parallel with the shoulders. Take a deep breath each time the head is turned to either side. Be sure not to bump the respirator.
- Move the head up and down but be sure not to bump the chest. Take a deep breath while the head is in the full upright position.
- Read aloud the entire "Rainbow Passage" test as defined in 29 CFR 1910.1001 Appendix C.

The respirator fit will be considered unacceptable if the personnel coughs or sneezes at any time during the test. If a satisfactory fit cannot be obtained, another APR will be selected and the entire fit testing protocol repeated.

8.3 Cleaning

Respirators will be cleaned and disinfected as frequently as necessary to ensure proper protection is maintained. For the RWP, TRC personnel will clean and disinfect their respirators using warm solution of cleaner and water. The respirators will be air dry prior to storage.

8.4 Storage

After cleaning and drying the APR, it should be placed in a clean resealable plastic bag and stored in a designated cabinet away from heat, sunlight, cold, dust, and damaging chemicals. The respirators should be stored in a manner to prevent distortion of the face piece and should have the straps fully extended.

8.5 Inspection and Maintenance

Prior to using an APR, the personnel will inspect the unit for signs of wear and contamination. The following items will be inspected:

- Face piece will be checked for excessive dirt, cracks, tears, holes; distortion; and cracked, scratched, or loose-fitting lenses.
- Head straps will be checked for breaks, tears; loss of elasticity; and broken or malfunctioning buckles or attachments.
- Inhalation valve and exhalation valve will be checked for detergent residue, dust particles, or dirt on valve or valve seat; cracks, tears, or distortion in the valve material or valve seat; and missing or defective valve cover.
- Filter elements will be checked for proper filter for the hazard, approval designation, missing or worn gaskets.

8.6 Cartridge Selection and Replacement

For the RWP, TRC personnel will use only cartridges that are approved by NIOSH/MSHA and will effectively filter asbestos fibers with the respirators. Cartridges will be replaced with new ones on a daily basis.

9.0 LEVEL OF PROTECTION

Levels of protection to be utilized by on-site personnel will be continually evaluated by the HSO. The levels of protection may be downgraded or upgraded, as necessary, with approval by the HSO. Any change in the level of protection must be documented on the HASP Amendment Form.

For the initial mobilization and monitoring activities outside of containment, the level of protection to be used is anticipated to be Levels D. For the purposes of this plan, **PPE is required in all work areas**. TRC field personnel will utilize Level C for all monitoring activities inside containment.

The following table details the levels of protection and PPE for Level C and D.

Level of Protection	**Required PPE**	**PPE as Needed**
Level C	▪ North 7700 Series half-face APR, or equivalent ▪ North P100 filter cartridges, or equivalent ▪ Safety vest ▪ Steel-toe boots ▪ Hard hat ▪ Safety glasses/goggles (Vessels/Construction Sites)	▪ Hearing protection ▪ Safety glasses/goggles ▪ Nitrile gloves ▪ Neoprene, Butyl, or Viton gloves (> 8 hour Breakthrough for PCBs) ▪ Work gloves
Level D	▪ Safety vest ▪ Steel-toe boots ▪ Hard hat ▪ Safety glasses/goggles (Vessels/Construction Sites)	▪ Hearing protection ▪ Safety glasses/goggles ▪ Nitrile gloves ▪ Neoprene, Butyl, or Viton gloves (> 8 hour Breakthrough for PCBs) ▪ Work gloves

TRC shall provide basic PPE to each employee exposed to a hazard at no cost to the employee. A selection of PPE shall be maintained in the TRC Project Offices.

Employees shall periodically inspect personally assigned PPE for serviceability and defects. PPE shall be cared for and stored in a manner that will maintain it in good condition.

All PPE shall be of a safe design and construction for the work to be performed. When employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance and sanitation of such equipment.

PPE devices alone shall not be relied on to provide protection against hazards, but should be used in conjunction with guards, administrative and engineering controls, and sound manufacturing practices.

Defective or damaged PPE shall not be used at any time.

All personal protective equipment used during the course of this project must meet the following OSHA standards:

Type of Protection	**Regulation**	**Source**
Eye and Face	29 CFR 1910.133	ANSI/ISEA Z87.1-2015
Respiratory	29 CFR 1910.134	ANSI/ASSE Z88.2-2015
Head	29 CFR 1910.135	ANSI/ISEA Z89.1-2014
Foot	29 CFR 1910.136	ASTM F 2412 and F 2413
Hand	29 CFR 1910.138	
Hearing	29 CFR 1910.95	
Protective Clothing	29 CFR 1910.132	

ANSI = American National Standards Institute
ASSE = American Society of Safety Engineers
ASTM = ASTM International
ISEA = International Safety Equipment Association

10.0 AIR MONITORING

Air monitoring will be conducted during the implementation of the RWP, or in any confined space within the facility, in order to characterize personnel exposures to certain potential site contaminants. The target compounds selected for air monitoring purposes within confined spaces includes oxygen, carbon monoxide, hydrogen sulfide, and LEL. Results of air monitoring will be used to protect on-site personnel from exposure to unacceptable levels of potential site contaminants. Descriptions of air monitoring strategies, procedures and equipment are provided below. Modification of this HASP, including additional monitoring, may be considered as judged necessary by the HSO in conjunction with the Project Manager.

Work area air monitoring will include direct reading methods following the frequency as required in the approved RWP. Monitoring equipment will be calibrated as per manufacturer's recommendation prior to starting work activities. A summary of air monitoring information to be conducted during the initial reconnaissance at the facility is provided in the table below. Procedures for air monitoring to be conducted during confined space entry are provided in Section 7.0 – Confined Space Entry Plan.

Monitoring Device	Monitoring Location	Monitoring Frequency	Action Level	Action
Multi-gas personal protection monitor	Stagnant areas, sumps, lower building areas, tunnels	2 readings Staffed structure: 1 from an occupied area and 1 from unoccupied area Unstaffed structure: 2 from two different unoccupied areas.	CO readings less than 35 ppm	Level D for field inspection
			CO readings more than 35 ppm	Stop work and notify HSO.
			H_2S readings less than 5 PPM	Level D for field inspection
			H_2S readings more than 10 PPM	Stop work and notify HSO
			LEL readings less than 5 %	Level D for field inspection
			LEL readings more than 10 %	Stop work and notify HSO
			O_2 readings greater than 19.5% or less than 23.5%	Level D for field inspection
			O_2 readings less than 19.5% or greater than 23.5%	Stop work and notify HSO

Notes:
ppm parts per million
mg/m^3 milligram per cubic meter

10.1 Personal Exposure Monitoring

Personal exposure monitoring may be performed for TRC employees if the potential for exposure to a contaminant above a trigger level is possible. A trigger level is described as 50 percent of the Permissible Exposure Limit (PEL) or Threshold Limit Value (TLV), whichever is the most conservative. PELs and TLVs for contaminants of concern are presented in Table 5-1.

Exposure monitoring strategies for dust, fumes, noise, or organic vapors will be based on the current activities, type of work being performed, environmental conditions, and the hazards present. Personal exposure monitoring will be conducted in accordance with all applicable regulations and standards.

Personal exposure monitoring for asbestos is anticipated to be performed during this project.

11.0 PERSONNEL AND EQUIPMENT DECONTAMINATION

11.1 Personnel Decontamination

Decontamination procedures minimize the potential spread of contaminants that workers may have contacted in the work areas to themselves and clean areas of the Site. This sequence describes the general decontamination procedures for Level C and D. The HSO will ensure that the decontamination procedures are adequate.

Level D Decontamination

1. Remove inner gloves and discard
2. Wash face and hands

Level C Decontamination

1. Remove gloves and deposit in waste container.
2. Remove boot covers and deposit in waste container.
3. Remove disposable coveralls and deposit in waste container.
4. Remove respirator.
5. Shower.
6. Put on clean street clothes.
7. Clean respirator in accordance with Section 8.0 – Respiratory Protection.

11.1.1 Suspected Contamination

Any employee suspected of sustaining skin contact with chemical materials will first use the emergency shower. Following a thorough drenching, the worker will proceed to the contamination reduction zone outside the work area. The worker will remove clothing and don clean clothing. Medical attention will be provided as determined by the HSO based on degree of injury.

11.1.2 Personal Hygiene

Personnel will wash hands, arms, neck and face, following decontamination and before any eating, smoking, or drinking.

11.2 Heavy Equipment and Vehicle Decontamination

No heavy equipment or vehicles are expected to be in contact with on-site contaminants. Therefore, procedures for heavy equipment decontamination are not required.

11.3 Waste Disposal

All waste generated from personnel and equipment decontamination will be treated as contaminated waste unless determined otherwise by accepted testing methods. Wastes will be disposed of in accordance with the federal, state and local regulations and OMH policy, as appropriate.

12.0 WORK PRACTICES AND ENGINEERING CONTROLS

The following work practices will be performed during the implementation of the RWP within the facility:

1. Before beginning work, the following items will be inspected for compliance with the OSHA Standards:
    - Fire extinguishers located in each mobile office trailer and in each field vehicle will be inspected and tagged within the past year.
    - Fire extinguishers will be appropriate for the type of fire.
2. The following PPE will be inspected, if used, prior to use:
    - Gloves will be inspected prior to use.
    - Gloves will be chosen with assistance from the HSO according to the chemical hazards present.
    - Neoprene, Butyl, or Viton gloves (> 8 hour Breakthrough for PCBs) shall be always used when handling PCB samples.
3. Respiratory Equipment:
    - Respiratory equipment will be inspected in accordance with Section 8.0, Respiratory Protection of this HASP.
    - Selection of respiratory protection will be reviewed with the TRC HSO prior to commencing monitoring activities.
4. Required Miscellaneous PPE:
    - Hearing Protection: Hearing protection will be worn by all personnel working in areas with where allowable noise limits, 90 dBA, are exceeded.
    - Safety Boots: Steel-toe safety boots will be worn by all personnel during the project.
    - Eye Protection: Eye protection will be worn by personnel who may be exposed to flying debris, chemical vapors or particulates. Safety glasses will be worn for protection against flying objects. All safety glasses, goggles, and face shields shall comply with ANSI Z87.1-2015.
    - Hard Hats: Appropriately rated hard hats will be worn by personnel working with or near heavy equipment for protection against overhead hazards, including electrical hazards and overhead objects. All hardhats must meet ANSI Z89-1986.
5. To avoid falling objects:
    - Be aware of falling objects in the work area.
    - Secure overhead objects.
6. When using hand tools:
    - Hand tools will meet the manufacturer's safety standards.
    - Hand tools will not be altered in any way.
    - Makeshift tools will not be used.
    - At a minimum, eye protection must be worn when working with hand tools.
    - Wrenches, including adjustable, pipe, end, and socket wrenches, will not be used when jaws are sprung to the point that slippage occurs.
    - Impact tools, such as drift pins, wedges, and chisels, will be kept free of mushroom heads.
    - Wooden handles will be free of splinters or cracks and secured tightly to the tool.
7. Housekeeping:
    - The work area will be kept neat and orderly.

- Walking surfaces will be kept free of debris or loose objects.
- Aisles, doorways and walkways will be kept clear at all times.
- Clean, store, and maintain tools and machinery.
- Use portable light sources when working within buildings.
- Paint chips and other work debris will not be disposed in common trash.

8. Use of Power Tools:
    - All power tools will be inspected regularly and used in accordance with the manufacturer's instructions and its capabilities.
    - Electrical tools will not be used in areas where flammable solids, gases, vapors or liquids are present, unless they are approved for that purpose.
    - Portable electric tools will be used only with a GFCI.
    - Proper eye and hearing protection will be used when working with power tools.
    - Personnel will be trained in the proper use of the specific tool.
    - Any defective power tools will be immediately tagged and removed from service.
    - Tools will be stored properly after use.
    - Power tools cannot be used in certain NFPA class zones. In addition, only intrinsically safe equipment can be used in NFPA class zones.
9. Slips, Trips, and Falls:
    - Proper lighting will be maintained at all times.
    - Walkways will remain clear and unobstructed at all times.
    - When possible, cords, hose lines, etc., will be raised to reduce or eliminate trip hazards.
    - Use appropriate climbing equipment.
10. Ground Fault Circuit Interrupters (GFCI) and Electrical Cords:
    - GFCIs will be used on all 120 volt, single phase, 15 and 20 ampere receptacle outlets when electrical equipment is used on-site.
    - Electrical cords will be inspected for cracks, tears, or general wear to the outer protective casing. If the wiring of the cord is exposed, the cord will be repaired, if possible, or discarded.
    - All extension cords will contain a grounding prong. If the grounding prong is missing or if the cord was designed to contain only two prongs, the cord will not be allowed for use. These cords are dangerous and cannot be grounded through the use of a GFCI.
11. Personal Hygiene
    - Eating, drinking, smoking, chewing gum or tobacco, and other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited in any work area.
    - Hands and face will be thoroughly washed upon leaving the work area and before eating, drinking, urinating, or other activities.
    - Certain medicines can increase the effects of exposure to toxic chemicals. Therefore, site workers utilizing medicines will notify the HSO who will either clear them for work or refer them to a physician for clearing.
    - Beards or other facial hair that interferes with respirator fit will preclude admission to the work area. Contact lenses will not be worn in the work area or if the worker may be expected to enter the work area under routine or emergency situations.
    - Personnel who take over-the-counter drugs within a day before work on a site must consult their physician regarding the warnings listed on the drug's container

(the part of the label that says, for example, "Do not take this medication if you are operating a motor vehicle") to verify that they will be allowed to work without suffering any ill effects.

- Alcoholic beverages intake will be prohibited during project operations. Personnel under the influence of alcohol or recreational or illegal drugs will not be allowed on site.

13.0 KEY PERSONNEL AND EMERGENCY SERVICES

Contact information for key personnel and emergency numbers for this project are listed in the following tables.

Key Personnel

Title	Name	Work/Cell No.	Email Address
Program Director	Josh Cupriks	212.221.7822 646.484.0889 (c)	jcupriks@trccompanies.com
Project Manager	Anthony Sigona	212.221.7822 646.483.3348 (c)	asigona@trccompanies.com
HSO	Daren Bryant	949.727.9336/ 949.697.7418(c)	dbryant@trccompanies.com
Field Team Leader	Nancy Guevara	212.221.7822 347.573.3747(c)	nguevara@trccompanies.com

Local Emergency Service

Organization	Telephone Number
Ambulance	911
Fire Department	911
Police Department	911
National Response Center Desk	800.424.8802
Poison Control Center	800.222.1222
Chemtec	(800) 222-2177
NYSDEC (Spills Hotline):	518.457.7362

Nearest Hospitals to Bronx Psychiatric Center:

Nearest Hospital	Hospital Address	Hospital Phone Number
Montefiore Hospital (226 feet)	1510 Waters Pl, Bronx, NY 10461	718-829-3440
Cavalry Hospital (0.70 miles)	1740 Eastchester Rd, Bronx, NY 10461	718-518-2000
New York City Children's Center (0.4 miles)	1000 Waters Pl, Bronx, NY 10461	718-239-3639
Jack D. Weiler Hospital (0.6 miles)	1825 Eastchester Rd, Bronx, NY 10461	718-904-2000
Montefiore Weiler Hospital (Einstein Campus) (0.6)	1825 Eastchester Rd, Bronx, NY 10461	718-904-2000
NYC Health + Hospitals/Jacobi (1.2 miles)	1400 Pelham Pkwy S, Bronx, NY 10461	718-918-5000
NYC Health + Hospitals/North Central Bronx (4.8 miles)	3424 Kossuth Ave, Bronx, NY 10467	718-519-5000
St. Barnabas Hospital (3.9 miles)	4422 Third Ave, Bronx, NY 10457	718-960-9000
BronxCare Health System (4.6 miles)	1650 Grand Concourse, Bronx, NY 10457	718-590-1800
NYC Health + Hospitals/Lincoln (7.6 miles)	234 E 149th St, Bronx, NY 10451	718-579-5000

Maps and Directions from the Facility to the two closest Hospitals are presented in Appendix G.

14.0 CONTINGENCY PLAN

Site personnel must be prepared in the event of an emergency. Emergencies can include illness, injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

Emergency telephone numbers and a map to the hospital will be carried by the field team. Site personnel should be familiar with the emergency procedures, and the locations of site safety, first aid, and communication equipment.

14.1 Emergency Equipment

The following emergency equipment will be kept at the Site during the entire duration of the project:

- Private Telephones: with the field team.
- First Aid Kits: with the field team.
- Fire Extinguisher: On-site, in the mobile office trailer and job vehicle.
- Horns: Air horns will be supplied to personnel at the discretion of the HSO.

14.2 Personal Injury in the Work Area

In the event of an injury in the facility, the victim will be removed from the area and all remaining site personnel will exit the building. The HSO should evaluate the nature of the injury, and the affected person should be decontaminated to the extent practical prior to movement from the work area. At this point, the certified first aid practitioner on site will take control. Appropriate first aid should be initiated, and an immediate request should be made for an ambulance (if necessary), and the designated nearest hospital will be notified (if necessary). No persons should re-enter the work area until the cause of injury or symptoms is determined.

14.3 Personal Injury within the Facility

In the event an injury occurs on the job, the HSO must be notified immediately and the certified first aid practitioner on-site will take control. Appropriate first aid will be administered and, if necessary, the injured individual will be sent to the nearest hospital. First aid should be administered while awaiting an ambulance or paramedic. If injury does not affect the performance of site personnel, operations may continue. **Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them directions to the hospital and information on the chemical(s) to which they may have been exposed.**

14.4 Personnel Responsibilities During Emergency

The HSO is primarily responsible for responding to and correcting emergency situations. However, during any planned, unplanned, or emergency absences of the HSO, the Project Manager will act as the HSO, such that the following responsibilities are continuously provided for:

- Take appropriate measures to protect personnel including withdrawal from the work area, total evacuation and securing of the Site, or upgrading or downgrading the level of protective clothing;
- Ensure that appropriate federal, state, and local agencies are informed, and emergency response plans are coordinated; In the event of fire or explosion, the local Fire Department should be summoned immediately. If toxic materials are released into the air, the local authorities should be informed in order to assess the need for evacuation;

- Ensure appropriate decontamination, treatment, or testing for exposed or injured personnel;
- Determine the cause of the incident and make recommendations to prevent recurrence; and,
- Ensure that all required reports have been prepared.

14.5 PPE Failure

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor that person and his/her buddy shall immediately leave the work area. Re-entry will not be permitted until the equipment has been repaired or replaced.

14.6 Emergency Phone Numbers and Hospital Information

Emergency phone numbers, directions and contact information for the nearest medical facility are shown in Section 13.0. This information must be carried by the field teams at the Site.

14.7 Fire or Explosion

In the event of a fire or explosion, the local Fire Department will be summoned immediately. The HSO or designated alternate will call 911 and advise the fire commander of the location, nature and identification of the hazardous materials on-site. Only if it is safe to do so, site personnel may:

- Use firefighting equipment available on site; or,
- Remove or isolate flammable or other hazardous materials that may contribute to the fire.

14.8 Evacuation Routes

TRC will use evacuation routes provided by the OMH for the facility, which will be included in each HASP addendum and periodically reviewed during the daily safety meetings. As the work areas change, the evacuation route and map will be altered accordingly, and the new route will be reviewed during the daily safety meetings.

Under extreme emergency conditions, evacuations should be conducted immediately, without regard for equipment. The evacuation signal will be a continuous blast of a vehicle horn, if possible, and/or by verbal/radio communication. When evacuating the site, personnel will:

- Keep upwind of smoke, vapors, or spill location.
- Exit through the decontamination corridor if possible.
- If evacuation is not possible through the decontamination corridor, site personnel should remove contaminated clothing once they are in a safe location and leave it near the work area or in a safe place.
- HSO, or designated alternate, will conduct a head count to ensure that all personnel have been evacuated safely.
- If emergency site evacuation is necessary, all personnel are to escape the emergency situation and decontaminate to the maximum extent practical.

14.9 Spill Control

In the event of a leak or release, field personnel will:

- Inform the HSO and Project Manager immediately, who would then notify OMH and its on-site representatives;
- Determine the nature of the materials that have spilled, identify the potential hazards;

- Locate the source of the spillage and stop the flow if it can be done safely;
- Wait for assistance from on-site OMH representatives and/or remediation contractor.

14.10 Accident/Incident Reporting

If an accident, incident, near miss, an explosion or fire, or a release of toxic materials occurs during the course of the project, the HSO will immediately record the incident. Within 24 hours of any reported accident, the Accident/Incident Report included in Appendix E will be completed and submitted to the OMH. A copy of this report will be available in the job vehicle for immediate use, if required.

APPENDICES

APPENDIX A

HEALTH AND SAFETY PLAN AMENDMENT FORM

HEALTH AND SAFETY PLAN AMENDMENT FORM

Project Name: _____ Project No.: _____

Amendment No.: _____ Date: _____

Amendment Revises: Page: _____ Section: _____

Task(s) Amendment Affects:*

_____

_____

_____

_____

_____

*(Attach new/revised Job Safety Analyses)

Reason For Amendment:

_____

_____

_____

_____

_____

_____

Amendment: (Attach separate sheet(s) as necessary)

Completed by: _____

Approved by: _____

APPENDIX B

HASP REVIEW ACKNOWLEDGEMENT FORM

HEALTH AND SAFETY PLAN REVIEW ACKNOWLEDGEMENT FORM

By signing this document, I am stating that I have read and understand the health and safety plan for TRC personnel, subcontractors and visitors entering the Site.

Name	Company	Signature	Date

APPENDIX C

CONFINED SPACE PERMIT

NON-PERMIT Required Confined Space Entry Air Monitoring Log

Location: Confined Space #

Description:

Start Date/Time: / / : AM/PM Finish Date/Time: : / / : AM/PM
Nature of work (i.e. inspection, repair, maintenance):
Attendant:

Entrant (s):

Required Air Monitoring – O_2, LEL, CO, H_2S
Location dependent required air monitoring (circle applicable) Cl_2, Hg, Other:
Acceptable Air Levels
Oxygen 19.5 to 25.5%, LEL<10%, Hydrogen Sulfide <10 ppm, Carbon Monoxide <35 ppm,
Hg <0.025 mg/m^3, Other:_____
Initial air monitoring must be performed prior to entry. Monitor all items listed in order listed and record time of readings. Use "other" column for an additional parameter.

Time	Location	O_2	LEL	H_2S	CO	Other	Initials
	Opening						
	Halfway						
	Bottom						

Note problems or issues encountered during entry operations:

Confined Space Entry Permit					Permit #
Section A: General Information					
Instructions: Follow procedures carefully. Leave no blank space on this permit.					
Location:					Confined Space #:
Description:					
Start Date/Time: / / : AM/PM			Finish Date/Time: : / / : AM/PM		
Nature of work (i.e. inspection, repair, maintenance):					
Entry Supervisor:					
Authorized Attendant (s):			Authorized Entrants		
Sections B, C, D, E, F and G to be filled out by qualified Entry Supervisor. Answer Yes, No or NR (Not Required)					
Section B: Activities that may produce hazardous conditions					
Circle		**Circle**		**Circle**	
Yes/No	Welding	Yes/No	Solvent Use	Yes/No	Painting or Coating
Yes/No	Open Flame	Yes/No	Electrical Tool	Yes/No	Disassembly Process
Yes/No	Brazing	Yes/No	Electrical Work	Yes/No	Equipment or Piping
Yes/NR	Other				
Section C: Special Requirements					
Circle		**Circle**		**Circle**	
Yes/No	Secure Area	Yes/No	Purge, Flush, Vent	Yes/No	Lines Capped or blanked
Yes/No	Lock out/De-Energize	Yes/No	Ventilation	Yes/No	Other:
Section D: Equipment Checklist					
Circle		**Circle**		**Circle**	
Yes/No	Tripod and winch	Yes/No	Hard Hats	Yes/No	Explosive Proof Lighting
Yes/No	Harness	Yes/No	First Aid Kit	Yes/No	Ventilation fans & flex hoses
Yes/No	Ladder	Yes/No	Fire Extinguisher	Yes/No	Barriers
Yes/No	Scott Pak	Yes/No	Escape Pack	Yes/No	Traffic Cones
Yes/No	"People Working Signs"	Yes/No	Air Monitor	Air Monitor Calibration Date:	
Yes/NR	Other Personal Protective Equipment:				
Yes/No	Radio or other means of outside communication:				
Emergency response procedures to be followed:					
Emergency Rescue Service and Phone # (if not 911):					

Permit #
Date:

Section E:
Required Air Monitoring

Location dependent required air monitoring (circle applicable) Cl_2, Hg, Other:

Acceptable Air Levels

Oxygen 19.5 to 25.5%, LEL<10%, Hydrogen Sulfide <10 ppm, Carbon Monoxide <35 ppm, Hg <0.025 mg/m^3, Other:_____

Initial air monitoring must be performed prior to entry. Monitor all items listed in order listed and record time of readings. Use "other" column for an additional parameter.

Time	Location	O_2	LEL	H_2S	CO	Other	Initials
	opening						
	halfway						
	bottom						

Permit #
Date:

Section F:
Reclassified Space Determination/Certification
(Check only one):

□ **Alternate Entry Procedure Space:** I certify that all non-atmospheric hazards within this space have been eliminated and, as our monitoring and inspection data demonstrate, forced air ventilation along will control any atmospheric hazard within this space.

□ **Non-Permit Space – Temporary Reclassification:** I certify that hazard elimination Procedures (referenced above or attached) have been followed and all hazards within this space have been eliminated. This space is now temporarily reclassified as a non-permit space and is considered safe for work (until hazard elimination measures are removed).

Certify below only if the space is reclassified

Entry Supervisor Name Signature Date

Entrant (s) will monitor continuously with gas detection device set at audio alarm for the duration of confined space work. If **any** atmospheric testing result is outside the Permissible Exposure Limits (PEL) and cannot be reduced /controlled by ventilation, entry is **not** permitted under Alternate Entry. If the air monitoring alarm sounds while in the space, **exit immediately.**

Section G:
PRCS Entry Authorization and Close-out
(Note: If space reclassified above, skip Section G)

Entry Authorization:

Entry Supervisor Name Signature Date

The above signature is required after initial air monitoring test and certifies that all provisions for safe entry into a confined space are completed and all persons in the work crew are trained, equipped, and physically capable of performing the assigned work. Entrant (s) will monitor continuously with gas detection device set at audio alarm for the duration of confined space work.

Entry Close-Out
If work is completed or there is a change in atmospheric conditions that is unacceptable or a new hazard becomes apparent, this permit is no longer valid and immediately exit the space

Entry Cancelled by: Time: Date:

Reason:

Note all problems encountered during entry operations.

Permit #
Date:

Section H: **Entry/Exit Log** (Post at Entry) Re-enter name below for each entry and exit into confined space		
Name of Entrant	**Time of Entry**	**Time of Exit**

APPENDIX D

NOTIFICATION OF IMMEDIATE RISK

Notification of Immediate Health Risk

Attention: OMH Facility Responsible Manager,

Facility Initials:

Facility Name:

Facility Address:

Building Number:

Functional Area:

Date and time of IDL Health discovery:

Name, date, and time of verbal notification to the following OMH personnel:
OMH escort:

Contractor's Project Manager:

Description of Material and Condition:

Recommended Corrective Action:

Contractor's Surveyor Name and contact info:

APPENDIX E

ACCIDENT/INCIDENT REPORT

ACCIDENT/INCIDENT REPORT FORM

Date of Report: _____

Injured: _____

Employer: _____

Site: _____ **Site Location**: _____

Report Prepared By:_____
Signature **Title**

ACCIDENT/INCIDENT CATEGORY (circle all that applies)

Injury	**Illness**	**Near Miss**
Property Damage	**Fire**	**Spill**
On-site Equipment	**Motor Vehicle**	**Electrical**
Mechanical	**Chemical Exposure**	**Other_____**

DATE AND TIME OF ACCIDENT/INCIDENT: Narrative report of Accident/Incident: Identify: 1) actions leading to or contributing to the accident/incident; 2) the accident/incident occurrence; and 3) actions following the accident/incident.

_____
_____
_____
_____
_____
_____
_____

WITNESS TO ACCIDENT/INCIDENT:

Name: _____ Company: _____

Address: _____

Phone No.: _____

Name: _____ Company: _____

Address: _____

Phone No.: _____

INJURED:

Name: _____ SSN: _____
Address: _____ Age: _____

Length of Service: _____ Time on Present Job: _____
Time/Classification:_____
SEVERITY OF INJURY OR ILLNESS (circle the appropriate answer):

Disabling Non-disabling Fatality

Medical Treatment First Aid Only

ESTIMATED NUMBER OF DAYS AWAY FROM JOB: _____

NATURE OF INJURY OR ILLNESS:

_____

_____

_____

_____

CLASSIFICATION OF INJURY (circle the appropriate answer):

Abrasions	**Dislocations**	**Punctures**
Bites	**Faint/Dizziness**	**Radiation Burns**
Blisters	**Fractures**	**Respiratory Allergy**
Bruises	**Frostbite**	**Sprains**
Chemical Burns	**Heat Burns**	**Toxic Resp. Exposure Toxic**
Cold Exposure	**Heat Exhaustion**	**Ingestion**
Concussion	**Heat Stroke**	**Dermal Allergy**
Lacerations		

Part of Body Affected: _____
Degree of Disability: _____
Date Medical Care was Received: _____
Where Medical Care was Received: _____
Address (if off-site): _____
(If two or more injuries, record on separate sheets)

PROPERTY DAMAGE:

Description of Damage: _____

Cost of Damage: _____

ACCIDENT/INCIDENT LOCATION: _____

ACCIDENT/INCIDENT ANALYSIS: Causative agent most directly related to accident/incident (Object, substance, material, machinery, equipment, conditions)

_____

_____

_____

_____

_____

Was weather a factor?: _____

Unsafe mechanical/physical/environmental condition at time of accident/incident (Be specific):

_____

_____

_____

_____

Personal factors (Attitude, knowledge or skill, reaction time, fatigue):

_____

_____

_____

_____

ON-SITE ACCIDENTS/INCIDENTS:

Level of personal protection equipment required in Site Safety Plan: _____

Modifications: _____

Was injured using required equipment?:

_____

_____

If not, how did actual equipment use differ from plan?:

_____

_____

_____

ACTION TAKEN TO PREVENT RECURRENCE: (Be specific. What has or will be done? When will it be done? Who is the responsible party to insure that the correction is made?

_____

_____

_____

_____

_____

ACCIDENT/INCIDENT REPORT REVIEWED BY:

SSO Name Printed: _____SSO Signature: _____

OTHERS PARTICIPATING IN INVESTIGATION:

Signature: _____ Title: _____

Signature: _____ Title: _____

Signature: _____Title: _____

ACCIDENT/INCIDENT FOLLOW-UP: Date: Outcome of accident/incident:

_____

_____

_____

Physician's recommendations:

_____

_____

_____

Date injured returned to work: _____

Follow-up performed by: _____

Signature: _____ Title: _____

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

APPENDIX F

SAFETY DATA SHEETS

SAFETY DATA SHEETS
SDS Index

Carbon Dioxide

Carbon Monoxide

Epoxy/Urethane (Paint)

Hydrogen Sulfide

Methane

Nitrogen

Oxygen

Polychlorinated Biphenyls (PCBs)

Material Safety Data Sheet

1. Product and Company Identification

Product name : **Carbon Dioxide, Gas**

Chemical formula : CO_2

Synonyms : Carbonic Acid Gas, Carbon Dioxide, Carbon Oxide, Carbonic Anhydride

Company : **SpecAir Specialty Gases**
22 Albiston Way
Auburn, Maine 04210 USA

Telephone : **207-777-6218**

Emergency : 800-535-5053

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Carbon Dioxide, Gas	124-38-9	100%

3. Hazards Identification

Emergency Overview

Containers may rupture or explode if exposed to heat.
May cause difficulty breathing.

Potential Health Effects

Inhalation : Changes in blood pressure, ringing in the ears, nausea, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, tingling sensation, tremors, weakness, visual disturbances, suffocation, convulsions, unconsciousness, coma.

Eye contact : Blurred vision, frostbite.

Skin contact : Blisters, frostbite.

Ingestion : Ingestion of a gas is unlikely.

Chronic Health Hazard : Not applicable.

4. First Aid Measures

General advice : None.

Eye contact : Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blanket. Get immediate medical attention.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be

administered by qualified personnel. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Use extinguishing agents appropriate for surrounding fire.
Specific hazards	:	Negligible fire hazard. Containers may rupture or explode if exposed to heat.
Fire fighting	:	Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Do not get water directly on material. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	None.
Methods for cleaning up	:	Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away. Isolate hazard area and deny entry. Ventilate closed spaces before entering.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Protect from physical damage. Store in a well-ventilated area. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

5000 ppm (9000 mg/m3) OSHA TWA
10000 ppm (18000 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
30000 ppm (54000 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
5000 ppm ACGIH TWA
30000 ppm ACGIH STEL
5000 ppm (9000 mg/m3) NIOSH recommended TWA 10 hour(s)
30000 ppm (54000 mg/m3) NIOSH recommended STEL

Engineering measures

Not available.

Personal protective equipment

Respiratory protection	:	The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA. 40000 ppm – Any supplied-air respirator. Any self-contained breathing apparatus with a full facepiece. Escape – Any appropriate escape-type, self-contained breathing apparatus. For unknown concentrations or immediately dangerous to life or death – Any

		supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
Hand protection	:	Wear insulated gloves.
Eye protection	:	For the gas: Eye protection is not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	For the gas, Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.
Ventilation	:	Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Odorless.
Taste	:	Acid taste.
Molecular weight	:	44.01
Vapor pressure	:	43700 mmHg @ 21 C
Vapor density	:	1.5 (air = 1)
Specific gravity	:	1.527 @ 21 C (water = 1)
Boiling point	:	-109.3 to -79 F (-78.50 to -61.7 C) (liquid)
Freezing point	:	-71 F (-57 C) @ 4000 mmHg
Water solubility	:	Soluble.

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and conditions.
Conditions to avoid	:	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Avoid contact with water or moisture.
Materials to avoid	:	Combustible materials, oxidizing materials, metal salts, reducing agents, metal carbide, metals, bases, potassium, sodium, ethyleneimine.
Hazardous decomposition products	:	Thermal decomposition products: oxides of carbon.

11. Toxicological Information

Acute Health Hazard

Ingestion	:	Not available.
Inhalation	:	Not available.
Skin	:	Not available.
Medical conditions aggravated by exposure	:	Heart or cardiovascular disorders, respiratory disorders.

12. Ecological Information

Ecotoxicity Data

Fish toxicity	:	150000 ug/L 48 day(s) (Mortality) Brown trout (Salmo trutta)

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Carbon Dioxide
Class	:	2.2
UN/ID No.	:	UN1013
Labeling	:	Non-Flammable Gas

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Not regulated.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes
Chronic: No
Fire: No
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

Material Safety Data Sheet

1. Product and Company Identification

Product name : **Carbon Monoxide**

Chemical formula : CO

Synonyms : Carbon Oxide; Carbon Oxide (CO);

Company : **SpecAir Specialty Gases**
22 Albiston Way
Auburn, Maine 04210 USA

Telephone : **207-777-6218**

Emergency : 800-535-5053

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Carbon Monoxide	630-08-0	100%

3. Hazards Identification

Emergency Overview

Flammable gas. May cause flash fire. Flash back hazard.
May cause blood damage, suffocation.

Potential Health Effects

Inhalation : Changes in body temperature, changes in blood pressure, nausea, vomiting, chest pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, hallucination, pain in extremities, tremors, loss of coordination, hearing loss, visual disturbances, eye damage, suffocation, blood disorders, convulsion, coma. May cause loss of appetite, heart damage, nerve damage, birth defects, brain damage in long term exposure.

Eye contact : No information on significant adverse effects.

Skin contact : No information on significant adverse effects.

Ingestion : Ingestion of a gas is unlikely.

Chronic Health Hazard : Not applicable.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation	:	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Severe explosion hazard. Vapor/air mixtures are explosive. Pressurized containers may rupture or explode if exposed to sufficient heat. Vapors or gases may ignite at distant ignition sources and flash back.
Fire fighting	:	Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Cool containers with water. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Stop flow of gas.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	Water release – Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.
Methods for cleaning up	:	Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away. Isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Grounding and bonding required. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

50 ppm (55 mg/m3) OSHA TWA
35 ppm (40 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
200 ppm (229 mg/m3) OSHA ceiling (vacated by 58 FR 35338, June 30, 1993)
25 ppm ACGIH TWA
35 ppm (40 mg/m3) NIOSH recommended TWA 10 hour(s)
200 ppm (229 mg/m3) NIOSH recommended ceiling

Engineering measures

Not available.

Personal protective equipment

Respiratory protection	:	The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA. 350 ppm – Any supplied-air respirator. 875 ppm – Any supplied-air respirator operated in a continuous flow mode. 1200 ppm – Any air-purifying respirator with a full facepiece and a canister providing protection against this substance. End of service life indicator required (ESLI). Any self-contained breathing apparatus with a full facepiece. Any supplied-air respirator with a full facepiece. Escape – Any air-purifying respirator with a full facepiece and a canister providing protection against this substance. End of service life indicator required (ESLI). Any appropriate escape-type, self-contained breathing apparatus. For unknown concentrations or immediately dangerous to life or death – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
Hand protection	:	Wear appropriate chemical resistant gloves.
Eye protection	:	Eye protection is not required, but recommended.
Skin and body protection	:	Protective clothing is not required.
Ventilation	:	Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Odorless.
Taste	:	Tasteless.
Molecular weight	:	28.01
Vapor pressure	:	760 mmHg @ -191 C
Vapor density	:	0.968 (air = 1)
Specific gravity	:	Not applicable.
Boiling point	:	-314 F (-192 C)
Freezing point	:	-326 F (-199 C)
Water solubility	:	2.3% @ 20 C

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and conditions.
Conditions to avoid	:	Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Avoid inhalation of material or combustion by-products. Keep out of water supplies and sewers.
Materials to avoid	:	Combustible materials, oxidizing materials, halogens, metal oxides, metals, lithium.
Hazardous decomposition products	:	Thermal decomposition products: oxides of carbon.

11. Toxicological Information

Toxicity Data

1807 ppm/4 hour(s) inhalation-rat LC50.

Acute Health Hazard

Ingestion	:	Not available.
Inhalation	:	Toxic.
Skin	:	Not available.
Target organs	:	Blood.
Medical conditions aggravated by exposure	:	Blood system disorders, heart or cardiovascular disorders, hormonal disorders, respiratory disorders.

12. Ecological Information

Ecotoxicity Data

Fish toxicity	:	75000 ug/L 1 day(s) LC100 (Mortality) Orangespotted sunfish (Lepomis humilis).

Fate and Transport

KOW	:	1479.11 (log = 3.17) (estimated from water solubility).
KOC	:	2760.58 (log = 3.44) (estimated from water solubility).
Henry's Law Constant	:	1.2 E -3 atm-m3/mol.
Bioconcentration	:	2.13 (estimated from water solubility).
Aquatic Processes	:	1.3766993 hour(s) (River Model: 1 m deep, 1 m/s flow, 3 m/s wind).
Environmental summary	:	Relatively non-persistent in the environment. Not expected to leach through the soil or the sediment. Accumulates very little in the body of living organisms. Highly volatile from water.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Carbon Monoxide, Compressed
Class	:	2.3
UN/ID No.	:	UN1016
Labeling	:	2,3; 2.1
Additional shipping description	:	Toxic-Inhalation Hazard Zone D

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Not regulated.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

Protective & Marine Coatings

GENERAL POLYMERS® 3579
STANDARD EPOXY PRIMER/ BINDER

PART A	GP3579	SERIES
PART B	GP3579B01	STANDARD HARDENER

Revised April 06, 2016

PRODUCT INFORMATION

PRODUCT DESCRIPTION

GENERAL POLYMERS 3579 STANDARD PRIMER / BINDER is a high solids, clear or pigmented epoxy primer and binder resin. GENERAL POLYMERS 3579 STANDARD PRIMER / BINDER is available in clear, red, white and gray, has good blush resistance and is low in viscosity to promote penetration of the concrete substrate and excellent wetting of mortar aggregate.

ADVANTAGES

- Good blush resistance at room temperature
- Low modulus of elasticity, stress relieving
- Acceptable for use in USDA inspected facilities

TYPICAL USES

GENERAL POLYMERS 3579 STANDARD PRIMER / BINDER is an epoxy primer for coatings, slurries, mortar overlays, and patches. It can be also used as a binder resin. For slurries, mortar and patching systems. Suitable for use in the Mining & Minerals Industry.

LIMITATIONS

- Slab on grade requires vapor/moisture barrier.
- Surface must be clean and dry.
- Cool damp conditions may cause surface blushing.
- Substrate must be structurally sound and free of bond inhibiting contaminants.
- During installation and initial cure cycle substrate andambient air temperature must be at a minimum of 50ºF (10ºC). Substrate temperature must be at least 5ºF (3ºC) above the dew point (for lower temperature installation contact your local representative.
- When required, adequate ventilation shall be provided and proper clothing and respirators worn.
- **Strictly adhere to published coverage rates.**

SURFACE PREPARATION

Proper inspection and preparation of the substrate to receive resinous material is critical. Read and follow the "Instructions for Concrete Surface Preparation" (Form G-1) for complete details.

PRODUCT CHARACTERISTICS

Color:	Clear, Red, Gray, White
Mix Ratio:	2:1
Volume Solids:	96% ± 2%, mixed
Weight Solids:	96% ± 2%, mixed
VOC (EPA Method 24):	<50 g/L mixed: 0.41 lbs/gal
Viscosity, mixed:	2,100 cps

Recommended Spreading Rate per coat:

	Minimum		Maximum	
Wet mils (microns):	**6**	(150)	**30**	(750)
~Coverage sq ft/gal (m^2/L):	**varies according to usage**			

Drying Schedule @ 6 mils (150 microns) wet:

	@ 73°F (23ºC)
To touch:	6-8 hours
To recoat:	10-20 hours

If maximum recoat time is exceeded, abrade surface before recoating.
Drying time is temperature, humidity, and film thickness dependent.

Pot Life: gallon mass 25-30 minutess @ 73°F (23ºC)

Shelf Life:	Part A: 36 months, unopened Part B (Standard): 36 months, unopened Store indoors at 50°F (10°C) to 90°F (32°C)
Flash Point:	>230°F (>110°C), ASTM D 93, mixed

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Adhesion	ACI 503R	300 psi concrete failure
Compressive Strength	ASTM D 695	9,000 psi
Flammability		Self-extinguishing over concrete
Flexural Strength	ASTM D 790	6,000 psi
Hardness, Shore D	ASTM D 2240	75/65
Tensile Strength	ASTM D 638	3,000 psi

continued on back

Protective & Marine Coatings

GENERAL POLYMERS® 3579
STANDARD EPOXY PRIMER/ BINDER

PART A	GP3579	SERIES
PART B	GP3579B01	STANDARD HARDENER

Revised April 06, 2016

PRODUCT INFORMATION

APPLICATION

- **APPLICATION INSTRUCTIONS**

1. Add 2 parts 3579A (resin) to 1 part 3579B (hardener) by volume. Mix with low speed drill and Jiffy blade for three minutes and until uniform. To insure proper system cure and performance, strictly follow mix ratio recommendations.

2. 3579 may be applied via spray, roller or brush. Apply evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture.

3. 3579 application varies upon usage.

NOTE: Epoxy materials may tend to blush at the surface especially in humid environments. After the surface is primed and before installation of each subsequent coat, surface must be examined for blush (a whitish greasy film and/or low gloss). The blush must be completely removed prior to recoating using warm detergent water or through solvent wipe.

Epoxy materials will appear to be cured and dry to touch prior to full chemical cross linking. Allow epoxy to cure for 2-3 days prior to exposure to water or other chemicals for best performance.

ORDERING INFORMATION

Packaging:

Part A:	1 gallon (3.8L) and 5 gallon (18.9L) containers
Part B:	1 gallon (3.8L) and 5 gallon (18.9L) containers
Weight:	9.4 ± 0.2 lb/gal; 1.13 Kg/L mixed, may vary by color

CLEANUP

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

SAFETY

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

MAINTENANCE

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, Contact your Sherwin-Williams representative.

SHIPPING

- Destinations East of the Rocky Mountains are shipped F.O.B. Cincinnati, Ohio.

- Destinations West of the Rocky Mountains are shipped F.O.B. Victorville, California.

For specific information relating to international shipments, contact your local sales representative.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

SHERWIN WILLIAMS | HIGH PERFORMANCE FLOORING

RESUTILE™ MC 100
ALIPHATIC MOISTURE CURE URETHANE

PART A GP4660A01 — **CLEAR**
PART B GP4660B01 — **HARDENER**

Revised: November 28, 2022

PRODUCT INFORMATION

PRODUCT DESCRIPTION

RESUTILE MC 100 is an economical, light stable, high gloss standard traffic system. It provides outstanding gloss retention and superior hardness as well as exceptional abrasion resistance. Resutile MC 100 is resistant to many chemicals and solvents. It prevents concrete dusting, furnishing a surface that is easy to maintain. Resutile MC 100 may be field-tinted with Sherwin-Williams colorants.

Advantages:

- Excellent abrasion and wear resistance
- Outstanding chemical resistance
- High gloss, light stable, aliphatic, non-ambering
- Good thermal shock properties
- Resistant to Skydrol®, jet fuels and other vehicle maintenance fluids
- USDA compliant
- Tintable with Sherwin-Williams colorants

TYPICAL USES

Resutile MC 100 is an ideal high gloss topcoat over a variety Sherwin-Williams Systems in busy industrial, commercial and institutional settings where additional durability and excellent abrasion-resistance is desired, such as:

- Hospitals, clinics, laboratories
- Food processing plants
- Schools and universities
- Detention and public safety buildings
- Warehouses and logistics operations
- Manufacturing plants, research departments
- Hangars, aerospace and transportation facilities
- Hospitality and restaurants
- Grocery stores and retail establishments

SURFACE PREPARATION

New concrete must have a 28 day cure, and preferably a broom swept finish, prior to coating. In the case of older concrete flooring, remove all surface oils, paint, dust and debris. Prior to coating, ensure the surface is clean, passes the MVT test and the water drop test and that all surface defects have been repaired.

APPLICATION CONDITIONS

Resutile MC 100 should not be applied when the floor temperature is above 90°F (32°C) or below 50°F (10°C), or when within 5°F (2.8°C) of the dew point.

PRODUCT CHARACTERISTICS

Color:	Clear
Sheen:	Gloss
Mix Ratio:	10:1 by volume
Weight Solids:	91%, mixed (ASTM D2369)
Viscosity, A+B:	324 cps (ASTM D2196)
VOC (ASTM D3960):	106 g/L ; 0.88 lb/gal

Recommended Spreading Rate per coat:

	Minimum		Maximum	
Dry mils (microns)	**2.9**	(73)	**2.9**	(73)
~Coverage sq ft/gal (m^2/L)**:**	**500**	(12.3)	**525**	(12.9)

Drying Schedule:

	@ 50°F (10°C) *50% RH*	@ 77°F (25°C) *50% RH*	@ 100°F (38°C) *50% RH*
Dry Touch:	4 hours	4 hours	105 minutes
Dry Tack:	13 hours	6 hours	3.5 hours
Dry Hard:	18.5 hours	7 hours	4.25 hours
To Recoat:			
minimum:		8 hours	
maximum:		24 hours	

NOTE: The cure time will vary with cooler temperatures. Allow a minimum of 2 hours and a maximum of 24 hours between each step.

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 95°F (35°C)
Flash Point:	185°F (85°C)

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS-17 wheel, 1000gm load, 1000 cycles	26.4 mg loss
Adhesion	ASTM D7234	617 psi ; 100% concrete failure
Coefficient of Friction	ASTM D2047	0.53
Elongation	ASTM D2370	9%
Gloss, 60°	ASTM E97	90+
Heat Resistance	MIL-D-3134J	Pass
Pencil Hardness	ASTM D3363	4H+
Surface Burning	ASTM E84	TBD
Tensile Strength	ASTM D2370	6,400 psi

ORDERING INFORMATION

Packaging:	Part A: 2.5 gallons (9.45L) in a 5 gallon pail Part B: 0.25 gallon (0.95L) quart container
Weight:	9.14 lb/gal ; 1.1 Kg/L, mixed

continued on back

SHERWIN WILLIAMS | HIGH PERFORMANCE FLOORING

RESUTILE™ MC 100
ALIPHATIC MOISTURE CURE URETHANE

PART A	GP4660A01	CLEAR
PART B	GP4660B01	HARDENER

Revised: November 28, 2022

PRODUCT INFORMATION

APPLICATION INSTRUCTIONS

Primer Application: Once surface preparation is complete, apply selected Sherwin-Williams primer and basecoat(s) to the concrete floor in accordance with system technical data sheet instructions. Note: The cure time will vary with conditions and primer selection.

Topcoat Application:
1. Abrade application surface with 100 grit sandpaper or screens to provide proper surface tension for the Resutile MC 100. Vacuum thoroughly and wipe with clean tack rags until no dust is evident.
2. Combine and blend parts A & B for 3 minutes using a Jiffy mixer blade with slow speed drill. For a pigmented coating, add 2-4 pints of Sherwin-Williams Colorant into blended container of parts A & B and remix.
3. Apply at 500-525 sq. ft. per gallon using a 3/8-inch nap roller, taking great care to apply at recommended spread rate. Excess material could result in blisters; insufficient material could result in an uneven appearance.
4. For a second topcoat of Resutile MC 100, allow first topcoat to cure until no longer tacky. Repeat steps 1-3 above.
5. Allow final topcoat to cure for 24 hours before opening floor to light foot traffic.

Instructions for Use Over Existing Coatings:
1. Examine the existing coating to ensure that it is well bonded to the concrete. Any loose coating must be completely removed and edges should be sanded to a feathered edge.
2. Clean the entire floor thoroughly with detergent cleaner. The surface must be free of all dirt, oils, or other contaminants.
3. After the floor has completely dried, sand the existing coating until a powdery residue is evident and all gloss is removed. Sweep or vacuum clean, and wipe with xylene to ensure good adhesion of the new system. Any bare concrete should be mechanically prepared and primed with appropriate Sherwin-Williams primer.

TINTING

Only tint with HPF Universal Colorants. Do not tint with GIS colorants.

CHEMICAL RESISTANCE

For comprehensive chemical resistance information, consult the Chemical Resistant Guide and contact your Sherwin-Williams representative.

CLEANUP

Clean up mixing and application equipment immediately after use with Xylene. Observe all fire and health precautions when handling or storing solvents.

SAFETY

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

MAINTENANCE

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact your Sherwin-Williams representative.

DISCLAIMER

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Material Safety Data Sheet

1. Product and Company Identification

Product name : **Hydrogen Sulfide**

Chemical formula : H2-S

Synonyms : Hydrogen Sulfide (H2S); Dihydrogen Monosulfide; Dihydrogen Sulfide; Hydrosulfuric acid; Sulfur Dihydride; Sulfureted Hydrogen; Sulfur Hydride; Stink Damp; Sewer gas

Company : **SpecAir Specialty Gases**
22 Albiston Way
Auburn, Maine 04210 USA

Telephone : **207-777-6218**

Emergency : 800-535-5053

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Hydrogen Sulfide	7783-06-4	100%

3. Hazards Identification

Emergency Overview

Harmful if inhaled.
May cause respiratory tract irritation, skin irritation, eye irritation, blood damage.
Flammable gas. May cause flash fire. Flash back hazard. Electrostatic charges may be generated by flow, agitation, etc.

Potential Health Effects

Inhalation : Irritation, lack of sense of smell, sensitivity to light, nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, disorientation, tremors, visual disturbances, suffocation, lung congestion, internal bleeding, heart damage, nerve damage, brain damage, coma, death. May cause allergic reactions, nausea, vomiting, loss of appetite, weight loss, irregular heartbeat, headache, sleep disturbances, emotional disturbances, lung congestion, nerve damage in long term exposure.

Eye contact : Irritation, sensitivity to light, visual disturbances. May cause eye damage in long term exposure.

Skin contact : Irritation. May cause skin disorders in long term exposure.

Ingestion : Ingestion of harmful amounts is unlikely.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get

immediate medical attention.

Skin contact	:	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.
Ingestion	:	If a large amount is swallowed, get immediate medical attention.
Inhalation	:	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.
Antidote	:	Amyl nitrite, inhalation; sodium nitrite, intravenous; pyridoxine, intravenous; urea, intravenous. CAUTION! Get medical attention immediately.
Note to physician	:	For inhalation, consider oxygen.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Let burn unless leak can be stopped immediately. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Pressurized containers may rupture or explode if exposed to sufficient heat. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.
Fire fighting	:	Move container from fire area if it can be done without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Cool containers with water spray until well after fire is out. Keep unnecessary people away, isolate hazard area and deny entry. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Stop flow of gas.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	Air release – Reduce vapors with water spray. Collect runoff for disposal as potential hazardous waste. Soil release – Dike for later disposal. Absorb with sand or other non-combustible material. Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash). Water release – Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash).
Methods for cleaning up	:	Do not touch spilled material. Stop leak if possible without personal risk. Avoid heat, flames, sparks and other sources of ignition. Remove sources of ignition. Reduce vapors with water spray. Do not get water directly on material. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. For tank, rail car or tank truck: 800 meters(1/2 mile). Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders. Subject to handling regulations: U.S. OSHA 29 CFR 1910.119.

Storage

Store in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Store in a cool, dry place. Store in a well-ventilated area. Avoid contact with light. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30). Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

20 ppm OSHA ceiling
50 ppm OSHA peak 10 minute(s) (once if no other measurable exposure occurs)
10 ppm (14 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
15 ppm (21 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
10 ppm ACGIH TWA
15 ppm ACGIH STEL
10 ppm (15 mg/m3) NIOSH recommended ceiling 10 minute(s)

Engineering measures

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection	:	The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA. 100 ppm – Any powered, air-purifying respirator with cartridge(s) providing protection against this substance. Any air-purifying respirator with a full facepiece and a canister providing protection against this substance. Any supplied-air respirator. Any self-contained breathing apparatus with a full facepiece. Escape – Any air-purifying respirator with a full facepiece and a canister providing protection against this substance. Any appropriate escape-type, self-contained breathing apparatus. For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
Hand protection	:	Wear appropriate chemical resistant gloves.
Eye protection	:	Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	Wear appropriate chemical resistant clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Rotten egg odor.
Molecular weight	:	34.08

Vapor pressure	:	15200 mmHg @ 25 C
Vapor density	:	1.2 (air = 1)
Specific gravity	:	1.192 (water = 1)
Boiling point	:	-78 to -77 F (-61 to -60.3 C)
Freezing point	:	-123 F (-86 C)
Water solubility	:	2.58 – 2.9% @ 20 C
Evaporation rate	:	Not applicable.

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and pressure.
Conditions to avoid	:	Avoid heat, sparks, flames or other sources of ignition. Minimize contact with material. Avoid inhalation of material or combustion by-products. Keep out of water supplies and sewers.
Materials to avoid	:	Combustible materials, halogens, metals, oxidizing materials, metal salts, bases, metal oxides.
Hazardous decomposition products	:	Thermal decomposition products: oxides of sulfur.

11. Toxicological Information

Toxicity Data

444 ppm inhalation-rat LC50

Acute Health Hazard

Ingestion	:	None known.
Inhalation	:	Toxic.
Skin	:	None known.
Medical conditions aggravated by exposure	:	Eye disorders, respiratory disorders, nervous system disorders.

12. Ecological Information

Ecotoxicity Data

Fish toxicity	:	14.9 ug/L 96 hour(s) LC50 (Mortality) Fathead minnow (Pimephales promelas).
Invertebrate toxicity	:	9730 ug/L 1.5 hour(s) (Mortality) Mediterranean mussel (Mytilus galloprovincialis).
Environmental summary	:	Highly toxic to aquatic life.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U135.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Hydrogen sulfide

Class	:	2.3
UN/ID No.	:	UN1053
Labeling	:	Flammable Gas; Poison
Additional shipping description	:	Toxic-Inhalation Hazard Zone B

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Hydrogen Sulfide: 1500 LBS TQ

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Hydrogen Sulfide: 500 LBS TPQ

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Hydrogen Sulfide: 100 LBS RQ

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Hydrogen Sulfide: Administrative stay issued Aug. 22, 1994

Material Safety Data Sheet

1. Product and Company Identification

Product name	: **Methane, Compressed Gas**
Chemical formula	: C-H4
Synonyms	: Fire Damp; Marsh Gas; Methyl Hydride; Natural Gas; Methane
Company	: SpecAir Specialty Gases 22 Albiston Way Auburn, Maine 04210 USA
Telephone	: 207-777-6218
Emergency	: 800-535-5053

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Methane	74-82-8	100%

3. Hazards Identification

Emergency Overview

Flammable gas. May cause flash fire. Flash back hazard. Electrostatic charges may be generated by flow, agitation, etc.
May cause difficulty breathing.

Potential Health Effects

Inhalation	:	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, fatigue, dizziness, disorientation, mood swing, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma.
Eye contact	:	No information on significant adverse effects.
Skin contact	:	No information on significant adverse effects.
Ingestion	:	Ingestion of a gas is unlikely.
Chronic Health Hazard	:	None known.

4. First Aid Measures

General advice	:	None.
Eye contact	:	Flush eyes with plenty of water.
Skin contact	:	Wash exposed skin with soap and water.
Ingestion	:	If a large amount is swallowed, get immediate medical attention.
Inhalation	:	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.
Note to physician	:	For inhalation, consider oxygen.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Severe fire hazard. Severe explosion hazard. Pressurized containers may rupture or explode if exposed to sufficient heat. Vapor/air mixtures are explosive above flash point. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.
Fire fighting	:	Move container from fire area if it can be done without risk. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzle until well after fire is out. If this is impossible, take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Stop flow of gas.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	None.
Methods for cleaning up	:	Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away, isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

1000 ppm ACGIH TWA

Engineering measures

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection	:	Under conditions of frequent use or heavy exposure, respiratory protection may be needed. For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Hand protection	:	Wear appropriate chemical resistant gloves.
Eye protection	:	Eye protection not required, but recommended.
Skin and body protection	:	Protective clothing is not required.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Odorless.
Molecular weight	:	16.04
Vapor pressure	:	760 mmHg @ -161 C
Vapor density	:	0.555 (air = 1)
Specific gravity	:	Not applicable.
Boiling point	:	-260 F (-162 C)
Freezing point	:	-297 F (-183 C)
Water solubility	:	3.5% @ 17 C
Evaporation rate	:	Not applicable.

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and pressure.
Conditions to avoid	:	Avoid heat, sparks, flames or other sources of ignition. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Halogens, oxidizing materials, combustible materials.
Hazardous decomposition products	:	Thermal decomposition products: oxides of carbon.

11. Toxicological Information

Toxicity Data

50 pph/2 hour(s) inhalation-mouse LC50

Acute Health Hazard

Ingestion	:	None known.
Inhalation	:	Relatively non-toxic.
Skin	:	None known.
Medical conditions aggravated by exposure	:	None known.

12. Ecological Information

Fate and Transport

KOW	:	724.44 (log = 2.87) (estimated from water solubility).
KOC	:	2192.80 (log = 3.34) (estimated from water solubility).
Henry's Law constant	:	4.6 E -4 atm-m3/mol.
Bioconcentration	:	1.68 (estimated from water solubility).
Aquatic processes	:	1.0416679 hours (Rover Model: 1 m deep, 1 m/s flow, 3 m/s wind).
Environmental summary	:	Relatively non-persistent in the environment. Not expected to leach through the soil or the sediment. Accumulates very little in the bodies of living organisms. Moderately volatile from water.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Methane, Compressed
Class	:	2.1
UN/ID No.	:	UN1971
Labeling	:	Flammable Gas

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Not regulated.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

Material Safety Data Sheet

1. Product and Company Identification

Product name : **Nitrogen, Compressed Gas**

Chemical formula : N2

Synonyms : Diatomic Nitrogen; Dinitrogen; Nitrogen; Nitrogen-14; Nitrogen Gas

Company : **SpecAir Specialty Gases**
22 Albiston Way
Auburn, Maine 04210 USA

Telephone : **207-777-6218**

Emergency : 800-535-5053

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Nitrogen, Compressed Gas	7727-37-9	100%

3. Hazards Identification

Emergency Overview

May cause difficulty breathing.
Containers may rupture or explode if exposed to heat.

Potential Health Effects

Inhalation : Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma.

Eye contact : Irritation.

Skin contact : No information on significant adverse effects.

Ingestion : Ingestion of a gas is unlikely.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Flush eyes with plenty of water.

Skin contact : Wash exposed skin with soap and water.

Ingestion : If a large amount is swallowed, get immediate medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable : Carbon dioxide, regular dry chemical.

extinguishing media		Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Negligible fire hazard. Pressurized containers may rupture or explode if exposed to sufficient heat.
Fire fighting	:	Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	None.
Methods for cleaning up	:	Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH (simple asphyxiant)

Engineering measures

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection	:	Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
Hand protection	:	Wear appropriate chemical resistant gloves.
Eye protection	:	Wear splash resistant safety goggles. Provide and emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	Wear appropriate chemical resistant clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Odorless.
Molecular weight	:	28.0134
Vapor pressure	:	760 mmHg @ -196 C
Vapor density	:	0.967 (air = 1)
Specific gravity	:	Not applicable.
Boiling point	:	-321 F (-196 C)
Freezing point	:	-346 F (-210 C)
Water solubility	:	1.6% @ 20 C
Evaporation rate	:	Not applicable.

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and pressure.
Conditions to avoid	:	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Metals, oxidizing materials.
Hazardous decomposition products	:	Thermal decomposition products: oxides of nitrogen.

11. Toxicological Information

Acute Health Hazard

Ingestion	:	None known.
Inhalation	:	None known.
Skin	:	None known.

12. Ecological Information

Not available.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Nitrogen, Compressed
Class	:	2.2
UN/ID No.	:	UN1066
Labeling	:	Non-Flammable Gas

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)
Not regulated.

TCSA
Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)
Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)
Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)
Acute: Yes
Chronic: No
Fire: No
Reactive: No
Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)
Not regulated.

SAFETY DATA SHEET

Oxygen

Section 1. Identification

GHS product identifier : Oxygen

Chemical name : oxygen

Other means of identification : Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)

Product type : Gas.

Product use : Synthetic/Analytical chemistry.

Synonym : Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)

SDS # : 001043

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253
Inside the US: 1-800-424-9300 (Chemtrec, 24 hours)
Outside the US: 1-703-527-3887 (Chemtrec, 24 hours)

24-hour telephone : Airgas Emergency Response Center 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : OXIDIZING GASES - Category 1
GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H270 - May cause or intensify fire; oxidizer.
H280 - Contains gas under pressure; may explode if heated.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Open valve slowly. Use only with equipment cleaned for Oxygen service.

Prevention : P220 - Keep away from clothing and other combustible materials.
P244 - Keep reduction valves, valves and fittings free from oil and grease.

Response : P370 + P376 - In case of fire: Stop leak if safe to do so.

Storage : P410 + P403 - Protect from sunlight. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : oxygen

Other means of identification : Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)

Product code : 001043

Ingredient name	%	CAS number
Oxygen	100	7782-44-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. Oxidizing material. This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid breathing gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous. Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves free from grease and oil.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Separate from reducing agents and combustible materials. Store away from grease and oil. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
oxygen	None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless. Blue.

Odor : Odorless.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : -218.4°C (-361.1°F)

Boiling point or initial boiling point and boiling range : -183°C (-297.4°F)

Flash point : [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Extremely flammable in the presence of the following materials or conditions: reducing materials, combustible materials and organic materials.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Relative vapor density : 1.1 [Air = 1]

Specific Volume (ft ^{3}/lb) : 12.0482

Gas Density (lb/ft ^{3}) : 0.083

Relative density : Not applicable.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.65

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Flow time (ISO 2431) : Not available.

Molecular weight : 32 g/mole

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions may include the following:
contact with combustible materials
Reactions may include the following:
risk of causing fire

Conditions to avoid : No specific data.

Incompatible materials : Highly reactive or incompatible with the following materials:
combustible materials
reducing materials
grease
oil

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 10. Stability and reactivity

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
oxygen	0.65	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

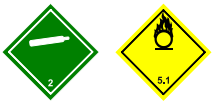
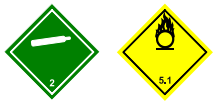
Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1072	UN1072	UN1072	UN1072	UN1072
UN proper shipping name	Oxygen, compressed	OXYGEN, COMPRESSED	OXIGENO COMPRIMIDO	OXYGEN, COMPRESSED	Oxygen, compressed
Transport hazard class(es)	2.2 (5.1) 	2.2 (5.1) 	2.2 (5.1) 	2.2 (5.1) 	2.2 (5.1) 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 14. Transport information

Additional information

DOT Classification : **Limited quantity** Yes.
Packaging instruction Exceptions: 306. Non-bulk: 302. Bulk: 314, 315.
Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.
Special provisions 110, A14

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.23-2.25 (Class 5).
Explosive Limit and Limited Quantity Index 0.125
ERAP Index 3000
Passenger Carrying Road or Rail Index 75

Mexico Classification : **Special provisions** 355

IMDG : **Emergency schedules** _F-C_, _S-W_
Special provisions 355

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 200. Cargo Aircraft Only: 150 kg. Packaging instructions: 200. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.
Special provisions A175, A302

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

TSCA 8(a) CDR Exempt/Partial exemption: This material is listed or exempted.

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

Section 15. Regulatory information

New Jersey : This material is listed.

Pennsylvania : This material is listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

Thailand : This material is listed or exempted.

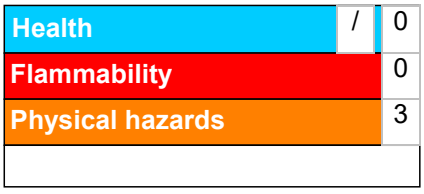
Turkey : Not determined.

United States : This material is active or exempted.

Viet Nam : This material is listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

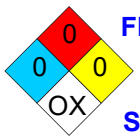


Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Section 16. Other information



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
OXIDIZING GASES - Category 1 GASES UNDER PRESSURE - Compressed gas	Expert judgment According to package

History

Date of printing : 3/28/2025

Date of issue/Date of revision : 3/28/2025

Date of previous issue : 2/20/2024

Version : 5.06

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Monsanto
Material Safety Data

POLYCHLORINATED BIPHENYLS (PCBs)

Emergency Phone No.
(Call Collect)
314-694-1000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: POLYCHLORINATED BIPHENYLS (PCBs)
Aroclor® Series 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, 1268
Therminol® FR Series

MSDS Number: M00018515 Date: 12/95

Chemical Family:	Chlorinated Hydrocarbons
Chemical Name:	Polychlorinated biphenyls
Synonyms:	PCBs, Chlorodiphenyls, Chlorinated biphenyls

Trade Names/Common Names:

PYRANOL® and INERTEEN® are trade names for commonly used dielectric fluids that may have contained varying amounts of PCBs as well as other components including chlorinated benzenes.

ASKAREL is the generic name for a broad class of fire resistant synthetic chlorinated hydrocarbons and mixtures used as dielectric fluids that commonly contained about 30 - 70% PCBs. Some ASKAREL fluids contained 99% or greater PCBs and some contained no PCBs.

PYDRAUL® is the trade name for hydraulic fluids that, prior to 1972, may have contained varying amounts of PCBs and other components including phosphate esters.

The product names/trade names are representative of several commonly used Monsanto products (or products formulated with Monsanto products). Other trademarked PCB products were marketed by Monsanto and other manufacturers. PCBs were also manufactured and sold by several European and Japanese companies. Contact the manufacturer of the trademarked product, if not in this listing, to determine if the formulation contained PCBs.

In 1972, Monsanto restricted sales of PCBs to applications involving only closed electrical systems, (transformers and capacitors). In 1977, all manufacturing and sales were voluntarily terminated. In 1979, EPA restricted the manufacture, processing, use, and distribution of PCBs to specifically exempted and authorized activities.

MONSANTO COMPANY, 800 N. LINDBERGH BLVD., ST. LOUIS, MO 63167

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT
Call CHEMTREC - Day or Night - 1-800-424-9300 Toll free in the continental U.S., Hawaii, Puerto Rico, Canada, Alaska, or Virgin Islands. For calls originating elsewhere: 202-483-7616 (collect calls accepted)

For additional nonemergency information, call: 314-694-3344.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemically, commercial PCBs are defined as a series of technical mixtures, consisting of many isomers and compounds that vary from mobile, oily liquids to white crystalline solids and hard noncrystalline resins. Technical products vary in composition, in the degree of chlorination, and possibly according to batch.

The mixtures generally used contain an average of 3 atoms of chlorine per molecule (42% chlorine) to 5 atoms of chlorine per module (54% chlorine). They were used as components of dielectric fluids in transformers and capacitors. Prior to 1972, PCB applications included heat transfer media, hydraulic, and other industrial fluids, plasticizers, carbonless copy paper, paints, inks, and adhesives.

Component	CAS No.
chlorinated biphenyl	1336-36-3
Aroclor 1016	12674-11-2
Aroclor 1221	11104-28-2
Aroclor 1232	11141-16-5
Aroclor 1242	53469-21-9
Aroclor 1248	12672-29-6
Aroclor 1254	11097-69-1
Aroclor 1260	11096-82-5
Aroclor 1262	37324-23-5
Aroclor 1268	11100-14-4

There are also CAS Numbers for individual PCB congeners and for mixtures of Aroclor® products.

PCBs are identified as hazardous chemicals under criteria of the OSHA Hazard Communication Standard (29 CFR Part 1910.1200). PCBs have been listed in the International Agency for Research on Cancer (IARC) Monographs (1987)-Group 2A and in the National Toxicology Program (NTP) Annual Report on Carcinogens (Seventh).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance and Odor: PCB mixtures range in form and color from clear to amber liquids to white crystalline solids. They have a mild, distinctive odor and are not volatile at room temperature. Refer to Section 9 for details.

WARNING!
CAUSES EYE IRRITATION
MAY CAUSE SKIN IRRITATION

PROCESSING AT ELEVATED TEMPERATURES MAY RELEASE VAPORS OR FUMES WHICH MAY CAUSE RESPIRATORY TRACT IRRITATION

POTENTIAL HEALTH EFFECTS

Likely Routes of Exposure: Skin contact and inhalation of heated vapors

Eye Contact: Causes moderate irritation based on worker experience.

Skin Contact: Prolonged or repeated contact may result in redness, dry skin and defatting based on human experience. A potential exists for developing chloracne. PCBs can be absorbed through intact skin.

Inhalation: Due to the low volatility of PCBs, exposure to this material in ambient conditions is not expected to produce adverse health effects. However, at elevated processing temperatures, PCBs may produce a vapor that may cause respiratory tract irritation if inhaled based on human experience.

Ingestion: No more than slightly toxic based on acute animal toxicity studies. Coughing, choking and shortness of breath may occur if liquid material is accidentally drawn into the lungs during swallowing or vomiting.

Other: Numerous epidemiological studies of humans, both occupationally exposed and nonworker environmentally exposed populations, have not demonstrated any causal relationship between PCB exposure and chronic human illnesses such as cancer or neurological or cardiovascular effects. PCBs at high dosage can cause skin symptoms; however, these subside upon removal of the exposure source.

Refer to Section 11 for toxicological information.

4. FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. If easy to do, remove any contact lenses. Get medical attention. Remove material from skin and clothing.

IF ON SKIN, immediately flush the area with plenty of water. Wash skin gently with soap as soon as it is available. Get medical attention if irritation persists.

IF INHALED, remove person to fresh air. If breathing is difficult, get medical attention.

IF SWALLOWED, do NOT induce vomiting. Rinse mouth with water. Get medical attention. Contact a Poison Control Center. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

NOTE TO PHYSICIANS: Hot PCBs may cause thermal burn. If electrical equipment arcs between conductors, PCBs or other chlorinated hydrocarbon dielectric fluids may decompose to produce hydrochloric acid (HCl), a respiratory irritant. If large amounts are swallowed, gastric lavage may be considered.

5. FIRE FIGHTING MEASURES

Flash Point: 284 degrees F (140 degrees C) or higher depending on the chlorination level of the Aroclor product

Fire Point: 349 degrees F (176 degrees C) or higher depending on the chlorination level of the Aroclor product

NOTE: Refer to Section 9 for individual flash points and fire points.

Extinguishing Media: Extinguish fire using agent suitable for surrounding fire. Use dry chemical, foam, carbon dioxide or water spray. Water may be ineffective. Use water spray to keep fire-exposed containers or transformer cool.

PCBs are fire-resistant compounds. They may decompose to form CO, CO2, HCl, phenolics, aldehydes, and other toxic combustion products under severe conditions such as exposure to flame or hot surfaces.

Dielectric fluids having PCBs and chlorinated benzenes as components have been reported to produce polychlorinated dibenzo-p-dioxins (PCDDs) and furans (PCDFs) during fire situations involving electrical equipment. At temperatures in the range of 600-650 degrees C in the presence of excess oxygen, PCBs may form polychlorinated dibenzofurans (PCDFs). Laboratory studies under similar conditions have demonstrated that PCBs do not produce polychlorinated dibenzo-p-dioxins (PCDDs).

Federal regulations require all PCB transformers to be registered with fire response personnel.

If a PCB transformer is involved in a fire-related incident, the owner of the transformer may be required to report the incident. Consult and follow appropriate federal, state and local regulations.

Fire Fighting Equipment: Fire fighters and others exposed to products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Cleanup and disposal of liquid PCBs and other PCB items are strictly regulated by the federal government. The regulations are found at 40 CFR Part 761. Consult these regulations as well as applicable state and local regulations prior to any cleanup or disposal of PCBs, PCB items, or PCB contaminated items.

If PCBs leak or are spilled, the following steps should be taken immediately:

All nonessential personnel should leave the leak or spill area.

The area should be adequately ventilated to prevent the accumulation of vapors.

The spill/leak should be contained. Loss to sewer systems, navigable waterways, and streams should be prevented. Spills/leaks should be removed promptly by means of absorptive material, such as sawdust, vermiculite, dry sand, clay, dirt or other similar materials, or trapped and removed by pumping or other suitable means (traps, drip-pans, trays, etc.).

Personnel entering the spill or leak area should be furnished with appropriate personal protective equipment and clothing as needed. Refer to Section 8 for personal protection equipment and clothing.

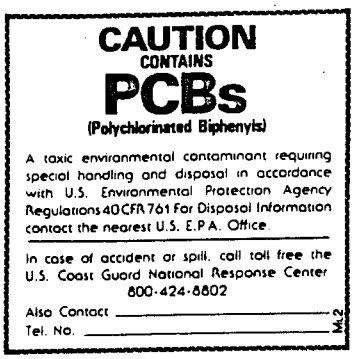
Personnel trained in emergency procedures and protected against attendant hazards should shut off sources of PCBs, clean up spills, control and repair leaks, and fight fires in PCB areas.

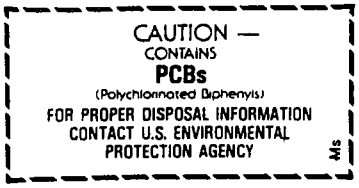
Refer to Section 13 for disposal information and Sections 14 and 15 for information regarding reportable quantity, and Section 7 for marking information.

7. HANDLING AND STORAGE

Care should be taken to prevent entry into the environment through spills, leakage, use vaporization, or disposal of liquid or containers. Avoid prolonged breathing of vapors or mists. Avoid contact with eyes or prolonged contact with skin. If skin contact occurs, remove by washing with soap and water. Following eye contact, flush with water. In case of spillage onto clothing, the clothing should be removed as soon as practical, skin washed, and clothing laundered. Comply with all federal, state, and local regulations.

Federal regulations under the Toxic Substances Control Act require PCBs, PCB items, storage areas, transformer vaults, and transport vehicles to be marked (check regulations, 40 CFR 761, for details).





Storage: The storage of PCB items or equipment (those containing 50 ppm or greater PCBs) and PCB waste is strictly regulated by 40 CFR Part 761. The storage time is limited, the storage area must meet physical requirements, and the area must be labeled.

Avoid contact with eyes.
Wash thoroughly after handling.
Avoid breathing processing fumes or vapors.
Process using adequate ventilation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Wear chemical splash goggles and have eye baths available where there is significant potential for eye contact.

Skin Protection: Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine the appropriate type glove for a given application. Wear chemical goggles, face shield, and chemical resistant clothing such as a rubber apron when splashing is likely. Wash immediately if skin is contacted. Remove contaminated clothing promptly and launder before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

ATTENTION! Repeated or prolonged skin contact may cause chloracne in some people.

Respiratory Protection: Avoid breathing vapor, mist, or dust. Use NIOSH/MSHA approved equipment when airborne exposure limits are exceeded. Full facepiece equipment is recommended when airborne exposure limits are exceeded and, if used, replaces the need for face shield and/or chemical splash goggles. Consult respirator manufacturer to determine the type of equipment for a given application. The respirator use limitations specified by NIOSH/MSHA or the manufacturer must be observed. High airborne concentrations may require use of self-contained breathing apparatus or supplied air respirator. Respiratory protection programs must be in compliance with 29 CFR Part 1910.134.

ATTENTION! Repeated or prolonged inhalation may cause chloracne in some people.

Ventilation: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of vapor or mist, such as open process equipment.

Airborne Exposure Limits:

Product: Chlorodiphenyl (42% chlorine)

OSHA PEL: 1 mg/m^3 8-hour time-weighted average - Skin*
ACGIH TLV: 1 mg/m^3 8-hour time-weighted average - Skin*

Product: Chlorodiphenyl (54% chlorine)

OSHA PEL: 0.5 mg/m^3 8-hour time-weighted average - Skin*
ACGIH TLV: 0.5 mg/m^3 8-hour time-weighted average - Skin*

*For Skin notation see Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Government Industrial Hygienists, 1995-1996.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTIES OF SELECTED AROCLORS*							
PROPERTY	**1016**	**1221**	**1232**	**1242**	**1248**	**1254**	**1260**
Color (APHA)	40	100	100	100	100	100	150
Physical state	mobile oil	mobile oil	mobile oil	mobile oil	mobile oil	viscous liquid	sticky resin
Stability	inert	inert	inert	inert	inert	inert	inert
Density (lb/gal 25°C)	11.40	9.85	10.55	11.50	12.04	12.82	13.50
Specific gravity x/15.5°C	1.36-1.37 x-25°	1.18-1.19 x-25°	1.27-1.28 x-25°	1.30-1.39 x-25°	1.40-1.41 x-65°	1.49-1.50 x-65°	1.55-1.56 x-90°
Distillation range (°C)	323-356	275-320	290-325	325-366	340-375	365-390	385-420
Acidity mg KOH/g, maximum	.010	.014	.014	.015	.010	.010	.014
Fire point (°C)	none to boiling point	176	238	none to boiling point	none to boiling point	none to boiling point	none to boiling point
Flash point (°C)	170	141-150	152-154	176-180	193-196	none	none
Vapor pressure (mm Hg @ 100°F)	NA	NA	0.005	0.001	0.00037	0.00006	NA
Viscosity (Saybolt Univ. Sec. @ 100°F) (centistokes)	71-81 13-16	38-41 3.6-4.6	44-51 5.5-7.7	82-92 16-19	185-240 42-52	1800-2500 390-540	— —

*NA—*Not Available*

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Stability: PCBs are very stable, fire-resistant compounds.
Materials to Avoid: None
Hazardous Decomposition
Products: PCBs may decompose to form CO, CO_2, HCl, phenolics, aldehydes, and other toxic combustion products under severe conditions such as exposure to flame or hot surface.
Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Data from laboratory studies conducted by Monsanto and from the available scientific literature are summarized below.
Single exposure (acute) studies indicate:
Oral - Slightly Toxic (Rat LD50 - 8.65 g/kg for 42% chlorinated; 11.9 g/kg for 54% chlorinated)

The liquid products and their vapors are moderately irritating to eye tissues. Animal experiments of varying duration and at different air concentrations show that for similar exposure conditions, the 54% chlorinated material produces more liver injury than the 42% chlorinated material.

There are literature reports that PCBs can impair reproductive functions in monkeys. The National Cancer Institute (NCI) performed a study in 1977 using Aroclor 1254 with both sexes of rats. NCI stated that the PCB, Aroclor 1254, was not carcinogenic under the conditions of their bioassay. There is sufficient evidence in the scientific literature to conclude that Aroclor 1260 can cause liver cancer when fed to rodents at high doses. Similar experiments with less chlorinated PCB products have produced negative or equivocal results.

The consistent finding in animal studies is that PCBs produce liver injury following prolonged and repeated exposure by any route, if the exposure is of sufficient degree and duration. Liver injury is produced first, and by exposures that are less than those reported to cause cancer in rodents. Therefore, exposure by all routes should be kept sufficiently low to prevent liver injury.

Numerous epidemiological studies of humans, both occupationally exposed and nonworker environmentally exposed population, have not demonstrated any causal relationship between PCB exposure and chronic human illnesses such as cancer or neurological or cardiovascular effects. PCBs at high dosage can cause skin symptoms; however, these subside upon removal of the exposure source.

PCBs have been listed in the International Agency for Research on Cancer (IARC) Monographs (1987)-Group 2A and in the National Toxicology Program (NTP) Seventh Annual Report on Carcinogens.

12. ECOLOGICAL INFORMATION

Care should be taken to prevent entry of PCBs into the environment through spills, leakage, use, vaporization or disposal of liquid or solids. PCBs can accumulate in the environment and can adversely affect some animals and aquatic life. In general, PCBs have low solubility in water, are strongly bound to soils and sediments, and are slowly degraded by natural processes in the environment.

13. DISPOSAL CONSIDERATIONS

The disposal of PCB items or equipment (those containing 50 ppm or greater PCBs) and PCB wastes is strictly regulated by 40 CFR Part 761. For example, all wastes and residues containing PCBs (wiping cloths, absorbent material, used disposable protective gloves and clothing, etc.) should be collected, placed in proper containers, marked and disposed of in the manner prescribed by EPA regulations (40 CFR Part 761) and applicable state and local regulations.

14. TRANSPORT INFORMATION

The data provided in this section are for information only. Please apply the appropriate regulations to properly classify a shipment for transportation.

DOT Classification:	IF WEIGHT OF PCBs TO BE SHIPPED IS OVER ONE POUND, THE FOLLOWING CLASSIFICATION AND LABEL APPLY.	
DOT Label:	LIQUID:	Environmentally Hazardous Substance, liquid, n.o.s. (Contains PCB), 9, UN 3082, III
	SOLID:	Environmentally Hazardous Substance, solid, n.o.s. (Contains PCB), 9, UN 3077, III
DOT Label:	Class: 9	
DOT Reportable Quantity:	One Pound	
IMO Classification:	Polychlorinated Biphenyls, IMO Class 9, UN 2315, II IMO Page 9034, EMS 6.1-02	
IATA/ICAO Classification:	Polychlorinated Biphenyls, 9, UN2315, II	

15. REGULATORY INFORMATION

For regulatory purposes, under the Toxic Substances Control Act, the term "PCBs" refers to a chemical substance limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such a substance (40 CFR Part 761).

TSCA Inventory: not listed.

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): Immediate, Delayed.
SARA Section 313 Toxic Chemical(s): Listed-1993 (De Minimis concentration 0.1%.)

Reportable Quantity (RQ) under DOT (49 CFR) and CERCLA Regulations: 1 lb. (polychlorinated biphenyls) PCBs.

Release of more than 1 (one) pound of PCBs to the environment requires notification to the National Response Center (800-424-8802 or 202-426-2675).

Various state and local regulations may require immediate reporting of PCB spills and may also define spill cleanup levels. Consult your attorney or appropriate regulatory officials for information relating to spill reporting and spill cleanup.

16. OTHER INFORMATION

Reason for revision: Conversion to the 16 section format. Supersedes MSDS dated 10/88.

Therminol®, Aroclor® and Pydraul® are registered trademarks of Monsanto Company
Pyranol® is a registered trademark of General Electric Company
Inerteen® is a registered trademark of Westinghouse Electric Corporation

FOR ADDITIONAL NONEMERGENCY INFORMATION, CONTACT:

Gary W. Mappes
Manager, Product & Environmental Safety

Robert G. Kaley, II
Director, Environmental Affairs

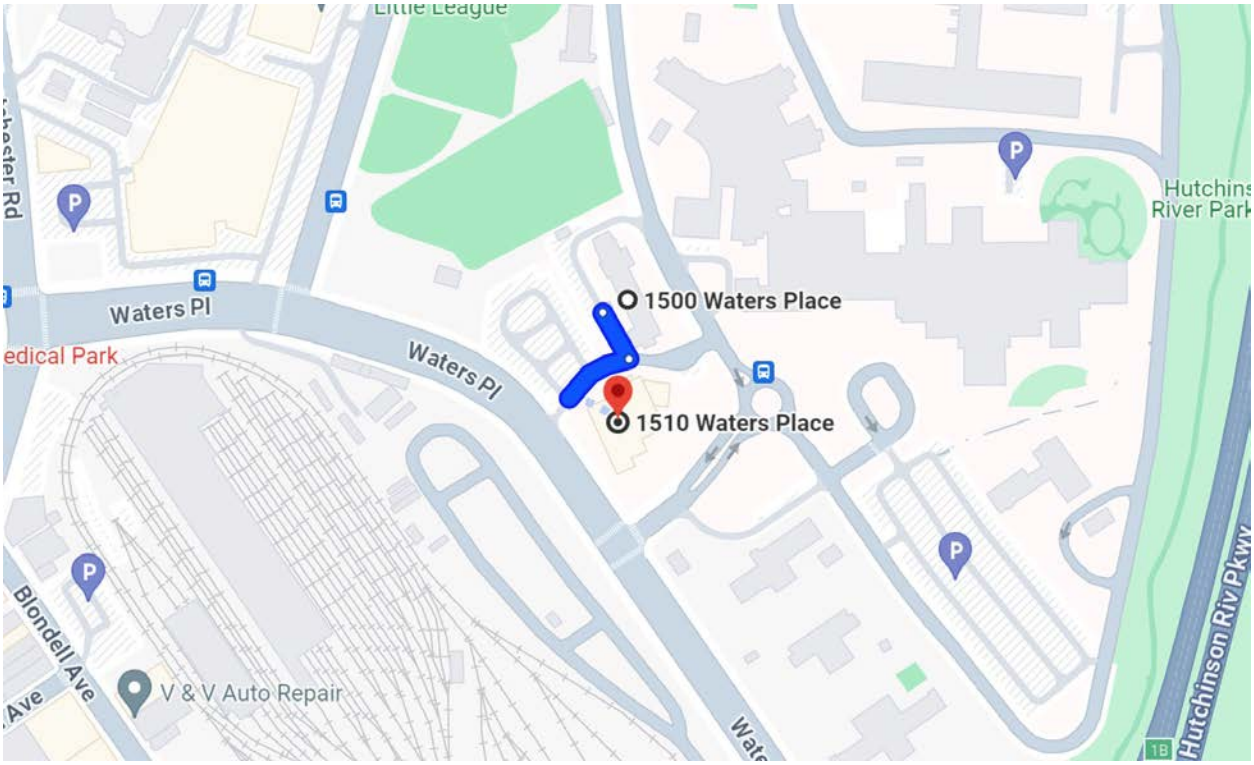
Monsanto Company
800 North Lindbergh Boulevard
St. Louis, MO 63167
(314) 694-3344

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APPENDIX G

MAPS AND DIRECTIONS TO THE CLOSEST HOSPITALS

CLOSEST HOSPTAL AND DIRECTIONS: MONTEFIORE HOSPITAL



1 min (226 ft)

Fastest route to 1500 Waters Place Bronx, New York 10461

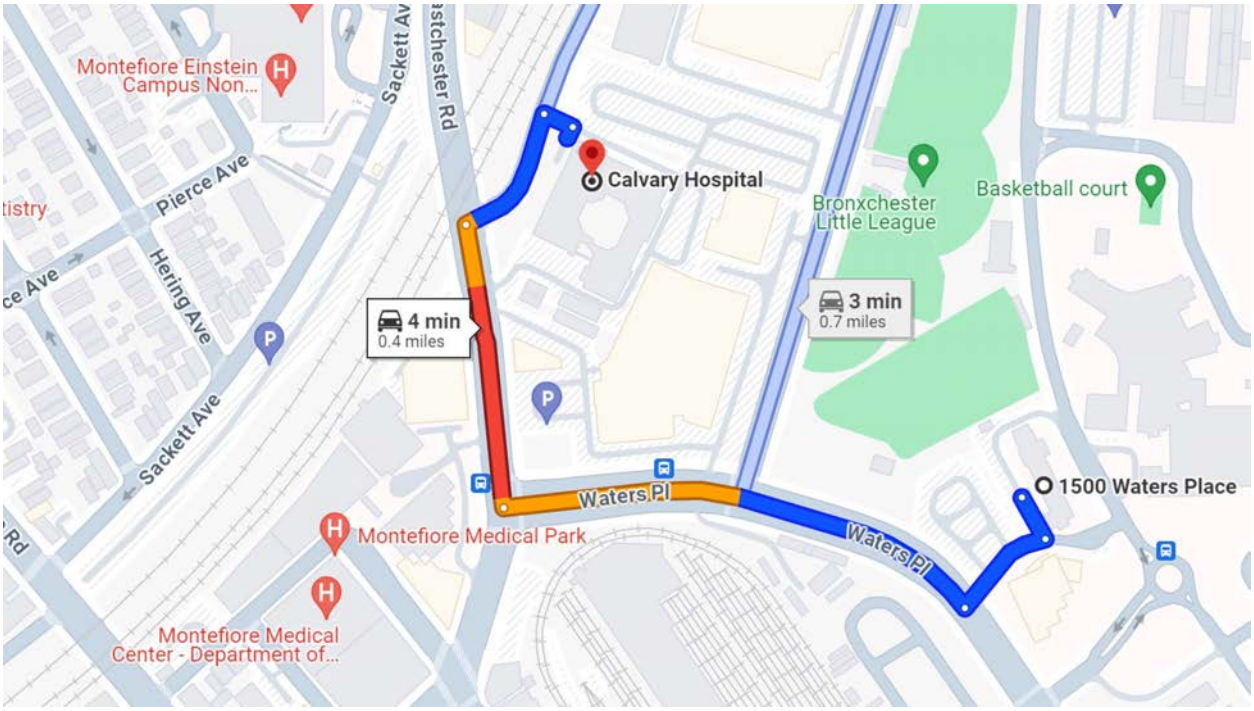
Head southeast 95 feet

Turn right

Destination will be 131 feet ahead on the left

1510 Waters Place Bronx, New York 10461

SECOND CLOSEST HOSPTAL AND DIRECTIONS: CAVALRY HOSPITAL



4 min (0.4 mile)

Fastest Route via Waters Place and Eastchester Road to1500 Waters Place Bronx, New York 10461

Head southeast toward Waters Place 95 feet

Turn right toward Waters Place 217 feet

Turn right onto Waters Place 0.2 miles

Turn right onto Eastchester Road 0.1 miles

Turn right onto Bassett Avenue 282 feet

Turn right 62 feet

Turn right 23 feet

Calvary Hospital

1740 Eastchester Road, Bronx, New York 10461

APPENDIX 5

COMMUNITY AIR MONITORING PLAN

COMMUNITY AIR MONITORING PLAN

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461
DASNY PROJECT NUMBER 3816609999

Prepared For:

New York State Office of Mental Health
75 New Scotland Avenue
Albany, NY 12208

Prepared by:
TRC Engineers, Inc.
1407 Broadway, 33rd Floor
New York, New York 10018
Phone: (212) 221-7822
TRC Project No. 411323.0000.0022

January 2026

Table of Contents

1.0 INTRODUCTION 1

2.0 PURPOSE 2

3.0 AIR MONITORING PROTOCOL 3

3.1 PARTICULATE MONITORING, RESPONSE LEVELS, AND ACTIONS 3

4.0 REPORTING 5

1.0 INTRODUCTION

In accordance with the Remedial Work Plan, this Community Air Monitoring Plan (CAMP) is developed for utilization during ground intrusive work activities at Transformer Room No. 1 and Transformer Room No. 2 located inside Building No. 1 (Medical Surgical Building 101 (Thomson Building), located at the Bronx Psychiatric Center located at 1500 Waters Place in Bronx County of New York City, tax block 4226, lot 30. (referred to as the "Site").

TRC Engineers, Inc. (TRC) developed this CAMP to describe the procedures for real-time air monitoring for particulate levels, which will be completed during slab removal, excavation, material handling, and off-site transport. Continuous monitoring and observations will be required during ground intrusive activities. This CAMP was developed based on the requirements of the New York State Department of Health (NYSDOH) Generic CAMP, Appendix 1A and Fugitive Dust and Particulate Monitoring, Appendix 1B, of the New York State Department of Environmental Conservation (NYSDEC) DER-10.

2.0 PURPOSE

The Community Air Monitoring Plan (CAMP) requires real-time monitoring for particulates (i.e., dust) at the downwind perimeter of the work area at the Site.

Transformer Rooms 1 and 2 are located in the basement of an unoccupied building and are secluded from the public. Each Transformer Room has an egress on the basement level with dedicated exterior stairs from the basement level directly to the ground level, which is the primary pathway for remedial work and waste removal for basement Transformer Rooms 1 and 2. During the intrusive remedial activities, the front primary pathway entrance to the basement will be isolated (e.g. polyvinyl plastic sheeting (curtain wall) to prevent dust from leaving the work area). Polyvinyl plastic sheeting (curtain wall) will be installed at each exterior doorway during intrusive work. Soil and concrete will be transported to roll-off containers on the ground level via the exterior stairwells, and bins utilized to transport soil and concrete will be covered during transport to the roll-off.

There is a potential for dust emissions to impact the community during the transport of soil and concrete into roll-off containers or during off-site transport. Therefore, as a precautionary measure, an exterior dust monitor will be positioned at a downwind location at the exterior doorway nearest to the work during the transport of soil or concrete outside of the building.

The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors, including businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of ground intrusive work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities do not spread contamination off-site through the air.

3.0 AIR MONITORING PROTOCOL

A qualified environmental monitor with "stop work authority" will be responsible for air monitoring and daily calibration and maintenance of the equipment in accordance with the manufacturer's specifications. All instrumentation and equipment will be maintained at all times in proper operating condition. The qualified environmental monitor will be responsible for documenting in the dedicated project log book each calibration event, any equipment and instrument malfunctions, unusual conditions, air monitoring station locations, and any exceedances of action levels and countermeasures implemented. Copies of the manufacturers' owner's manuals for monitoring instrumentation to be used are included as *Appendix A*.

3.1 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind locations of the perimeter of the Site at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level (i.e., TSI DustTrak Model 8530). The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust is migrating from the work area. Note that dust complaints from any owner of an adjacent or nearby property will be managed by the Contractor in a manner equivalent to an exceedance of an action level in the CAMP.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 $\mu g/m^3$ above the upwind level, work will be stopped, and a re-evaluation of activities will be initiated. Work will be able to be resumed provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

- All readings will be recorded and be available for State (NYSDEC and NYSDOH) personnel to review.

4.0 REPORTING

Any exceedance of a CAMP threshold or action level will be reported to the NYS Office of Mental Health, NYSDEC, and NYSDOH immediately and additionally via email within 4 hours of the time it is recorded. The report will include the instrument readings; location of the monitoring station where the exceedance was recorded; readings at upwind locations; date, time, and duration of elevated readings (i.e., number of 15 minute time-weighted exceedances); activities being performed at the time of the exceedances; and descriptions of countermeasures implemented to control the exceedance and prevent future occurrences.

At the completion of each workday, the data recorded from each air monitoring station will be downloaded onto a dedicated field computer and evaluated by the qualified environmental monitor. All readings will be recorded and will be available for State (NYSDEC and NYSDOH) personnel to review.

APPENDIX A

MANUFACTURERS' OWNER'S MANUALS

DustTrak™ II Aerosol Monitor

Model 8530/8530EP/8532

Operation and Service Manual

P/N 6001893, Revision W
April 2023



DustTrak™ II 8530 Desktop and 8532 Handheld Monitors



DustTrak™ II 8530EP Monitor

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TSI Incorporated / 500 Cardigan Road / Shoreview, MN 55126 / USA

Fax No.
(651) 490-3824

Limitation of Warranty and Liability (effective April 2014)
(For country-specific terms and conditions outside of the USA, please visit www.tsi.com.)

Seller warrants the goods, excluding software sold hereunder, under normal use and service as described in the operator's manual, shall be free from defects in workmanship and material for twenty-four (24) months, or if less, the length of time specified in the operator's manual, from the date of shipment to the customer. This warranty period is inclusive of any statutory warranty. This limited warranty is subject to the following exclusions and exceptions:

a. Hot-wire or hot-film sensors used with research anemometers, and certain other components when indicated in specifications, are warranted for 90 days from the date of shipment;
b. DustTrak internal pump for Models 8530 and 8533 is warranted for two (2) years or 4000 hours, whichever comes first;
c. DustTrak external pump for Models 8530EP and 8533EP is warranted for two (2) years or 8760 hours, whichever comes first;
d. DustTrak internal pump for Models 8530 and 8533 is warranted for operation within ambient temperatures between 5–45°C. Warranty is void when the internal pump is operating outside of this temperature range;
e. Parts repaired or replaced as a result of repair services are warranted to be free from defects in workmanship and material, under normal use, for 90 days from the date of shipment;
f. Seller does not provide any warranty on finished goods manufactured by others or on any fuses, batteries or other consumable materials. Only the original manufacturer's warranty applies;
g. This warranty does not cover calibration requirements, and seller warrants only that the instrument or product is properly calibrated at the time of its manufacture. Instruments returned for calibration are not covered by this warranty;
h. This warranty is **VOID** if the instrument is opened by anyone other than a factory authorized service center with the one exception where requirements set forth in the manual allow an operator to replace consumables or perform recommended cleaning;
i. This warranty is **VOID** if the product has been misused, neglected, subjected to accidental or intentional damage, or is not properly installed, maintained, or cleaned according to the requirements of the manual. Unless specifically authorized in a separate writing by Seller, Seller makes no warranty with respect to, and shall have no liability in connection with, goods which are incorporated into other products or equipment, or which are modified by any person other than Seller.

The foregoing is **IN LIEU OF** all other warranties and is subject to the **LIMITATIONS** stated herein. **NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. WITH RESPECT TO SELLER'S BREACH OF THE IMPLIED WARRANTY AGAINST INFRINGEMENT, SAID WARRANTY IS LIMITED TO CLAIMS OF DIRECT INFRINGEMENT AND EXCLUDES CLAIMS OF CONTRIBUTORY OR INDUCED INFRINGEMENTS. BUYER'S EXCLUSIVE REMEDY SHALL BE THE RETURN OF THE PURCHASE PRICE DISCOUNTED FOR REASONABLE WEAR AND TEAR OR AT SELLER'S OPTION REPLACEMENT OF THE GOODS WITH NON-INFRINGING GOODS.**

TO THE EXTENT PERMITTED BY LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF SELLER'S LIABILITY FOR ANY AND ALL LOSSES, INJURIES, OR DAMAGES CONCERNING THE GOODS (INCLUDING CLAIMS BASED ON CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) SHALL BE THE RETURN OF GOODS TO SELLER AND THE REFUND OF THE PURCHASE PRICE, OR, AT THE OPTION OF SELLER, THE REPAIR OR REPLACEMENT OF THE GOODS. IN THE CASE OF SOFTWARE, SELLER WILL REPAIR OR REPLACE DEFECTIVE SOFTWARE OR IF UNABLE TO DO SO, WILL REFUND THE PURCHASE PRICE OF THE SOFTWARE. IN NO EVENT SHALL SELLER BE LIABLE FOR LOST PROFITS, BUSINESS INTERRUPTION OR ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES. SELLER SHALL NOT BE RESPONSIBLE FOR INSTALLATION, DISMANTLING OR REINSTALLATION COSTS OR CHARGES. No Action, regardless of form, may be brought against Seller more than 12 months after a cause of action has accrued. The goods returned under warranty to Seller's factory shall be at Buyer's risk of loss, and will be returned, if at all, at Seller's risk of loss.

Buyer and all users are deemed to have accepted this LIMITATION OF WARRANTY AND LIABILITY, which contains the complete and exclusive limited warranty of Seller. This LIMITATION OF WARRANTY AND LIABILITY may not be amended, modified or its terms waived, except by writing signed by an Officer of Seller.

Service Policy

Knowing that inoperative or defective instruments are as detrimental to TSI as they are to our customers, our service policy is designed to give prompt attention to any problems. If any malfunction is discovered, please contact your nearest sales office or representative, or call TSI's Customer Service department at (800) 680-1220 (USA) or (001 651) 490-2860 (International) or visit www.tsi.com.

Trademarks

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CONTENTS

SAFETY INFORMATION V
Laser Safety v
Labels vi
Description of Caution/Warning Symbols vii
Caution vii
Warning vii
Caution and Warning Symbols vii
Reusing and Recycling vii

CHAPTER 1 UNPACKING AND PARTS IDENTIFICATION 1
Unpacking the DustTrak™ II Aerosol Monitor 2
Optional Accessories 7
Parts Identification for the DustTrak™ II Desktop Aerosol Monitor Models 8530 8
Parts Identification for the DustTrak™ II Desktop Aerosol Monitor Model 8530EP 9
External Pump Module (8530EP only) 9
Parts Identification for the DustTrak™ II Handheld Aerosol Monitor Model 8532 10

CHAPTER 2 SETTING UP 11
Supplying Power to the DustTrak™ II Aerosol Monitor 11
Installing the Batteries in Model 8530/8530EP Desktop 11
Installing the Batteries in Model 8532 Handheld 12
Connecting the External Pump to DustTrak™ Model 8530EP 12
Using the AC Adapter to Run Instrument 14
Battery Charging 14
Inlet Cap 15
Size-Selective Impactors 15
Dorr-Oliver Cyclone 16
Instrument Setup 16
Connecting to the Computer 16
Installing TrakPro™ Data Analysis Software 16
Connecting Analog/Alarm Output 17
Wiring the Analog Output 18
Wiring the Alarm 18

CHAPTER 3 OPERATION 19
Getting Started 19
For Model DustTrak™ 8530EP only 19
Setup Menu 22
Zero Cal 23
Flow Cal 24
User Cal 25
Alarm 30
Analog 32
Settings 33
Run Mode 35
Survey Mode 36

Manual Mode 37
Log Mode (1–5) 38
Locking Feature 39
Taking Mass Concentration Measurements 41
Screen Regions 42
Stats 43
Graphing 43
Viewing Data 45
Title Bar 46

CHAPTER 4 MAINTENANCE 47
Maintenance Schedule 47
Zeroing Instrument 48
Cleaning the Inlet 48
Cleaning and Oiling Impactors 49
Replacing the Internal Filters 50
Replacing the Filters in the External Pump Module 54
Storage Precautions 54

CHAPTER 5 TROUBLESHOOTING 55

APPENDIX A SPECIFICATIONS 61

APPENDIX B ZERO MODULE 63

These Application Notes can also be found on TSI® Incorporated's web site:
https://www.tsi.com

EXPMN-001 DustTrak II Theory of Operation.pdf
EXPMN-003 DustTrak II Impactor.pdf

Safety Information

IMPORTANT NOTICE

There are no user serviceable parts inside the instrument. Refer all repair and maintenance to a qualified factory-authorized technician. All maintenance and repair information in this manual is included for use by a qualified factory-authorized technician.

Laser Safety

- The Model 8530/8532 DustTrak™ II monitor is a Class I laser-based instrument.
- During normal operation, you will ***not*** be exposed to laser radiation.
- Precaution should be taken to avoid exposure to hazardous radiation in the form of intense, focused, visible light.
- Exposure to this light may cause blindness.

Take these precautions:

- **DO NOT** remove any parts from the DustTrak™ II monitor unless you are specifically told to do so in this manual
- **DO NOT** remove the housing or covers. There are no serviceable components inside the housing.



WARNING

The use of controls, adjustments, or procedures other than those specified in this manual may result in exposure to hazardous optical radiation.



WARNING

There are no user-serviceable parts inside this instrument. The instrument should only be opened by TSI® or a TSI® approved service technician.



WARNING

If the DustTrak™ monitor is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

When operated according to the manufacturer's instruction, this device is a Class I laser product as defined by U.S. Department of Health and Human Services standards under the Radiation Control for Health and Safety Act of 1968. A certification and identification label like the one shown below is affixed to each instrument.

Labels

Advisory labels and identification labels are attached to the instrument.

1. Serial Number Label (bottom)	DUSTTRAK™ II – Model 8530 SN 8530105101 MFD DECEMBER 2010 CLASS I LASER PRODUCT COMPLIES WITH 21 CFR 1040.10 AND 1040.11 TSI Inc. 500 Cardigan Road Shoreview, MN 55126 U.S.A. www.tsi.com ⎓ 24V – 2.5A Made in USA
2. Laser Radiation Label (internal)	**DANGER!** VISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM WARNING: NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL
3. Battery label	!!WARNING!! THIS INSTRUMENT WAS DESIGNED TO USE ONLY TSI SUPPLIED BATTERIES, PN 801680 or !!WARNING!! THIS INSTRUMENT WAS DESIGNED TO USE ONLY TSI SUPPLIED BATTERIES, PN 801680
4. European symbol for non-disposable item. Item must be recycled.	

Description of Caution/Warning Symbols

Appropriate caution/warning statements are used throughout the manual and on the instrument that require you to take cautionary measures when working with the instrument.

Caution



CAUTION
Failure to follow the procedures prescribed in this manual might result in irreparable equipment damage. Important information about the operation and maintenance of this instrument is included in this manual.

Warning



WARNING
Warning means that unsafe use of the instrument could result in serious injury to you or cause damage to the instrument. Follow the procedures prescribed.

Caution and Warning Symbols

The following symbols may accompany cautions and warnings to indicate the nature and consequences of hazards:

	Warns that the instrument contains a laser and that important information about its safe operation and maintenance is included in the manual.
	Warns that the instrument is susceptible to electro-static discharge (ESD) and ESD protection should be followed to avoid damage.
	Indicates the connector is connected to earth ground and cabinet ground.

Reusing and Recycling



As part of TSI® Incorporated's effort to have a minimal negative impact on the communities in which its products are manufactured and used:

- **DO NOT** dispose of used batteries in the trash. Follow local environmental requirements for battery recycling.
- If instrument becomes obsolete, return to TSI for disassembly and recycling.

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Chapter 1

Unpacking and Parts Identification

Carefully unpack the Model 8530/8532 DustTrak™ II Aerosol Monitor from the shipping container. Use the tables and illustrations below to make certain that there are no missing components. Contact TSI® immediately if anything is missing or damaged.

NOTICE

If you purchased a DustTrak™ II Model 8530-NA (no accessories) Aerosol Monitor, it only comes with the following items:

- DustTrak™ II Model 8530 Aerosol Monitor
- Operations manual
- TrakPro™ Data Analysis Software CD
- One-year calibration certificate
- Service paperwork
- 2-year warranty

All accessories for the DustTrak™ II Model 8530 Aerosol Monitor are sold separately. Contact TSI® at (800) 680-1220 for information on accessories and how to purchase them through a TSI® sales representative.

(continued on next page)

Unpacking the DustTrak™ II Aerosol Monitor

Compare all the components you received with those listed in the table below. If any parts are missing, contact TSI®.

Item	Qty	Part Number	Description
 *or*	1	8530	Desktop II
		8532	Handheld II
	1	801670	Desktop II Carrying Case
		801669	Handheld II Carrying Case
	1	1090014	Data Analysis Software CD-ROM
		(Software is also available for download from the TSI® website at https://tsi.com/software.)	
	1	800663	Zero Filter

Item	Qty	Part Number	Description
 *or*	1	801680	7800 mAH Lithium Ion Rechargeable Battery (Desktop)
		801681	Rechargeable lithium ion battery (Handheld)
	1	1303740	USB cable
	1	801652	Analog/alarm output cable (Desktop models only)
	1	6001893	Operation and Service Manual
	1	N/A	Calibration Certificate

Item	Qty	Part Number	Description
	1	801688	Conductive Tubing
	1	801668	Filter removal tool (Spanner Driver)
	4	801673	Spare Internal Filter Elements Desktop Model Only
	2		37-mm filter includes: Filter body top Filter body bottom Mesh screen
	1		Comes with 37-mm cartridge opening tool
	8	801666	Spare Internal Filters Handheld Model Only
	1	801667	Impactor Kit
			$PM_{2.5}$ assembled Top Bottom Impaction Plate $PM_{1.0}$ Top $PM_{4.0}$ Top PM_{10} Top Extra Impaction Plate
	1	801691	Dorr-Oliver Cyclone

Item	Qty	Part Number	Description
	1	801684	Power Supply – Desktop
		801694	Power Supply – Handheld
	2	N/A	Stylus
		When shipped, one stylus will be in the accessory bag, the second stylus attached to instrument.	
	1	3012094	Screwdriver, dual ended. (For Handheld Models only)
	1	801674	Impactor Oil
	2	801698	Inlet cap
		When shipped, one inlet will be in the accessory bag, the second inlet attached to instrument.	
	1	801675	External Pump Kit *for 8530EP only*

Item	Qty	Part Number	Description
	1	801797	External Pump Power Cable (to DustTrak™ monitor) *for 8530EP only*
	1	801798	External Pump Flow Tube (to DustTrak™ monitor) *for 8530EP only*
	1		Exhaust Adapter, DustTrak™ monitor *for 8530EP only*

Optional Accessories

The following photos and table list optional accessories. If you ordered optional accessories, make certain they have been received and are in working order.

Accessories	Qty	Part Number	Description
	1	801675	External Pump Kit
	2	801795	DustTrak™ II/DRX External Pump Service Kit for 8530EP only. Contains two filters for External Pump
	1	801685	Battery Charger, 2-Bay, Battery 801680 for Desktop DustTrak™ monitor
	1	801686	Battery Charger, Battery 801681 for Handheld DustTrak™ monitor

Parts Identification for the DustTrak™ II Desktop Aerosol Monitor Models 8530

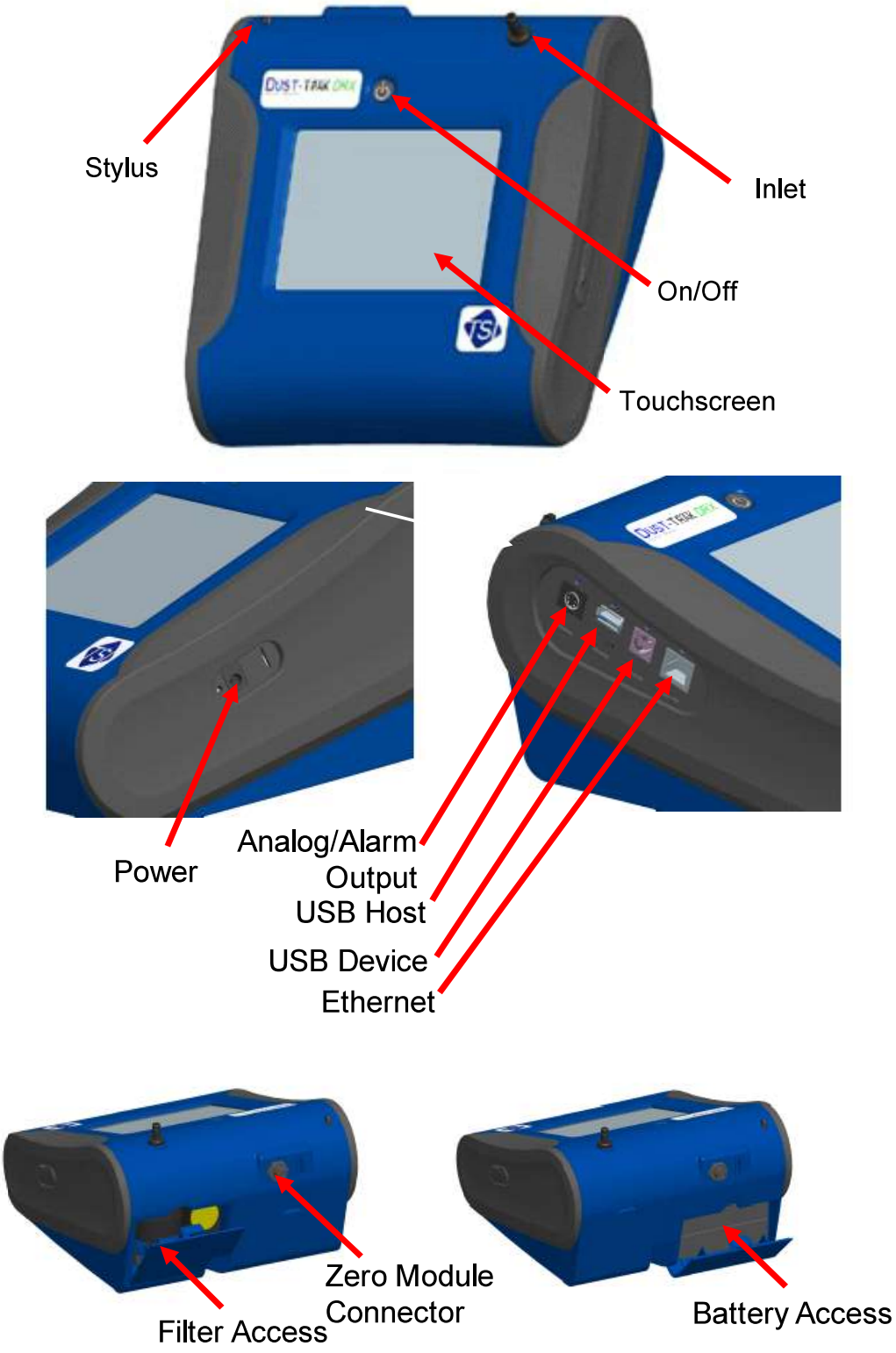
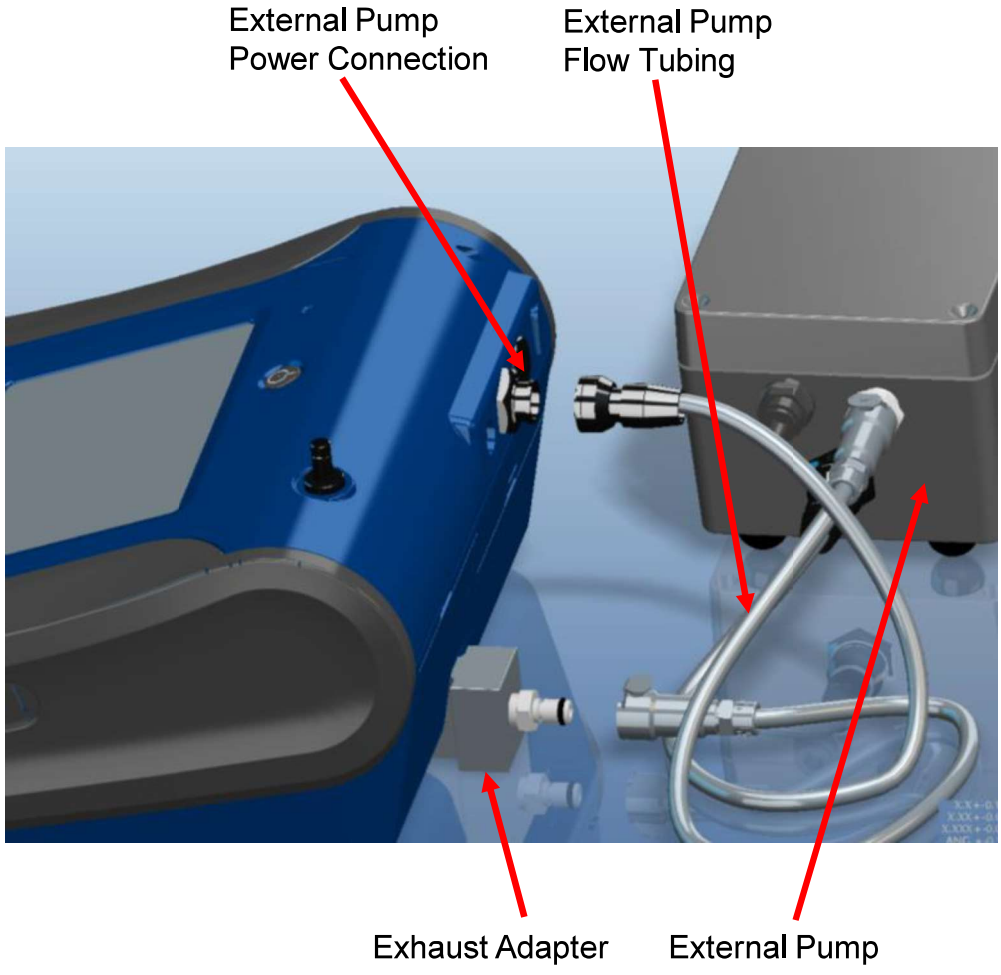


Figure 1-1: Features on Desktop Model 8530

Parts Identification for the DustTrak™ II Desktop Aerosol Monitor Model 8530EP



External Pump Module (8530EP only)

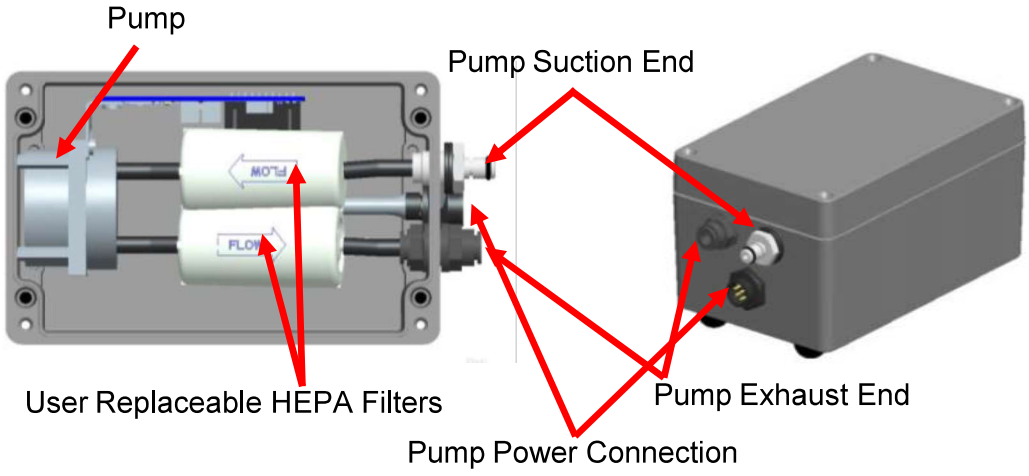


Figure 1-2: Features on Desktop Model 8530EP

Parts Identification for the DustTrak™ II Handheld Aerosol Monitor Model 8532

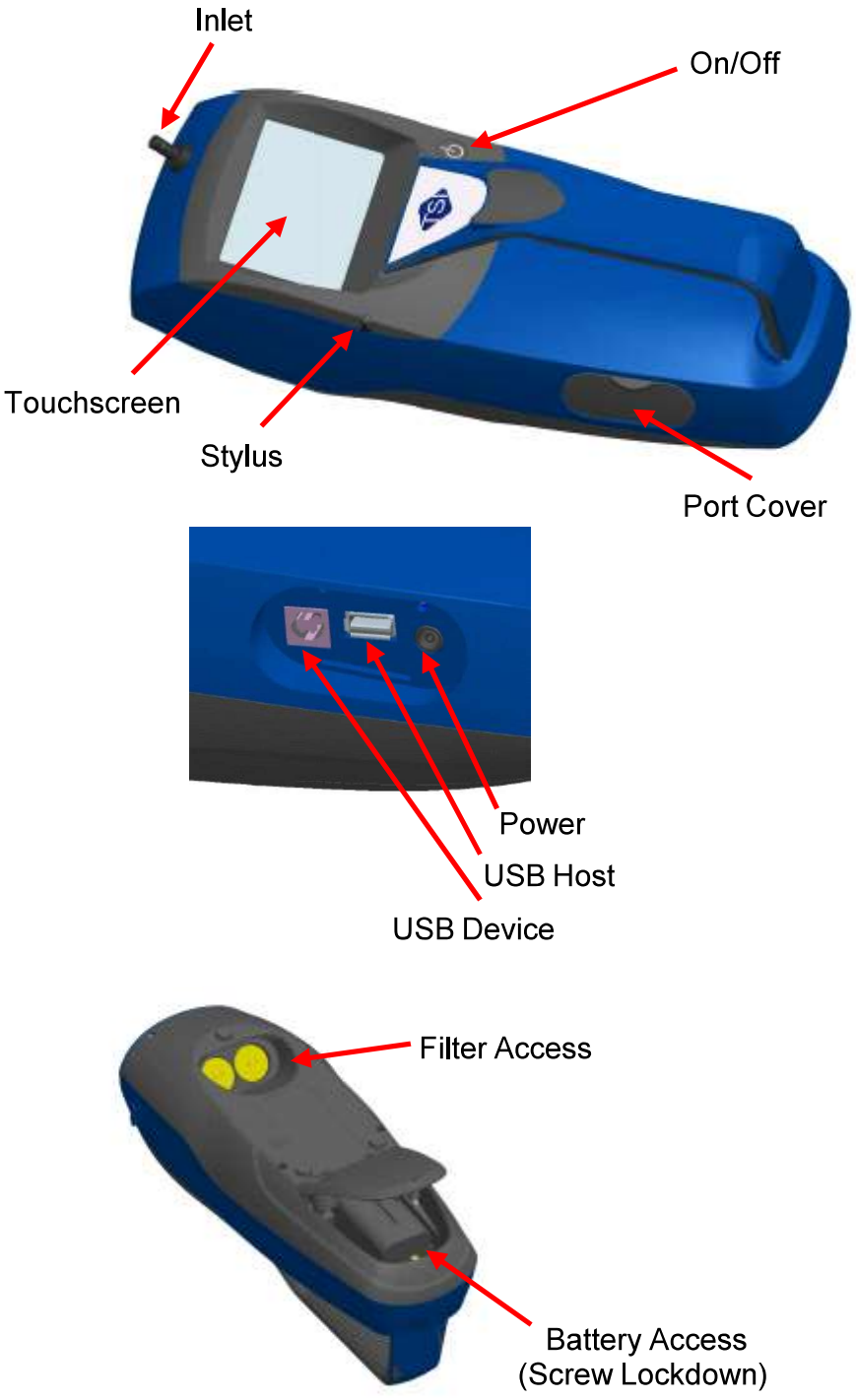


Figure 1-3: Features on Handheld Model

Chapter 2

Setting Up

Supplying Power to the DustTrak™ II Aerosol Monitor

The DustTrak™ II Aerosol Monitor must be powered by either batteries or using the external AC adapter.

WARNING

The instrument has been design to be used with batteries supplied by TSI®. **DO NOT** use a substitute.

Disposing of old batteries must be recycled in accordance with the local environmental regulations.

WARNING

DO NOT use non-rechargeable batteries in this instrument. Fire, explosions, or other hazards may result.

Installing the Batteries in Model 8530/8530EP Desktop

Remove the battery cover and slide one or two batteries into the battery slots. A single battery can be put into either slot. Orient the batteries with the label side facing up (see Figure 2-1).



Figure 2-1: Batteries into Desktop Unit

Installing the Batteries in Model 8532 Handheld

Remove the battery cover by loosening captured screw on the bottom of the unit. Orient battery with brass connectors facing forward. Insert battery into cavity and slide forward to engage into pins. Replace the battery cover and secure by tightening screw (see Figure 2-2).

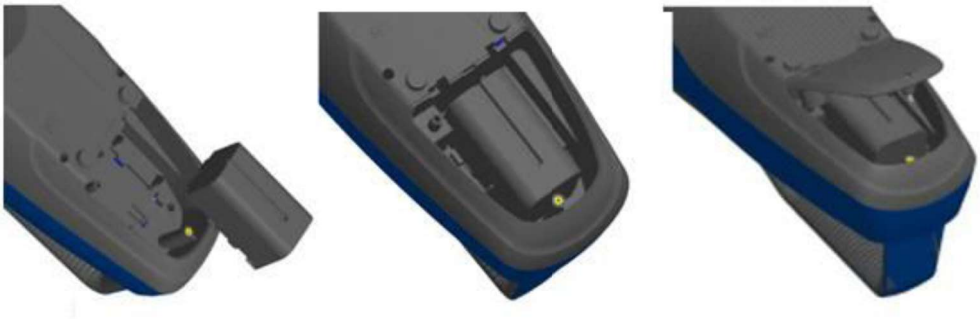


Figure 2-2: Batteries into Handheld Unit

Connecting the External Pump to DustTrak™ Model 8530EP

The Model 8530EP is a Desktop DustTrak™ monitor with an external pump. This DustTrak™ monitor has no internal pump and will not work with any other external pump other than the one provided by TSI® (P/N 801675). The Model 8530EP is intended for applications where the DustTrak monitor is operated continuously over extended periods (several days to months) under wide temperature fluctuations (0 to 50°C). The external pump is designed to be more robust for 24/7 operation of the DustTrak monitor and is warranted to operate continuously for one full year or 8760 hours. The Model 8530EP is ideal for fugitive dust monitoring.

The pump and the DustTrak monitor come separately and require assembly. Follow the steps below to connect the pump with the Model 8530EP DustTrak monitor.



WARNING

Turn the DustTrak monitor OFF before connecting the external pump. Turn the DustTrak monitor ON only after connecting the External Module.

1. Connect the pump end of the quick connect to the pump module (see Figure 2-3).



Figure 2-3: Connect Pump End of Quick Connect to Pump Module

2. Likewise, plug one end of the power connector to the pump module as shown above. Turn the power connector until it clicks and locks in place. This prevents the connector from disconnecting due to vibration or movement.



Figure 2-4: Connect Exhaust Adapter to Exhaust of DustTrak Monitor

3. Connect the exhaust adapter to the exhaust of the DustTrak™ monitor (see Figure 2-4).
4. Connect the other end of the flow tubing to the exhaust adapter of the DustTrak™ monitor.
5. Connect the other end of the power connector to the DustTrak™ monitor (see Figure 2-5).



Figure 2-5: Connect Power Connector to DustTrak Monitor



WARNING

The Pump module design does not allow for installation outdoors without any protection from the elements. Always operate it within an enclosure.

The DustTrak™ external pump module **DOES NOT** require an A/C adapter. It is always powered off the DustTrak™ monitor.

NOTICES

1. The power connector and the flow quick connect “click” when securely connected. The power connector must be rotated clockwise past the locking pin.
2. **DO NOT** hot-plug the External Pump Module when the DustTrak™ monitor is turned ON. Always connect the External Pump module first and then turn the DustTrak monitor ON.
3. TSI® recommends that the DustTrak monitor with the external pump be operated in the Model 8535 Environmental Enclosure.
4. TSI® recommends that the pump module be operated when mounted on its feet and avoid operating at other orientations as much as possible.
5. Pump module and the DustTrak monitor should be at the same electrical potential.
6. The additional port on the external pump module is where the pump exhausts the flow. For applications where the DustTrak monitor is sampling from a chamber or a duct at pressures significantly different from the ambient, TSI® recommends plumbing the exhaust of the external pump back in to the chamber/duct.

Using the AC Adapter to Run Instrument

The AC adapter allows you to power the DustTrak monitor from an AC wall outlet. When using the AC adapter, the batteries (if installed) are bypassed.

Battery Charging

This instrument will charge the Lithium Ion battery packs. Insert the batteries into the battery compartment, plug the instrument into AC power, and turn the instrument on. Batteries will charge only when the instrument is on and in stand-by mode. Batteries will not charge if the instrument is turned off or is actively taken measurements. Charging will stop when the batteries are fully charged.



CAUTION

When Charging Battery the ambient temp **MUST NOT** exceed 42°C.

Inlet Cap

When using the DustTrak™ monitor to sample environmental air, the inlet cap should be put over the instrument. This cap will keep large objects from dropping into and plugging the inlet. The cap will also keep direct light from shinning into the chamber and skewing the results.

The inlet cap can simply be pressed onto the instruments inlet.



Figure 2-6: Putting on Inlet Cap

Size-Selective Impactors

Size-selective impactors can be attached to the inlet of the DustTrak II instruments. Size-selective impactors can be used to pre-condition the size range of the particles entering the instrument. PM_1, $PM_{2.5}$, PM_4 (Respirable) and PM_{10} impactors are available. **The instrument must run at the factory default setting of 3.0 L/min for the impactors to achieve the correct cut points.**

The size-selective impactor is composed of three parts; the cap, impaction plate and bottom. Selection of the cap will determine cut size of the impactor. Each cap is labeled with the particle cut size (1 µm, 2.5 µm, 4.0 µm or 10 µm). The same impaction plate and bottom are used on all impactor sizes.

The impactor assembly is attached to the instrument in place of the inlet cap. The inlet cap does not need to be used if an impactor is being used. See Chapter 4, "Maintenance," for instructions on how to add oil to the impaction plate.

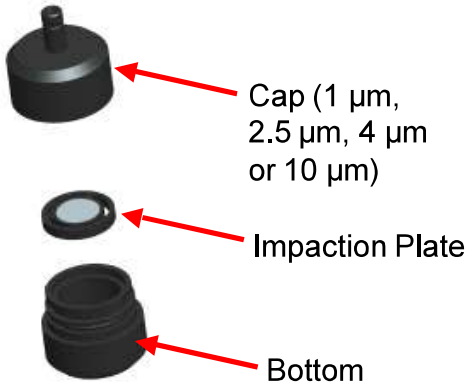


Figure 2-7: Size-Selective Impactor

Dorr-Oliver Cyclone

A Dorr-Oliver cyclone is shipped with the instrument. The Dorr-Oliver cyclone removes particles over 4.0 µm in size. The Dorr-Oliver cyclone is attached to the instrument by sliding the cyclone clip over the protruding catch. The tube from the Dorr-Oliver cyclone needs to be routed to the inlet of the instrument.



Figure 2-8: Installing Door-Oliver Cyclone

DO NOT use Inlet attachments (impactors or inlet cap) when using the Dorr-Oliver Cyclone. **The instrument flow rate must be changed to 1.7 L/min when using the Dorr-Oliver Cyclone in order to achieve a 4 µm (respirable) cut-point.** See the Flow Cal instructions in the Operations chapter for instructions on how to change the instruments flow rate.

Instrument Setup

The DustTrak™ II monitor can be connected to a computer to download data and upload sampling programs.

Connecting to the Computer

Connect the USB host port of a Microsoft® Windows®-based computer to the USB device port on the side of the DustTrak monitor.

Installing TrakPro™ Data Analysis Software

TrakPro™ software can preprogram the DustTrak™ monitor, download data, view and create raw data and statistical reports, create graphs, and combine graphs with data from other TSI® instruments that use TrakPro™ software. The following sections describe how to install the software and set up the computer.

NOTICE

To use TrakPro software with the DustTrak™ Aerosol Monitor, the PC must be running Microsoft® Windows® and the computer must have an available Universal Serial Bus (USB) port.

®Microsoft and Windows are registered trademarks of Microsoft Corporation.

1. Insert the TrakPro™ Data Analysis Software CD into the CD-ROM drive The install screen starts automatically.

NOTICE
If the software does not start automatically after a few minutes, manually run the program listed on the label of the CD using the **Run** command on the Windows® Start Menu.

2. Follow the directions to install TrakPro™ software.

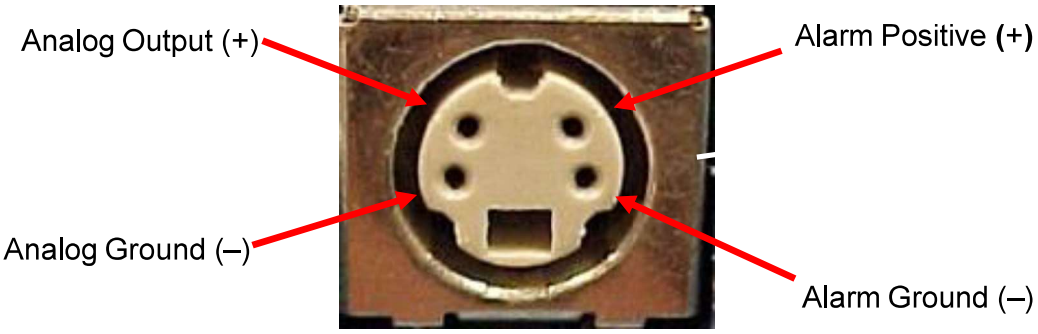
   - Software is also available for download from the TSI® website at https://tsi.com/software. Follow online instructions to download software.

TrakPro™ software contains a comprehensive installation guide. TSI® recommends printing out this guide prior to starting the TrakPro software installation on your computer, so it may be consulted during the installation. The TrakPro Software manual is located in the "Help" file in TrakPro software. There is no separately printed TrakPro Data Analysis software manual.

Connecting Analog/Alarm Output

The Analog/Alarm Output Cable plugs into the alarm connection on the side of the instrument. This feature is on the desktop model 8530 only.

The cable contains a 4-pin, mini-DIN connector. The pin-outs for the connector and the wiring for the cable are shown below.



4-pin miniDIN connector

Cable Wiring Diagram	
Brown Wire	Analog Ground
Orange Wire	Analog Out
Red Wire	Alarm (+)
White Wire	Alarm (-)
Black Wire	Shield

Figure 2-9: Cable Wiring Diagram

Wiring the Analog Output

System specifications:

- Output voltage: 0 to 5 VDC. With a maximum output of 15 mA.
- Output Current 4 mA to 20 mA with a maximum load impendence of 250 ohms.
- Correct polarity must be observed (see pin-outs above).

The output cable supplied by TSI® (P/N 801652) is labeled with the pin-out wiring diagram. Additional equipment may be needed for making connections to the system that TSI® does not supply. It is your responsibility to specify and supply all additional equipment.

Wiring the Alarm

System specifications:

- Maximum voltage: 15 VDC (**DO NOT USE AC POWER**)
- Maximum current: 1 Amp
- Correct polarity must be observed (see pin-outs above)
- The alarm switch, located inside the DustTrak™ monitor must be located on the ground side of the alarm system.



W A R N I N G

The DustTrak™ monitor Alarm Output function **SHOULD NOT** be used to detect hazardous conditions or to provide an alarm for protecting human life, health or safety.



W A R N I N G

The alarm switch **MUST NOT** be wired to AC power! Failure to install the user alarm properly could damage the DustTrak™ instrument and/or void the instrument warranty! Please read and follow all instructions before wiring or operating the user alarm.



W A R N I N G

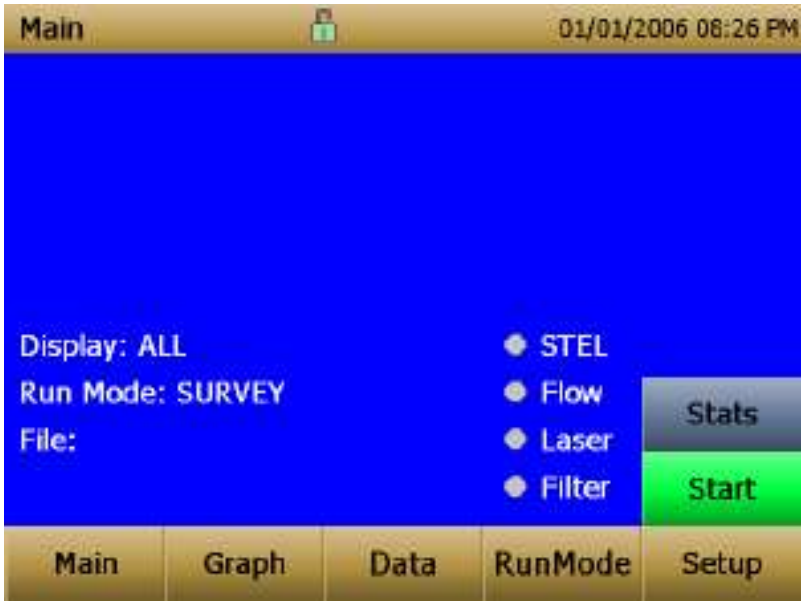
When connected to the analog out and alarm out connector, you **MUST** use safety certified equipment and/or power sources.

Chapter 3

Operation

Getting Started

The **START UP** screen is displayed initially when the instrument is turned on, following the initial TSI® logo splash screen.



Use a stylus or fingertip, touch the “buttons” on the screen to activate different menus.

For Model DustTrak™ 8530EP only

NOTICE
Always setup and operate the DustTrak™ monitor with External Pump Module with the External Pump Module connected to the DustTrak™ monitor. Failure to do so will result in communication errors.

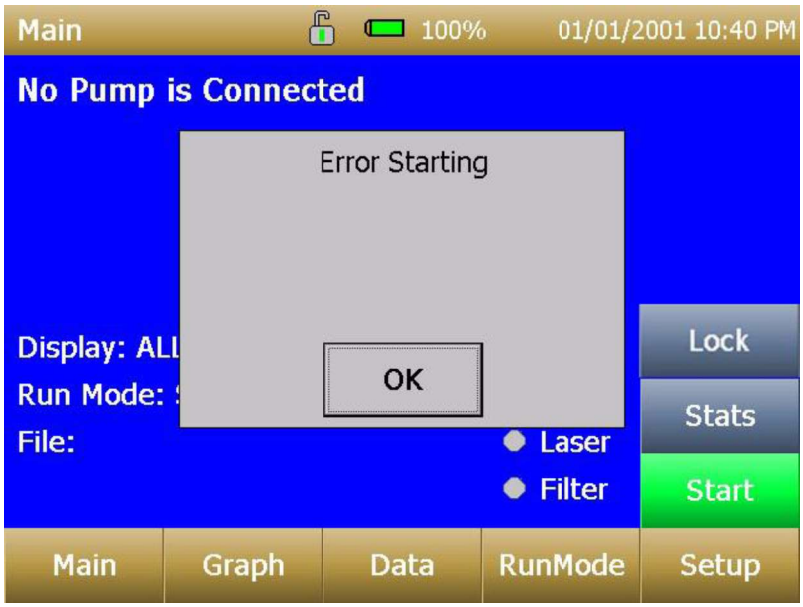
Communication errors take place under four different scenarios as follows:

1. When the unit is idle and **IS NOT** connected to the External Pump Module, a warning displays on the Main screen.



NOTICE
"No Pump is Connected" is a sticky error. Even after the warning message, if the External Pump Module is connected to the DustTrak™ monitor, the error will not disappear until the screen is refreshed. Refresh the screen by going into a different menu and returning to the Main menu.

2. When the unit **IS NOT** connected to the External Pump Module and an attempt is made to start a run by selecting "**Start**", an error appears on the Main screen.



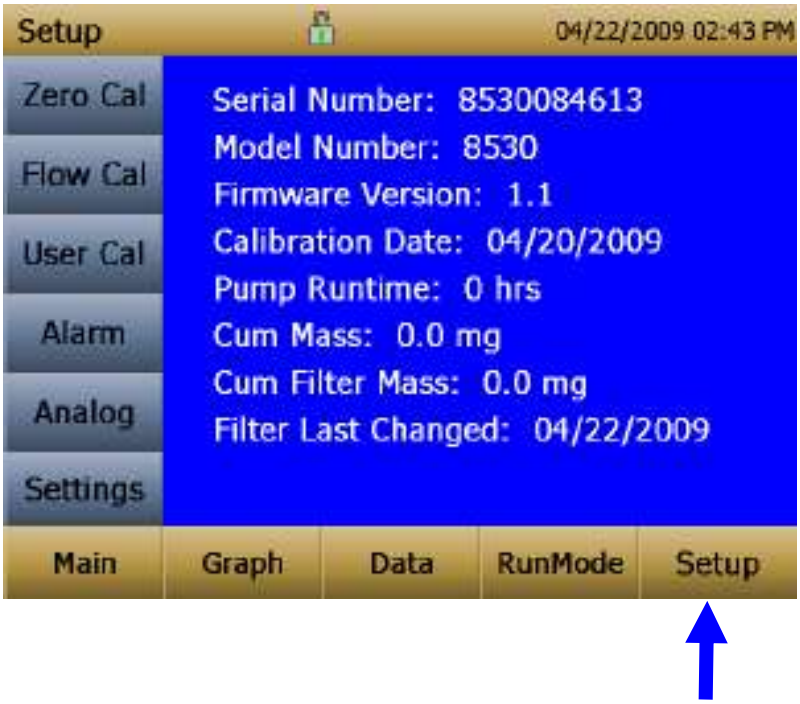
3. If the pump **IS NOT** connected while attempting to perform a Zero Cal, an error appears on the Setup screen.



4. If the pump **IS NOT** connected while attempting to perform a Flow Cal, an error appears on the Setup screen.



Setup Menu

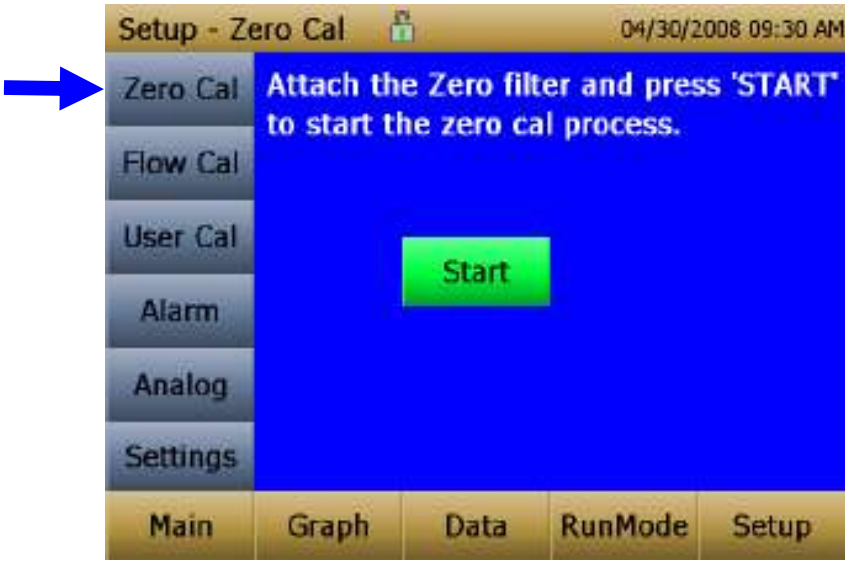


Pressing **Setup** activates the Setup Menu touchscreen buttons along the left edge of the screen. Setup is not accessible when the instrument is sampling.

The main screen of the **Setup** screen displays the following information:

Serial Number	The instruments serial number.
Model Number	The instruments model number.
Firmware Version	Instruments current version of firmware.
Calibration Date	Date of the last factory calibration.
Pump Run Time	Pump running time in hours.
Cum Mass Conc	Amount of mass run through instrument since its last calibration.
Cum Filter Conc	Amount of mass run through instrument since last filter change.
Filter Time	Date of last filter change.

Zero Cal



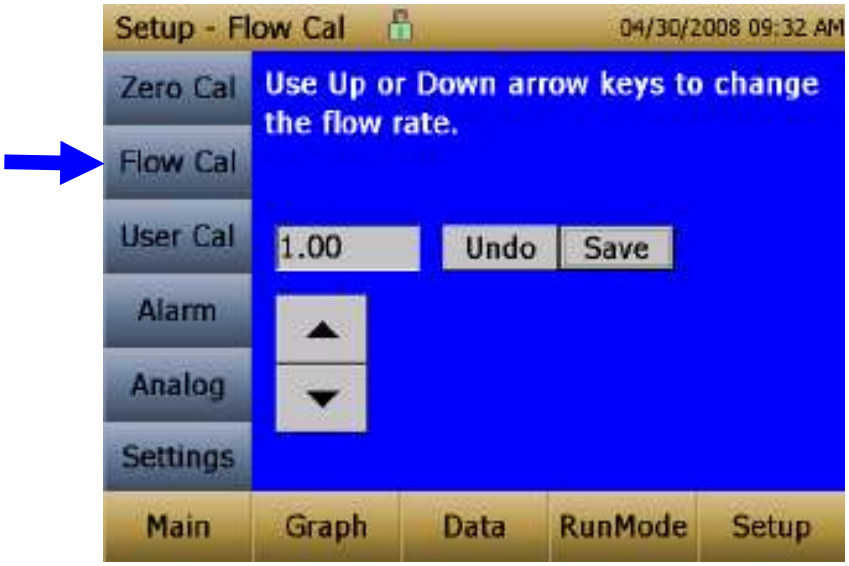
Run **Zero Cal** the first time the instrument is used and repeat prior to every use. Zero Cal requires that the zero filter be attached prior to running. Zero Cal must also be performed if the unit is reading negative concentrations. It is not possible for the DustTrak to read negative concentrations. Negative concentrations are a symptom of zero drift.

NOTICE
NEVER perform a zero cal without attaching a zero filter.

1. Press **Zero Cal** Button
2. Attach Zero Filter
3. Press the **Start** button to start Zeroing process.
4. A count-down clock will appear indicating the time remaining. The screen with indicate "**Zero Cal Complete**" when done.

Remove filter after zeroing has been completed. The instrument is now zero calibrated and ready for use.

Flow Cal



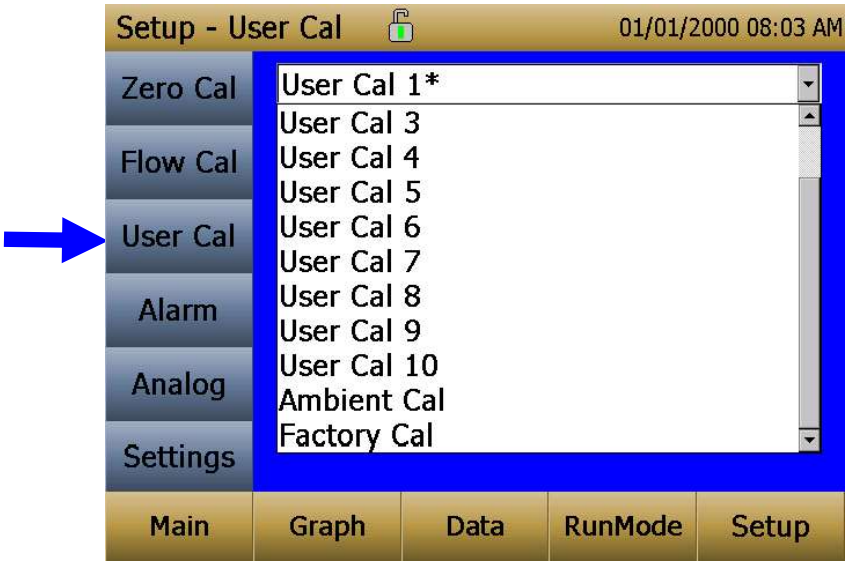
Run **Flow Cal** to change the flow set point. The flow set point is factory set to 3 L/min total flow. 2 L/min of the total flow is measured aerosol flow. 1 L/min of total flow is split off, filtered, and used for sheath flow. There is an internal ΔP flowmeter in the DustTrak™ II instrument that controls flow rate to ±5% of the factory setpoint. TSI® recommends checking the flow with an external flow reference meter, especially when collecting data. The pump will automatically start when entering the Flow Cal screen.

1. Attach a flow calibrator (reference flow meter) to inlet port. You may use a bubble buret, mass flow meter, dry piston or rotameter as flow measurement devices.
2. Move the arrows up or down to achieve desired flow rate on the reference flowmeter. Each up or down arrow will change the flow about 1%. Allow time between button presses to let pump change to the new flow rate.

   Select **Save** once the desired flow rate is achieved. Select **Undo** to return to the factory set point.

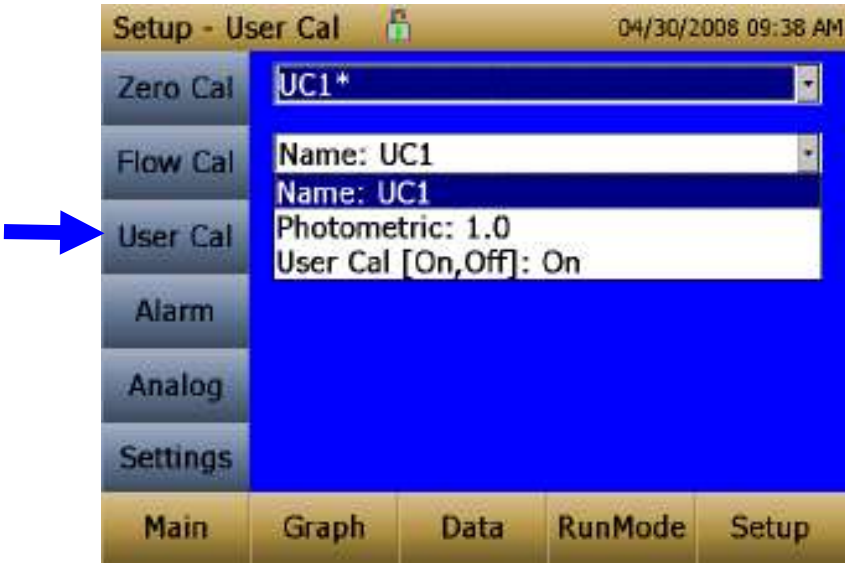
NOTICE
The flow rate can be adjusted from approximately 1.5 to 4.0 L/min. If needed, this feature can be used to adjust the flow rate to a value other than the factory set point, allowing for the use with the provided Dorr-Oliver Cyclone (1.7 L/min required) or 3rd party size selective inlets (cyclones or impactors) that may require a different flow rate.

User Cal



User Cal allows you to store and use 10 different calibration factors. In addition, there are two factory defaults, one is the “Ambient Cal” and the other is the “Factory Cal”. The “Ambient Cal” is appropriate for outdoor ambient dust or fugitive dust monitoring. The “Factory Cal” is the calibration to ISO 12103-1, A1 Arizona test dust for which a calibration certificate is provided with the instrument. The “Factory Cal” is appropriate for most workplace aerosol monitoring. The currently active user calibration is highlighted with an asterisk “*”.

Four variables can be set for each user calibration.



Name	User can rename calibration to a description name.
Photometric	Changes the factory calibration of particle signal, based on Arizona Road Dust, to actual aerosol being measured. See below for sets to set this calibration.
User Cal [on,off]	Selecting **On** will activate current user calibration and deactivate the previously selected user calibration.

Taking a Gravimetric Sample Using the DustTrak™ Monitor

When sampling with the DustTrak™ monitor, you can simultaneously take a gravimetric sample either for custom calibration of the DustTrak™ monitor or for collecting the sample on to the gravimetric filter downstream of the DustTrak monitor without a need for additional gravimetric sampling pump and filter assembly. To accomplish this, follow the instructions given below:

1. Setup the DustTrak monitor to sample how long you want the sample run time to be. The following example shows a sample for 8 hours.
2. Under RunMode menu, put the instrument in Manual Log (Manual Logging is reviewed later in this section), which will enable you to start and stop the pump at any time you choose.
3. Set the logging interval. One minute (i.e., “01:00”) is a good choice.
4. Make sure you have a preweighed 37-mm gravimetric filter cassette loaded into the DustTrak™ monitor. See Chapter 4, “Replacing the Internal Filters” on how to access the filter (see figure 4-8) and replace it.

NOTICE

Use only the conductive plastic filter cassette holder (SKC Part# 225-308).

5. Under the Setup Menu, make sure the DustTrak monitor is set to the desired flow rate. For DustTrak II Model 8530, the flow can be varied from 1.7 to 4 L/min for use with various inlet conditioners. For DustTrak DRX Model 8533, ***the flow cannot be changed.*** The flows for DustTrak II monitor can be changed by changing the default flow calibration setpoint from 1.0 to any value between 0.5 to 1.5 in the span adjustment. An external flowmeter is needed to measure the total flow. Flow can be changed by clicking on the UP or DOWN arrow keys shown below:



6. Conduct a preflow calibration on the DustTrak™ monitor using the same kind of sample media you will sample with. Now, attach the sample media you intend to sample with and start sampling aerosol for the desired time. After the desired run time, stop the sampling. Remove the filter from the DustTrak™ monitor and follow your laboratory's criteria for filter post weight. Conduct a post-flow calibration with the same sample media done with the pre-flow calibration and determine if these flow calibrations are within ±5% of each other. If they are, use the following to calculate the actual flow rate for the DustTrak™ monitor. The laboratory will need the following information to calculate mass concentration in mg/m^3:

   - Total sample time in minutes.
   - Flow rate—flow rate of the DustTrak monitor used for gravimetric analysis is only $^2/_3$ the total flow since $^1/_3$ of the flow is used as sheath flow.
   - Total liters of air sampled = total sample time x flow rate.

7. Using this information the laboratory can determine the concentration using the following formula:

$$concentration, \frac{mg}{m^3} = \frac{Filter\ Post\ Weight\ (mg) - Filter\ Pre\ Weight\ (mg)}{\frac{2}{3} * \frac{DustTrak^{TM}\ Monitor\ Flow\ Rate\ (\frac{L}{min})}{1000} * Total\ Sample\ Time\ (\text{min})}$$

NOTICE
The flow rate used for gravimetric analysis is only 2/3 the total flow since 1/3 of the flow is used as sheath flow.

8. For instructions on how to calibrate the DustTrak monitor using this data, see section below on "Determining the Calibration Factor for a Specific Aerosol".

Photometric Calibration Factor

In most situations, the DustTrak™I mass measurements are dependent upon particle size and material properties, there may be times in which a custom calibration would improve your accuracy for a specific aerosol.

Determining an aerosol specific photometric calibration requires that you determine a true mass concentration (e.g., gravimetric analysis) for the aerosol you want to measure. The true mass concentration is used to calculate the custom calibration factor for that aerosol. Once you have a custom calibration factor, you can reuse it each time you make measurements in the same aerosol environment.

Determining the Calibration Factor for a Specific Aerosol

The DustTrak™ II monitor is factory calibrated to the respirable fraction of standard ISO 12103-1, A1 test dust. The DustTrak™ monitor can be easily calibrated to any arbitrary aerosol by adjusting the custom calibration factor. The DustTrak monitor's custom calibration factor is assigned the value of 1.00 for the factory calibration to standard ISO test dust. This procedure describes how to determine the calibration factor for a specific aerosol. Using the value of 1.00 will always revert back to the factory calibration.

To determine a new calibration factor you need some way of accurately measuring the concentration of aerosol, hereafter referred to as the reference instrument. A gravimetric analysis is often the best choice, though it is limited to nonvolatile aerosols. The internal 37 mm filter cartridge, in the desktop units, can be used to collect the reference gravimetric reference sample.

To make an accurate calibration you must simultaneously measure the aerosol concentration with the DustTrak monitor and your reference instrument.

1. Zero the DustTrak II monitor.
2. Put the instrument in Manual Log (Manual Logging is reviewed later in this section).
3. Set the logging interval. One minute (i.e., "01:00") is often a good choice.
4. Co-locate the DustTrak II monitor and the reference sampler together so that they are measuring from the same area. The 37-mm filter cartridge in the desktop unit can be used to collect the particles to be weighed for the gravimetric reference.
5. Start sampling aerosol with both instruments at the same time.

NOTICE

Greater accuracy will be obtained with longer samples. The time you permit for sampling often depends on the reference instrument and characteristics of the measured aerosol. It may take some time to collect sufficient aerosol onto a filter cassette for accurate gravimetric analysis. Refer to instructions of your reference instrument for sampling times.

6. Stop sampling with both instruments at the same time.
7. Record the DustTrak™ monitor average concentration by viewing the sample average in the Data screen. (Data Screen is reviewed later in this chapter.)
8. Determine the mass concentration in mg/m^3 from your reference instrument. For gravimetric sampling this means weighing the gravimetric sample.

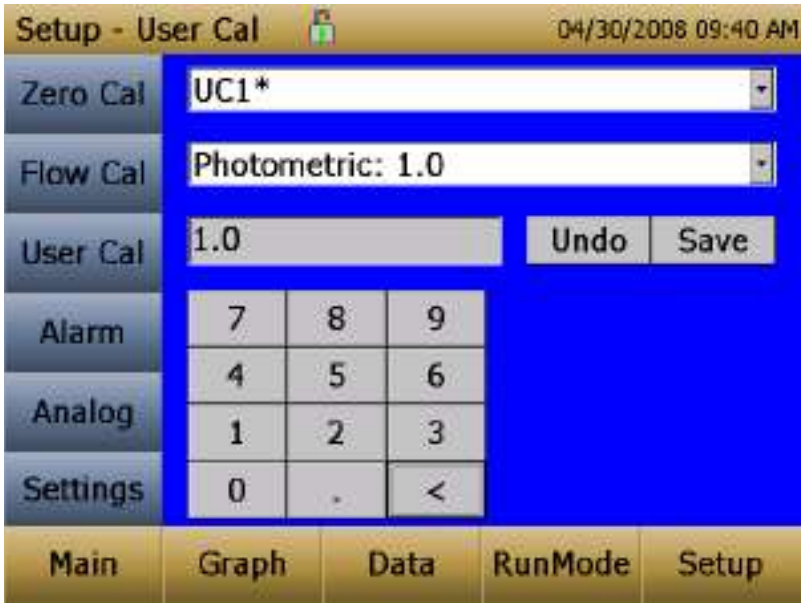
NOTICE

If you used the internal gravimetric filter in the DustTrak™ Model 8530, the flow rate used to compute the concentration should be 2 L/min, not 3 L/min since only 2 L/min of aerosol flow reaches the filter.

9. Compute the new calibration constant, NewCal, using the following formula:

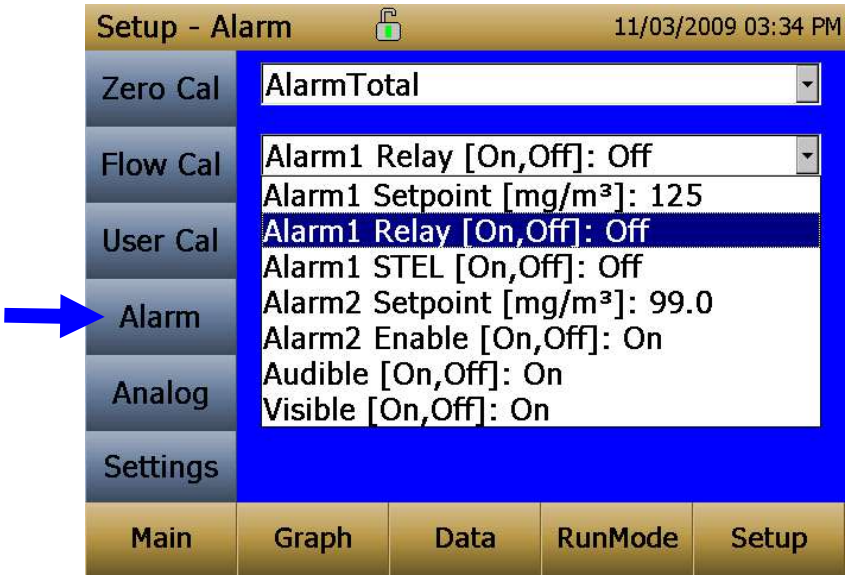
$$\text{New Cal} = \left(\frac{\text{Reference Concentration}}{\text{DustTrak Concentration}} \right) \cdot \text{CurrentCal}$$

10. Select **Photometric** from the User Cal drop down selection and enter the NewCal factor using the onscreen controls.



Alarm

Alarm allows you to set an alarm level that will be triggered if the instrument's reading goes above the setpoint. However, the alarm functioning is determined by the logging interval. The alarm will turn ON only if the average concentration over the logging interval exceeds the set point. If the logging interval is too long and the concentration exceeds the set point and stays at that level, the alarm will not turn ON until after the logging interval has passed. Likewise, the alarm will not stop until after the concentration has dropped below 5% of the threshold and after the logging interval has passed.



NOTICE

The Alarm is dependent on the logging interval. For the DustTrak™ monitor to alarm as soon as the Alarm Setpoint is exceeded, the logging interval must be set as low as possible (i.e., 1 second or 2 seconds). If a long test duration does not permit setting such a short logging interval, use the STEL alarm instead. The STEL is always based on 1 second concentrations and is independent of the logging interval. For more details on the STEL alarm, see section below on STEL.

In Survey mode, the alarm is dependent on the time constant.

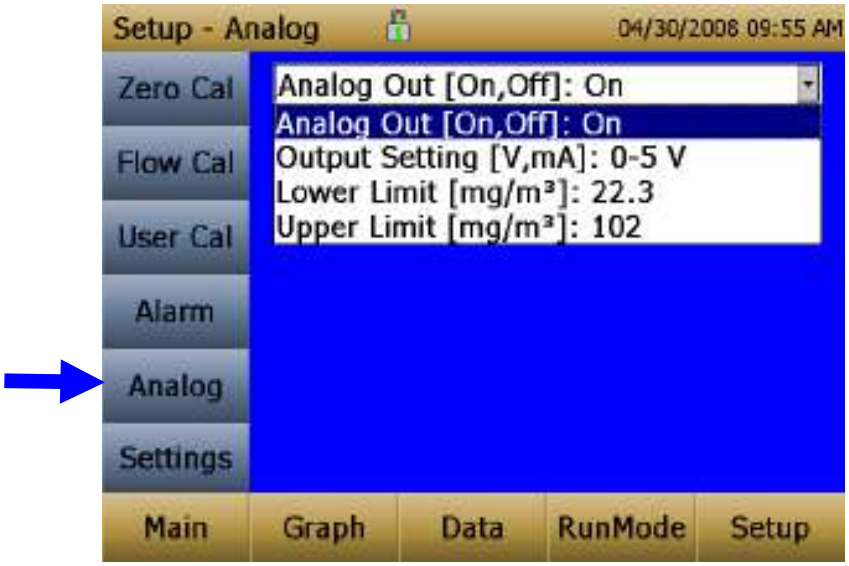
Alarm1 Setpoint [mg/m^3]	The alarm1 setpoint is the mass concentration level upon which the alarm1 is triggered. Alarm will trigger if the mass concentration, taken at the logging interval, rises above the setpoint. **NOTICE** Alarm 2 must be lower than Alarm 1 when both alarms are enabled.
Alarm1 Relay [On, Off]	When the relay alarm is turned on, unit will close relay switch when Alarm1 level is surpassed. Relay selection is available on the 8530 desktop model only.
Alarm1 STEL [On, Off]	When the STEL alarm is turned on, STEL data will be collected when Alarm1 level is surpassed. STEL selection is available on the 8530 desktop model only. See STEL Note below.
Alarm2 Setpoint [mg/m^3]	The Alarm2 setpoint is the mass concentration level upon which the alarm2 triggers. Alarm triggers if the mass concentration, taken at the logging interval, rises above the setpoint. **NOTICE** Alarm 2 must be lower than Alarm 1 when both alarms are enabled.
Alarm2 Enable [On, Off]	Enables Alarm2 to be logged and will activate the Audible or Visible alarms if they are enabled.
Alarm Audible [On, Off]	When the audible alarm is turned on, the instrument will activate internal beeper when Alarm1 or Alarm2 level is surpassed.
Alarm1 Visible [On, Off]	When the visible alarm is turned on, unit will show the alarm icon (Alarm1  , Alarm 2 ) in title bar when Alarm1 or Alarm2 level is surpassed.

STEL Alarm

STEL stands for **S**hort **T**erm **E**xposure **L**imit. When a STEL alarm is selected, the instrument will inspect the data on a second by second basis, independent from the selected logging interval. If the mass exceeds the STEL limit, then a STEL event triggers and the following actions will be taken.

STEL indicator	The STEL indicator STEL will show Red on the main screen.
Data	Data will be taken of the STEL alarm channel at a 1 minute logging interval for **15 minutes**. This data will be stored in a separate file named STEL_XXX, where XXX will be matched to the logged data file. The instrument will also continue to log the mass concentration data at the logging interval selected.
STEL Alarm repeat	If the instrument remains over the STEL limit after the 15 minute interval, or if the instrument exceeds the STEL limit later during the sample period, additional STEL files will be generated.

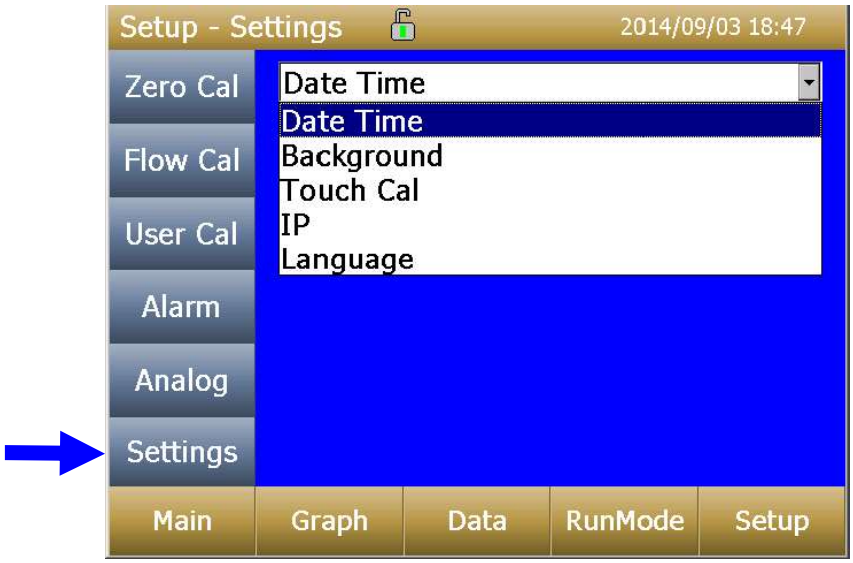
Analog



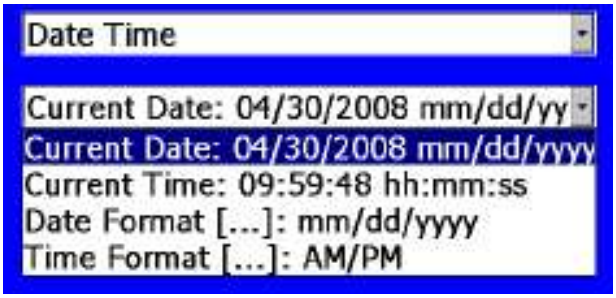
Analog setup screen sets the parameters that will drive the analog out port. Applies to the 8530 Desktop model only.

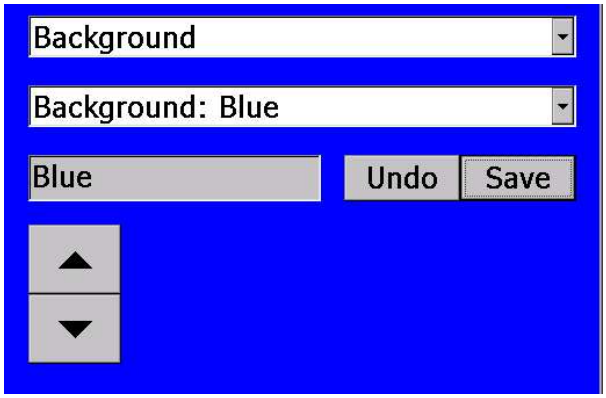
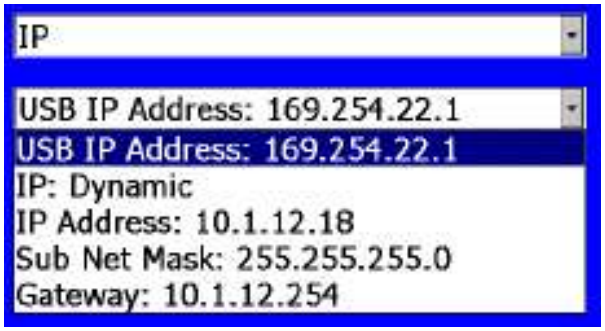
Analog out [On, Off]	Turns analog out port on.
Size Fraction	Selects the size channel that will drive the analog out.
Output Setting [V, mA]	Select between 0 to 5 V and 4 to 20 mA.
Lower Limit [mg/m^3]	Mass concentration reading of the selected channel that will correspond to 0 V or 4 mA.
Upper Limit [mg/m^3]	Mass concentration reading of the selected channel that will correspond to 5 V or 20 mA.

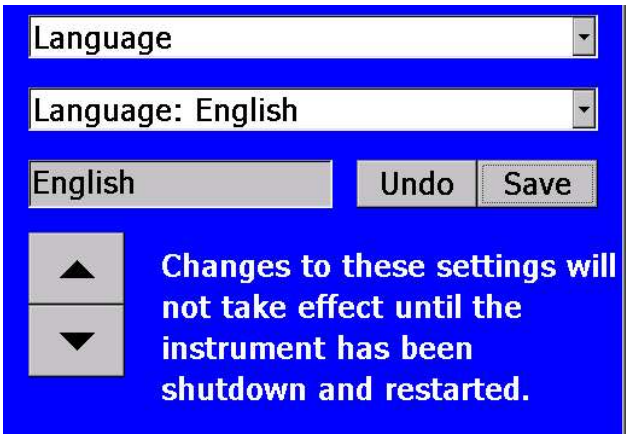
Settings



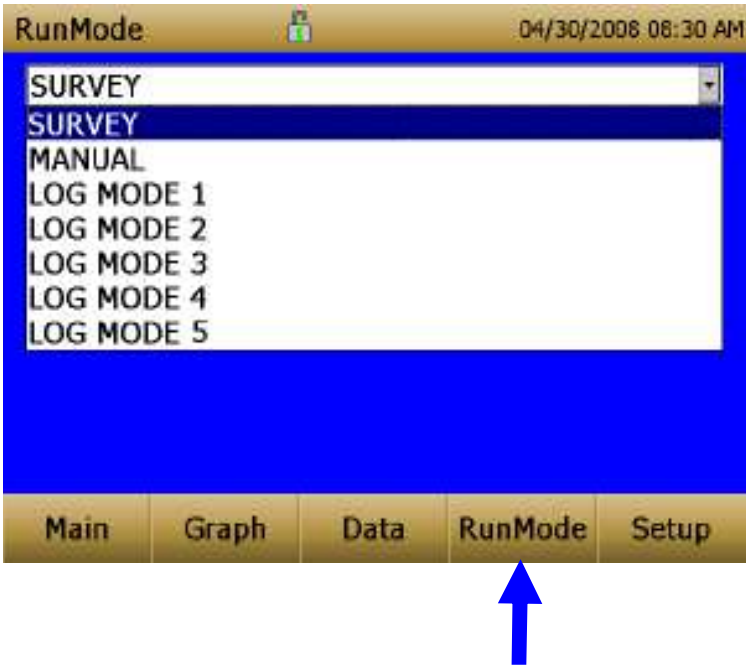
Settings screen sets basic unit parameters.

Date Time	 Sets current date, current time and date/time format. Time can be set in 12 or 24 hour format. Date can be set in yyyy/dd/mm, yyyy/mm/dd or yyyy/dd/mm.

Background	 Switches between blue and white backgrounds.
Touch Cal	 Calibrates the touch cal screen.
IP	 **USB PORT IP Address**: USB IP is the address assigned to the instrument by the NDIS driver. It is shown but cannot be changed. **Ethernet Port IP parameters**: (Model 8530 Desktop only.) IP method can be set to static or dynamic. For static IP, IP address, default gateway, and subnet mask can be set. For Dynamic, The IP assigned by the network is shown. This cannot be changed. See Note below.

	IP NOTE
	After changing the instrument to Dynamic or Static, reboot the instrument. In Dynamic Mode, the unit will show the IP to which is assigned (after being rebooted).
Language	 Switches between display languages. After changing the display language, reboot the instrument.

Run Mode

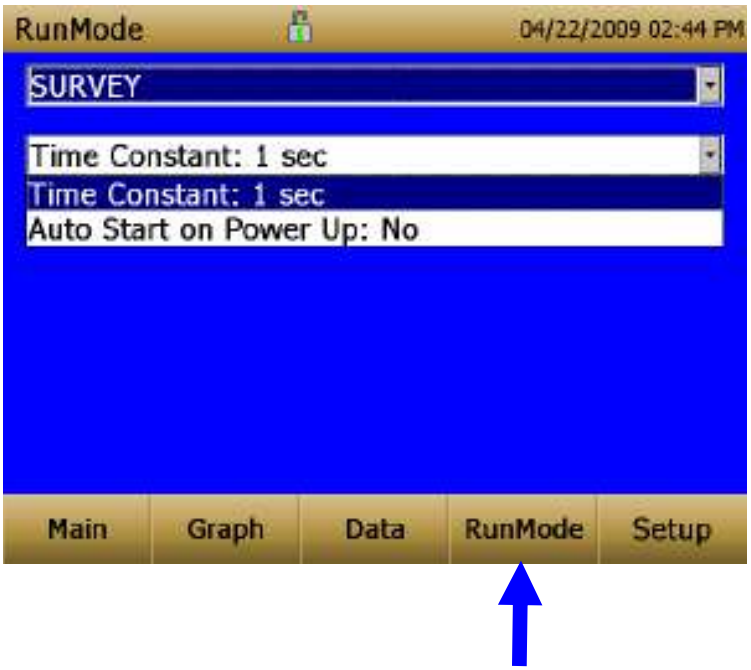


The **RunMode** tab brings up sampling mode options.

Sampling mode options include **Survey Mode**, **Manual Log**, and **Log Mode 1-5**.

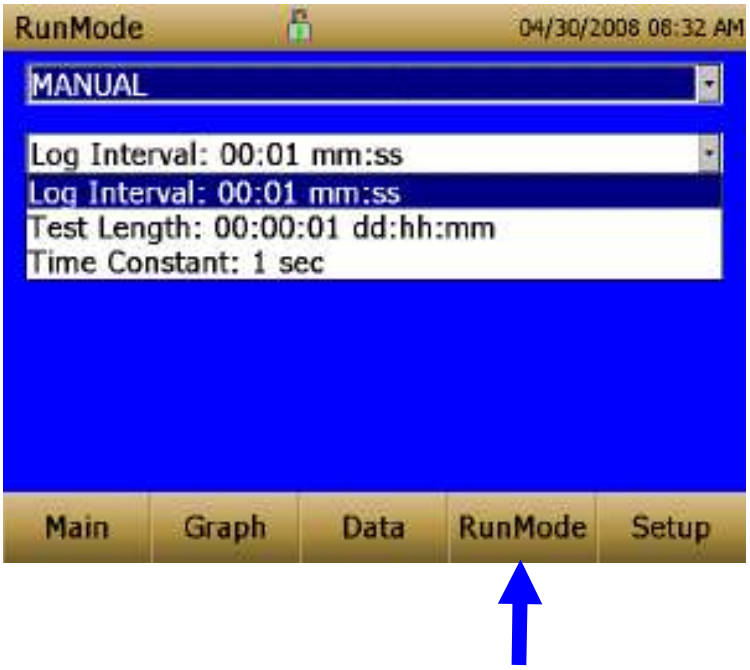
Survey	Survey Mode runs a real time, continuous active sample, but does not log data.
Manual	Manual Log sets the instrument to log data for a specified run time.
Log Modes	Log Mode starts and stops the instrument at specified times, run for a specified test length, and perform multiple tests of the same length with a specified time period between tests.

Survey Mode



Time Constant	Time Constant can be set from 1 to 60 seconds. This will control the update rate of the main screen. It is the rolling average of data displayed on the main screen and is not linked to logged data in either Manual or Program Log modes.
Auto Start on Power Up	When set to “Yes”, unit will start a measurement upon being powered on, if the unit was set to “Survey” when it was turned off. When set to “No”, the unit will be in idle when it is powered on.

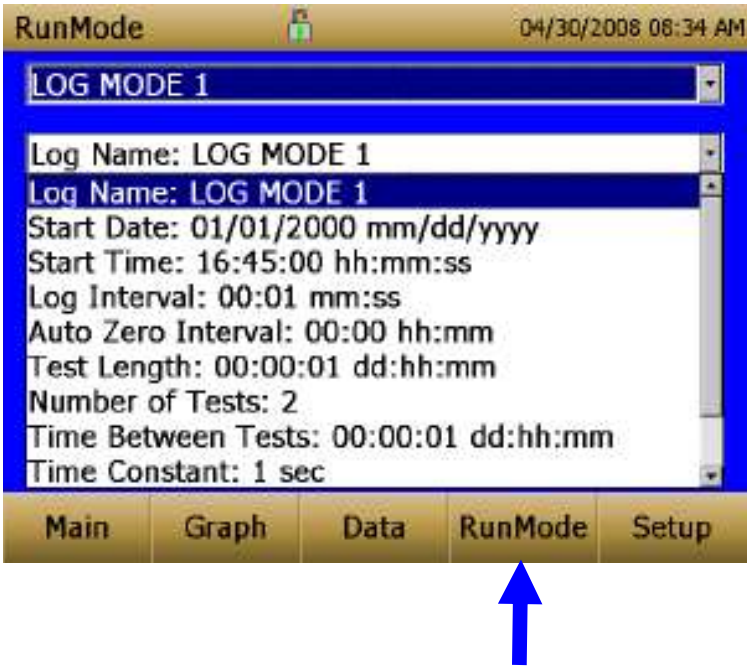
Manual Mode



Log Interval	The log interval can be set from 1 second to 60 minutes. It is the amount of time between logged data points.
Test Length	Test length can be set from 1 minute to the limit of the data storage.
Time Constant	Time Constant can be set from 1 to 60 seconds. This will control the update rate of the main screen. It is the rolling average of data displayed on the main screen and is not linked to logged data in either Manual or Program Log modes.

In Manual mode, data will be stored to a file named "*Manual_XYZ*" where *XYZ* is an incrementing integer.

Log Mode (1–5)



Log Name	Log Name, brings up a virtual keypad to name the Logged Data file.
Start Date	Start Date, select the date the test will start.
Start Time	Start Time, select the time the test will start.
Log Interval	The log interval can be set from 1 second to 60 minutes. It is the amount of time between logged data points.
Auto Zero Interval	Interval between re-zeroing the instrument using the Auto-Zero accessory. Model 8530 desktop only.
Test Length	From 1 minute to the limit of the data storage.
Number of Tests	Number of tests, 1 to 999.
Time between Tests	Time between tests, 1 minute to 30 days.
Time Constant	Time Constant can be set from 1 to 60 seconds. This will control the update rate of the main screen. It is the rolling average of data displayed on the main screen and is not linked to logged data in either Manual or Program Log modes.
Use Start Date	Use Start Date, option to use programmed start date or by pass programmed start date.
Use Start Time	Use Start Time, option to use programmed start time or bypass programmed start time.

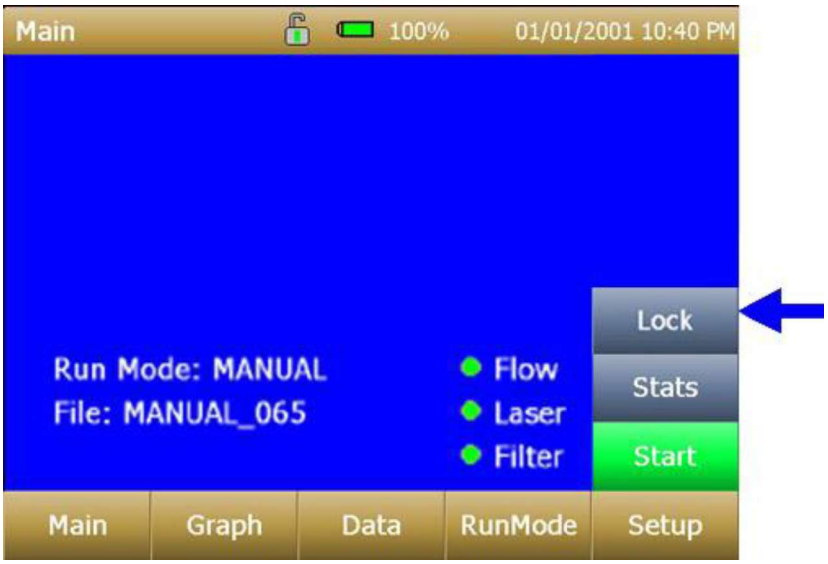
In Log mode, data will be stored to a file named "*LogName_XYZ*" where *LogName* is the user entered log name and *XYZ* is an incrementing integer.

Locking Feature

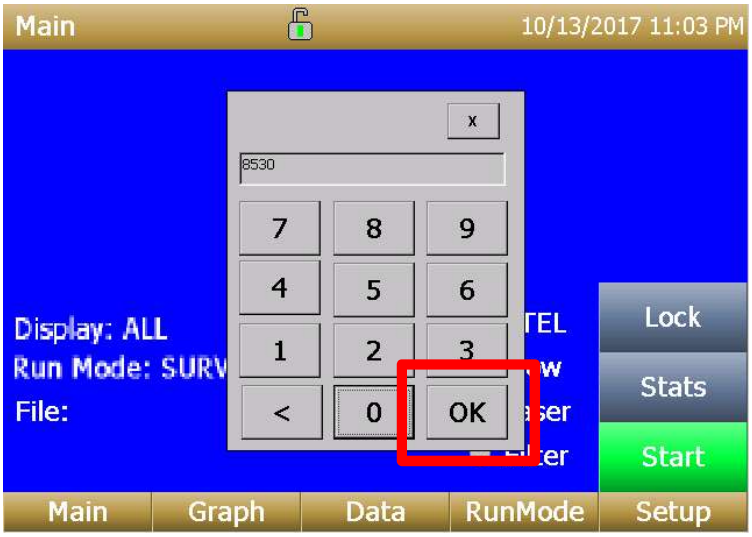
The locking feature allows you to lock the screen at any time. This can be done during mass concentration measurements and while the instrument is idle.

NOTICE
This feature is only available on Desktop models. It is not available on Handheld models.

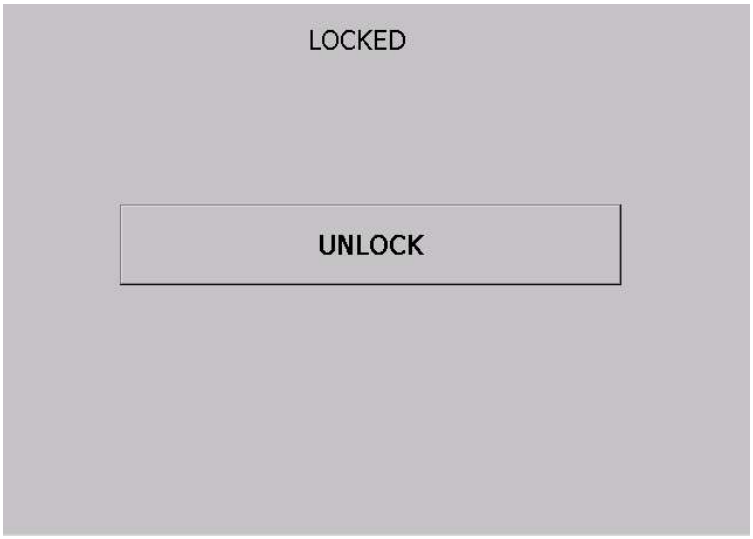
To enable this feature, touch the **Lock** button on the main screen.



Next enter the model of the instrument. For 8530EP models, 8530 should be used. After entering the model number, touch **OK**.



The screen is now locked.



To unlock, touch **UNLOCK** and re-enter the model number. For 8530EP models, 8530 should be used. After entering the model number, touch **OK**.

NOTICE

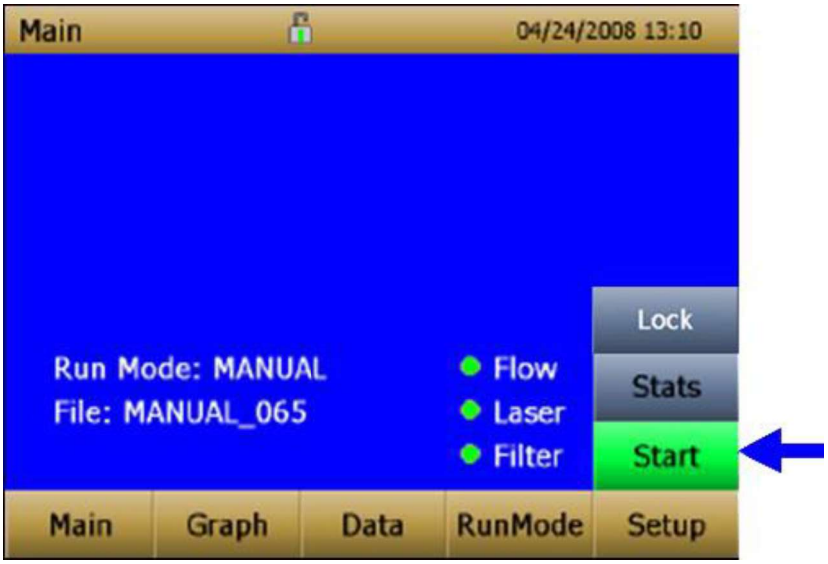
If you happen to enter the model number incorrectly and touch **OK**, you will be given another chance to enter it correctly. There is no limit to number of chances.



Taking Mass Concentration Measurements

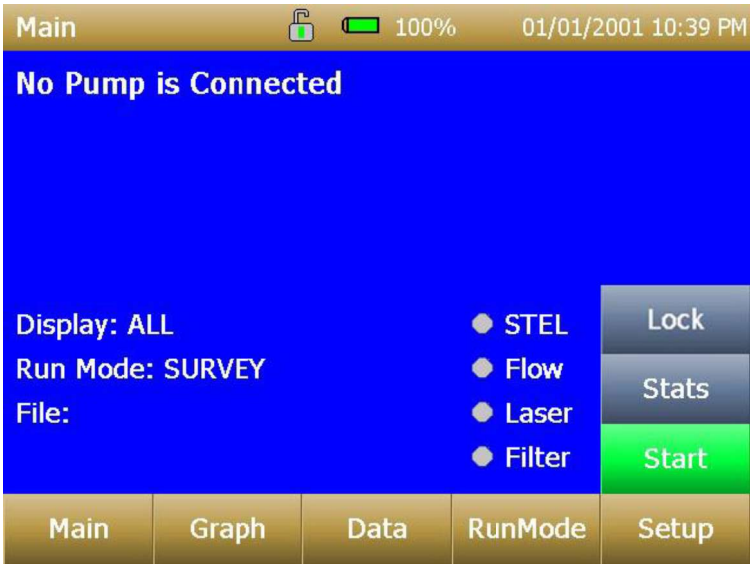
Measurements are started and controlled from the main screen.

Prior to starting a measurement the instrument should be zeroed from the **Setup** screen and the run mode should be configured and selected from the **RunMode** screen.



When the instrument is on, but not taking any mass measurements the start button will be green and instruments pump will not be running. To start taking a measurement, press the green **Start** button.

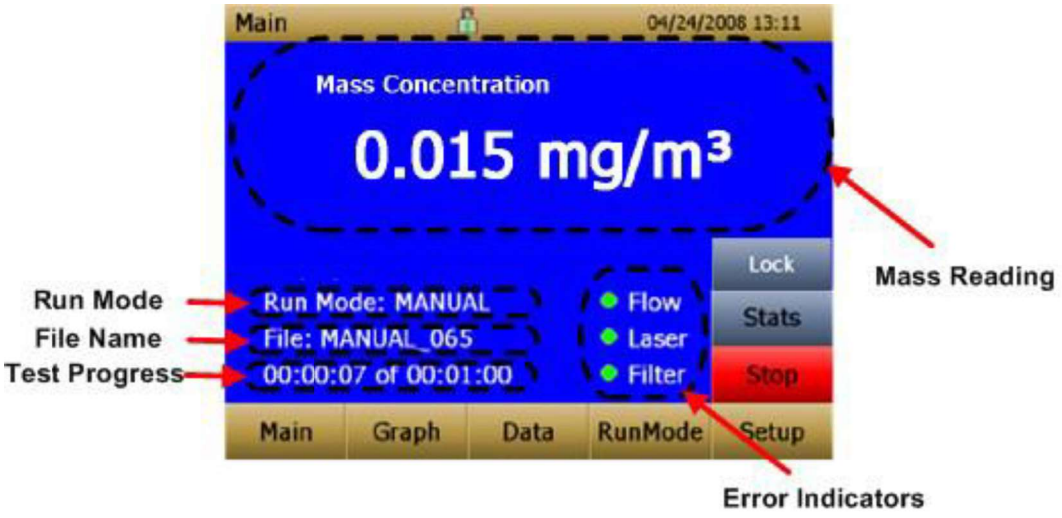
For the Model 8530EP DustTrak™ monitor with external pump, make sure the external pump is connected to the DustTrak™ monitor as described in Chapter 2. If the pump is not connected and the green start button is pressed, the DustTrak™ monitor will identify that the pump is not connected and a warning will be displayed as shown below:



Connect the External Pump Module to the DustTrak™ monitor and then try again. TSI® recommends powering down the DustTrak™ monitor before connecting the External Pump Module to the DustTrak™ monitor. Connect the power cable and the flow tubing between the DustTrak monitor and the External pump module, as applicable.

While taking a measurement the screen will display the current measured mass concentration. The various regions of the screen are shown below.

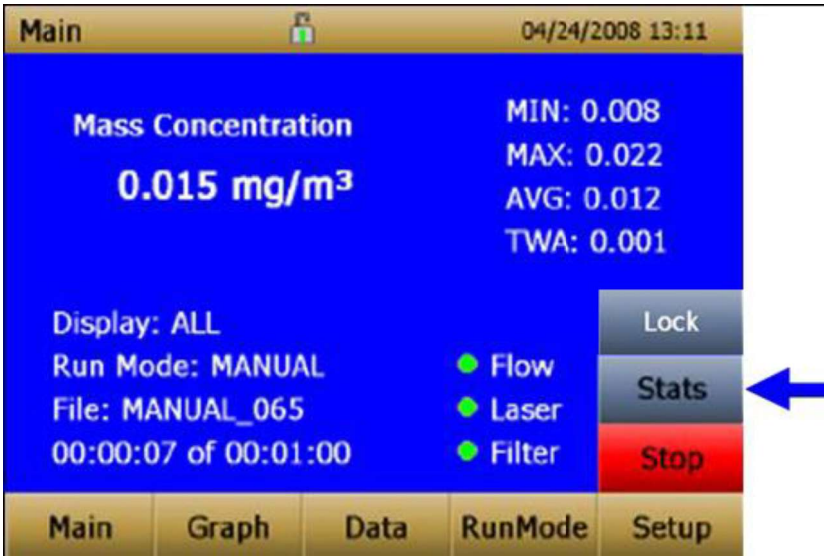
Screen Regions



Mass Reading	Shows the instruments mass measurements.
Run Mode Region	Shows the run mode selected from the RunMode screen.
File Name Region	Displays the file name to which the data is currently being saved.
Test Progress Region	Shows the time-based progress of the test.
Error Indicator Region	Shows the current stats of the instrument **STEL**: Shows if STEL is in progress (desktop instruments only) **Flow**: Status of the flow control **Laser**: Status of the Laser **Filter**: Status of the Filter See Chapter 5, "Troubleshooting," to resolve any of these error conditions.

Stats

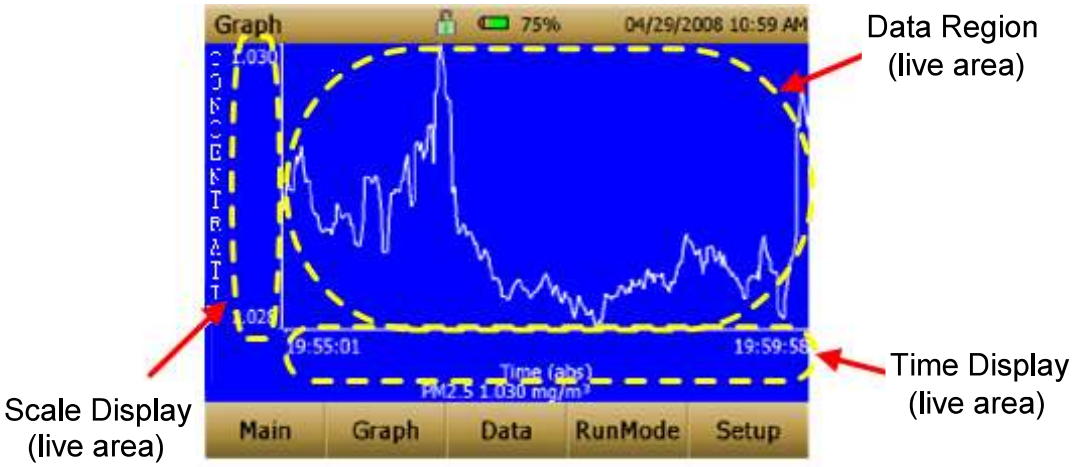
The Stats button shows the statistics of the mass measurement. When the Stats button is pressed, the main mass reading will reduce in font size, and the measurement statistics will show on the right side of the screen.

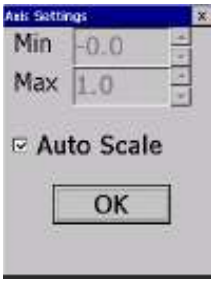


Graphing

During sampling, pressing the **Graph** button displays current readings in graphical form.

- During Survey Mode, five (5) minutes of running real-time data is displayed graphically.
- During Logging Mode, the entire log test time is displayed on the graph.



Time Display	Pressing the **Time** x-axis label on the graph screen switches between **Time (s)**, **Time (abs)**, and **Time (rel)**. **Time (s):** Elapsed time from first logged point (log interval) to the last logged point (test length). **Time (rel):** Relative time from zero to last logged point (test length – log interval). **Time (abs):** Absolute time from first logged point (test start + log interval) to last logged point (test stop).
Scale Display	Pressing in the Scale Display area will bring up a dialog that will allow changing between auto scaling and user scaling of the Y-axis. 
Data Region	Pressing the data region will bring up a dialog to show TWA or Average lines. **TWA:** Will show a secondary line on the graph showing the time weighted average of the data. This line will not show if test time is less than 15 minutes. **Average:** Show a secondary line on the graph of the running average of the data. 

In Graphing Mode, pressing **Main** returns the instrument to the Main Screen display.

Viewing Data

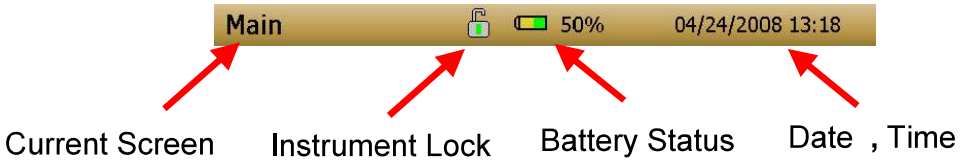
The **Data** button opens a list of data files for viewing.



Select File	Press the arrows on the right side of the screen to scroll up or down to the data file to be viewed.
Data Statistics	Statistics on the selected file ○ File Name ○ Sample Average ○ Sample TWA ○ Sample Maximum Reading ○ Sample Minimum Reading ○ Number of Data Points in the File
Save All Button	Downloads data to a USB thumb drive. The USB thumb drive must be attached to the USB host port. Data is saved as a .csv file that can be viewed in Microsoft® Excel® spreadsheet software.
Delete Button	Deletes the currently highlighted file.
Delete All Button	Deletes all the files stored on the instrument.
Graph Button	Data can also be viewed in graphical form by pressing the **Graph** button while the data file is highlighted.

Title Bar

The Title Bar shows common instrument information.



Current Screen	Title of the current screen that is being displayed.
Instrument Lock	Icon shows if the instrument touchscreen is in an unlocked or locked condition. **Unlocked**:  **Locked**:  To lock the touchscreen controls, touch the "lock" icon, immediately followed by three (3) quick touches on the current screen (**Main)** word along the top tool bar. Repeat the process to unlock the screen.
Battery Status	Show the current % life of the battery and show if the battery is currently being charged: **Charging**:  (unfilled portion of the icon is filled yellow as well as animated to indicate that the charging is in progress) **Not Charging**:  (unfilled portion of the icon transparent)
Date and Time	Indicates the instruments current date and time.
Alarm	If the instrument is in an alarm status, an alarm icon  will appear in the title bar.

Chapter 4

Maintenance

The DustTrak™ II aerosol monitor can be maintained in the field using the instructions below. Additionally, TSI® recommends that you return your DustTrak™ II monitor to the factory for annual calibration. For a reasonable fee, we will quickly clean and calibrate the unit and return it to you in "as new" working condition, along with a Certificate of Calibration. This "annual checkup" helps ensure that the DustTrak™ II monitor is always in good operating condition.

NOTICE
There are no user-serviceable parts inside this instrument. The instrument should only be opened by TSI® or a TSI® approved service technician.

Maintenance Schedule

The DustTrak II Aerosol Monitor requires maintenance on a regular basis. Table 4–1 lists the factory recommended maintenance schedule.

Some maintenance items are required each time the DustTrak monitor is used or on an annual basis. Other items are scheduled according to how much aerosol is drawn through the instrument. For example, TSI recommends cleaning the inlet sample tube after 350 hours of sampling a 1 mg/m^3 concentration of aerosol. This recommendation should be pro-rated according to how the instrument is used. 350 hours at 1 mg/m^3 is the same amount of aerosol as 700 hours at 0.5 mg/m^3 or 175 hours at 2 mg/m^3, etc.

Table 4–1. Recommended Maintenance Schedule

Item	Frequency
Perform zero check	Before each use.
Clean inlet	350 hr. at 1 mg/m^3*
Clean 2.5 µm calibration impactor	Before every use.
Replace internal filters	350 hr. at 1 mg/m^3* or when indicated by the main screen filter error indicator.
Return to factory for cleaning and calibration (For 8530EP, TSI recommends that both the DustTrak and the External Pump Module be returned to TSI)	Annually
Replace the internal HEPA filters in the External Pump module	Annually

*Pro-rated, see discussion above.

The DustTrak™ monitor keeps track of the accumulated amount of aerosol drawn through it since its last cleaning. When the internal filter replacement is due, the filter error indicator will turn from green to red.

TSI® recommends you perform a zero check prior to each use for the DustTrak™ monitor and certainly before running any extended tests, and after the instrument experiences a significant environmental change. Examples of significant environmental changes would be ambient temperature changes that exceed 15 °F (8 °C) or moving from locations with high aerosol concentrations to low concentrations.

Zeroing Instrument

1. Attach the zero filter to the inlet of the instrument.



Figure 4-1: Attach Zero Filter to Inlet

2. Follow zero calibration instructions detailed in the operations section of this manual.

Cleaning the Inlet

The inlet should be cleaned based on the schedule in Table 4–1.

1. Turn the DustTrak™ monitor off.
2. Unscrew the inlet nozzle from the instrument (Figure 4-2).

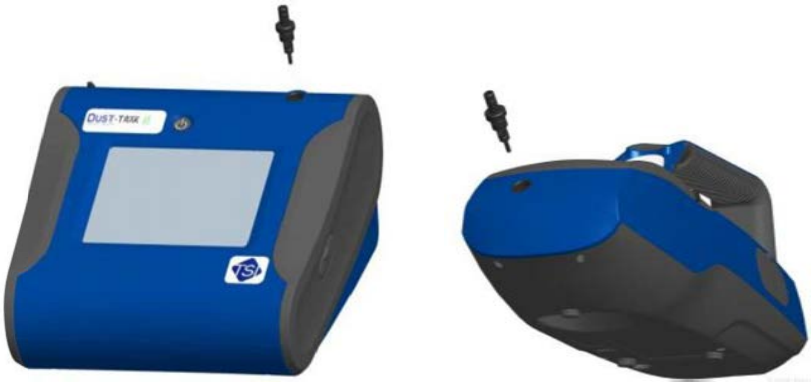


Figure 4-2: Unscrew Inlet Nozzle

3. Clean the inlet port. Use a cotton swab to clean the outside of the inlet port. You may dampen the swabs with water or a light solvent (e.g., isopropanol). Clean the inside of the sample tube by using a small brush, along with a light solvent. Dry the tube by blowing it out with compressed air, or let it air-dry thoroughly.

NOTICE
Be *careful* NOT to blow particles into the DustTrak™ monitor inlet port.



Figure 4-3: DO NOT Blow into Instrument

4. Screw (hand-tighten) inlet back into instrument.

Cleaning and Oiling Impactors

The calibration impactor should be cleaned prior to every use, using it to perform a Standard Calibration (size correction) on the instrument, as described in the Operations section.

1. Unscrew Impactor. Check O-ring on the impactor base.
2. Clean outside and inside of Impactor and the impactor plate using a clean brush and a light solvent. Dry impactor parts by blowing it out with compressed air, or let it air-dry thoroughly.
3. Apply 2 drops of oil (included) to the impactor plate. **DO NOT** over-fill impaction plate.
4. Screw (hand-tighten) impactor back together.



Figure 4-4: Apply 2 Drops of Oil to Impactor Plate

Replacing the Internal Filters

Replace the internal filters based on the schedule in Table 4–1 or when the filter indicator on the main screen changes to red.

1. Turn the instrument off.
2. Remove old filters from the instrument.

Handheld Model

a. Use the enclosed filter removal tool (P/N 801668) tool to unscrew the two filter caps located on the bottom of the instrument.

b. Pull the old filters out of the two filter wells. If filter wells are visibly dirty, blow out with compressed air.

c. Put two (2) new filters (P/N 801666) into the filter wells and screw filter caps back into place.



Figure 4-5: Pull Filters Out of Two Filter Wells (Handheld Model)

NOTICE

Replacement filters were shipped with the new instrument. Order additional filters from TSI® under P/N 801666.

Desktop Model

a. Open filter access door on the back of the instrument.

b. Use the enclosed filter removal tool (P/N 801668) to unscrew filter cap.

c. Pull out single cylindrical filter from filter well. If filter well is visibly dirty, blow out with compressed air.

d. Put new filer (P/N 801673) back into filter well and screw filter cap back into place.



Figure 4-6: Pull out Single Cylindrical Filter from Filter Well (Desktop Model)

e. Open blue retention clip by pinching ends inward and pushing down.



Figure 4-7: Open Blue Retention Clip

f. Remove 37-mm filter cassette by pulling downward and outward.

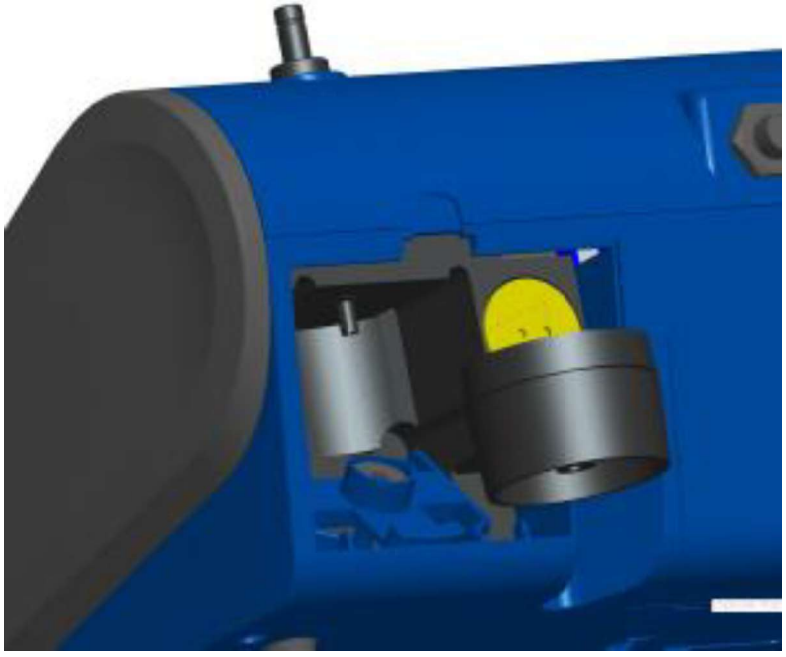


Figure 4-8: Remove 37-mm Filter Cassette

g. Open filter cassette using enclosed tool P/N 7001303.

h. Remove screen mesh from filter cassette and blow out using compressed air. Blow in reverse direction to remove captured particulate.

i. Replace mesh in filter cassette and press halves together. Make sure filter has been fully closed. The filter tool P/N 7001303 can be used to ensure the filter is fully closed.

j. Place filter cassette back into position and close blue retaining clip. Make sure retaining clip snaps back into place.



Figure 4-9: Open Filter using Enclosed Tool

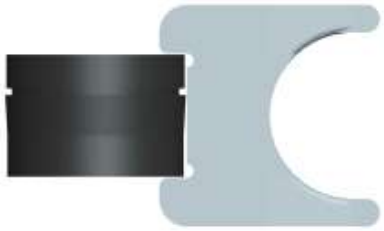


Figure 4-10: Replace Mesh in Filter Holder

NOTICES

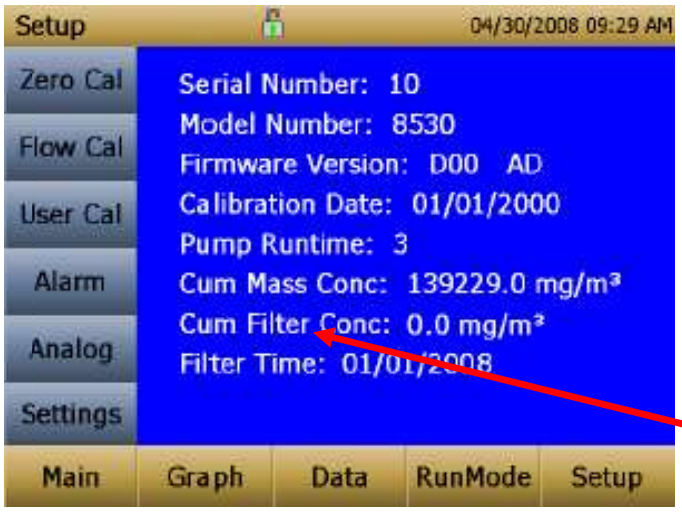
- Replacement filters (HEPA and 37-mm Filter Cassette with mesh filter) were shipped with the new instrument. Order additional filters from TSI® under P/N 801673.
- TSI® **DOES NOT** supply any filter media for the filter cassette. Any commercially available 37-mm filter media may be used with the DustTrak™ II or DRX desktop instruments to collect gravimetric reference samples.

3. **It is important to reset the instruments filter counter after replacing filters. Resetting the counter will clear the filter error condition shown on the main screen.** Reset the counters by the following:

   a. Turn on the instrument.

   b. Press the **Setup** button to go into the setup screen.

   c. Touch the **Cum Filter Conc:** (live key) to reset the aerosol mass.



   d. *Replace user serviceable filters?* Dialog will appear. Press **OK**.

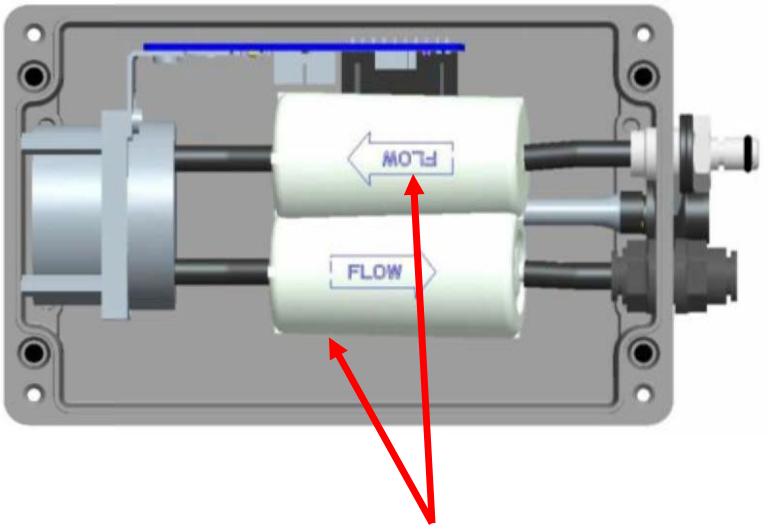
   e. *Reset filter concentration?* Dialog will appear. Press **Yes** to reset the cumulative filter concentration to zero.

   f. The Setup screen will now show zero for the **Cum Filter Concentration and** the current date for the **Filter Time**.

Replacing the Filters in the External Pump Module

The external pump module provided with Model 8530EP is designed to run continuously for about a year (8760 hours). There are two HEPA filters that protect the pump from contamination—one on the suction side of the pump and the other on the discharge side of the pump. The discharge side of the pump collects particles shedding from the vanes of the pump and will turn black over time. The HEPA filters will have to be replaced once a year.

To access the filters open the top cover of the pump module. The two HEPA filters are identified in the figure below. The two filters can be replaced by disconnecting the soft tubing between the filters, pump, and the casing connectors.



User Replaceable HEPA Filters

NOTICE
When replacing the HEPA filters, make sure they are oriented in the correction direction as shown in the picture above.

Storage Precautions

When storing the DustTrak™ monitor for more than 30 days, you should charge and remove the batteries. This prevents damage due to battery leakage.

This instrument must be stored in a location where the temperature remains between –20 and 60°C (–4 and 140°F).

Chapter 5

Troubleshooting

The table below lists the symptoms, possible causes, and recommended solutions for common problems encountered with the DustTrak™ II monitor.

Symptom	Possible Cause	Corrective Action
Erratic zero reading.	Leak	Check connections for leaks Replace zero filter
	Dirty inlet port and/or sample tube	Clean inlet port. Clean or replace tubing
	Internal filter(s) not installed properly (leaking)	Inspect internal filter wells to make certain the filters and O-rings are seated properly. Replace internal filters if necessary
DustTrak™ reading negative concentrations	Zero Drift	Perform Zero Cal
	Zero Cal was performed without the Zero Filter in-line	Perform Zero Cal again and make sure the Zero Filter is attached to the DustTrak™ inlet
Error completing Zero Cal	Too much light scatter in the optics chamber due to dust deposits	Clean the inlet nozzle. Attach the zero filter and sample for about 2 minutes. During sampling, pulse the flow going into the DustTrak monitor by intermittently plugging the zero filter. Any dust in the optics chamber will break loose during flow pulsations and will be cleared out by the pump Perform Zero Cal again. If the Zero Cal still cannot be performed, factory service may be required

Symptom	Possible Cause	Corrective Action
Severe/sudden increase or decrease in mass concentration (greater than or equal to ~0.200 mg/m^3)	RF (radio frequency) signal transmitting in the area of the instrument causing electrical interference.	Determine the source and turn off the transmitter. Frequencies between 0.9 GHz to 1.7 GHz are known to interfere with the measurement. This spectrum includes aeronautical navigation aids, satellite communications, radio telescopes, and mobile radios. Relocate the instrument to a location where the interference is not present and normal operation resumes.
Run Mode Error: The start time has passed	The selected Run Mode program has "Use Start Date" selected, but the start date is prior to the current date	Correct or change the run mode program
Run Mode Error: The selected log mode will exceed the allowed number of samples	The selected Run Mode program is programmed to save more samples then is room in memory	Reduce the number of samples by reducing the test length or increasing the logging interval
Instrument runs slow	Large amount of data in memory	Large data files or many small data files will cause instrument to slow, due to need to read and display large amounts of data
No display	Unit not switched on	Switch unit on
	Low or dead batteries	Recharge the batteries or plug in the AC adapter

Symptom	Possible Cause	Corrective Action
No touch - screen response	Instrument currently busy	The instrument will take time to open large data files and save configuration information. During this time, the instrument will not respond to additional touchscreen touches
	Instrument Touchscreen is locked	If the lock in the title bar is red, unlock the instrument following the instructions in the Chapter 3, Operation: Title Bar section of this manual
Analog output does not work	Cable/connector not correctly installed	Make sure cable connector is fully seated
	Output wired with reverse polarity	Make sure analog out (+) and analog ground (-) are wired correctly to data-logger
Analog output is not in proportion to display	Analog output range in DustTrak™ monitor may be set incorrectly	Check analog output setting in the Setup->Analog screen. Make sure the channel of interest is selected. Make sure that the correct output (0 to 5V, 4 to 20 mA) is selected
	Data logger scaling factor may be set incorrectly	Review the scaling factor set in the Setup-Analog screen
Alarm output does not work	Alarm function not turned on	Turn the alarm function on in the Settings->Alarm screen
Alarm does not turn on correctly	Alarm setting incorrect	Check the alarm settings in the Settings->Alarm screen Make sure the logging interval and time constant are set as short as possible (30 seconds or lower)
	Alarm output wired with reverse polarity	Alarm wires are polarized. Voltage input must be wired to alarm input (+)
Instrument does not store new data	Memory is full	Delete or transfer historic data
	Instrument is in Survey mode	The instrument does not store data in survey mode. Can to manual or program log mode

Symptom	Possible Cause	Corrective Action
Flow Error is indicated on front screen	If sampling from a duct, instrument may have problems overcoming pressure differences	Attach both the input and the exhaust port into the duct
	Flow obstruction	Remove obstruction if still present. Press any key to bypass
	Internal pump failing, indicated by inability to adjust flow rate to full range	Factory service may be required
	Filter Cassette clogged or has mass loading	Replace the filter cassette. See the maintenance section of the manual
	External pump module (for Model 8530EP only) is not connected to the DustTrak™ monitor	Make sure both the External Pump cable and the flow tubing connector are connected to the DustTrak™ monitor and the External pump module. Lock the External Pump Cable in place by rotating the connector clockwise until you hear it snap in place Make sure the tubing between the DustTrak™ monitor and the External pump module is not kinked and is free of any sharp bends Make sure the exhaust adapter is connected to the exhaust of the DustTrak monitor Make sure the External Pump module filters are not clogged. If found dirty, replace the two HEPA filters
Laser Error indicated on front screen	Laser background is too high	Remove and clean inlet nozzle. Pay close attention to the tip of the nozzle that is inserted into the instrument to ensure it is clear of any contamination
	Laser is failing	Factory service may be required

Symptom	Possible Cause	Corrective Action
Filter Error indicated on front screen	Filters need to be replaced	Replaced the filters per instructions in the maintenance section of this manual. Make sure to reset the filter mass and date once the filters have been changed **NOTICE** This is only a warning. The unit will continue to operate normally until the increase in pressure drop across the filter is so high that the pump can no longer maintain the set flow rate.
System Error has Occurred!	The processor did not receive the input it expected. This can also happen if the optics chamber is saturated with light, or the External Pump Cable is accidentally disconnected during the middle of sampling	Reboot the instrument. If the error does not go away, factory service is required

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Appendix A

Specifications

Specifications are subject to change without notice.

Sensor Type	90° light scattering
Range.....	8530 Desktop: 0.001 to 400 mg/m^3 8532 Handheld: 0.001 to 150 mg/m^3
Resolution	±0.1% of reading or 0.001 mg/m^3, whichever is greater
Zero Stability	±0.002 mg/m^3 24 hours at 10 sec time constant
Particle Size Range.....	Approximately 0.1 to 10 µm
Flow Rate	3.0 L/min set at factory 1.4 to 3.0 L/min adjustable
Flow Accuracy	±5% of factory set point Internal flow controlled
Temperature Coefficient	+0.001 mg/m^3 per °C
Operational Temperature.....	0 to 50°C
Storage Temperature	-20 to 60°C
Operational Humidity.....	0-95% RH, non-condensing
Time Constant.....	Adjustable 1 to 60 seconds
Data Logging	45 days at 1 minute samples
Log Interval	1 second to 1 hour
Physical Size (HWD)	Handheld: 4.9 x 4.75 x 12.45 in. Desktop: 5.3 x 8.5 x 8.8 in. External Pump: 4.0 x 7.5 x 3.5 in.
Weight	Handheld: 2.9 lb., 3.3 lb. with battery Desktop: 3.45 lb., 4.45 lb. – 1 battery, 5.45 lb. – 2 batteries External Pump: 3.0 lb.
Communications.....	8530: USB (Host and Device) and Ethernet. Stored data accessible using thumb drive 8532: USB (Host and Device). Stored dada accessible using thumb drive.

Power—DC	Handheld: 12 VDC at 2A Desktop: 24 VDC at 2.5A
Battery.....	8530: Up to 2 Removable Li-Ion External and Internal charging Life, 1 battery: >6.5 hours (9 hours typical for a new battery) for both internal and external pump Desktop DustTrak monitors Life, 2 battery: >13 hours 8532: 1 Removable Li-Ion External and Internal charging Life: 5 hours typical
Analog out.....	8530: User selectable output 0 to 5 V or 4 to 20 mA User selectable scaling
Alarm Out.....	8530: Relay or sound buzzer Relay No latching MOSFET User selectable set point 5% deadband Connector 4-pin, Mini-DIN connectors 8532: Sound buzzer
Screen.....	8530: 5.7” color touchscreen 8532: 3.5” color touchscreen
Gravimetric Sampling....	8530: Removable 37-mm Cartridge
EMI/RF Immunity	Complies with Emissions Directive Standard: EN50081-1:1992 Complies with Immunity Directive Standard: EN50082-1:1992*

*ESD Shock may require instrument reboot

Appendix B

Zero Module

The Zero Module (P/N 801690) allows for automatic re-zeroing of the DustTrak™ Instrument during long sampling runs. The Zero Module works only with the 8530 desktop models.

Attach the AutoZero module to the main instrument in two steps.

1. Place the Zero module over the instrument's inlet and press down. The Zero module has an O-ring seal that will engage with the instrument's inlet.

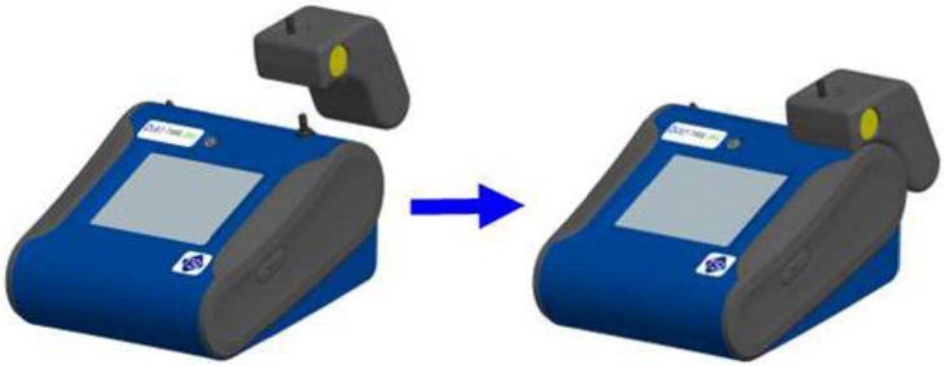


Figure B-1: Place Zero Module Over Inlet and Press Down

2. Attach the cable from the Zero module to the Zero module connector located on the back of the instrument.



Figure B-2: Zero Module Connector

The Zero Module can only be used in a program log mode. The Zero module function is controlled through these two program mode options:

Auto Zero Interval	Interval between re-zeroing the instrument using the Auto-Zero accessory.
Use Auto Zero	Select **Yes** to use the Zero Module. Select **No** to not use the Zero Module.

Important points on Zero Module operation:

- The Zero module will take one (1) minute to take a zero reading. The first 45 seconds of that period is used to clear the chamber of particles. Readings from last 15 second of the period, when the chamber is cleared of particles, will be averaged to determine the Zero offset.
- The log interval, when the Zero module is activated, must be two (2) minutes or greater. Data will not be recorded to the log file when the Zero module is activated.



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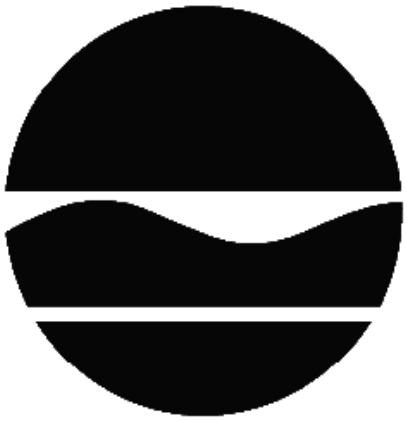
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APPENDIX B - MARCH 2019 RECORD OF DECISION

RECORD OF DECISION

Bronx Psychiatric Center
State Superfund Project
Bronx, Bronx County
Site No. 203005
March 2019



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - RECORD OF DECISION

Bronx Psychiatric Center
State Superfund Project
Bronx, Bronx County
Site No. 203005
March 2019

Statement of Purpose and Basis

This document presents the remedy for the Bronx Psychiatric Center site, a Class 2 inactive hazardous waste disposal site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375 and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Bronx Psychiatric Center site and the public's input to the remedy presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

Prior to the excavation, the transformers will be taken out of service and removed. The concrete floor will be removed and disposed of, and the soils under the concrete floor will be excavated. The soils underneath the transformers will be sampled and excavated and end point samples will be collected. All on-site soils which exceed restricted-residential SCOs for PCBs (1 ppm), as defined by 6 NYCRR Part 375-6.8 and/or the presumptive remedy for PCBs as defined in CP-51 (1 ppm in the upper 2 feet, 10 ppm below that) will be excavated and transported off-site for disposal. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element #4. All soils in the upper two feet below the building slab in Transformer Rooms No. 1 and 2 which exceed the restricted residential SCOs for PCBs will be excavated and transported off-site for disposal. The volume of contaminated soil removed from the site will be determined during the design phase.

3. Backfill

On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element #4 to backfill the excavation. On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element #4.

4. Cover System

A site cover currently exists and will be maintained and/or replaced to allow for restricted residential use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for restricted residential use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

5. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

6. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed in Paragraph 5 above.
   - Engineering Controls: The cover system discussed in Paragraph 4.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - descriptions of the provisions of the environmental easement including any land use, and/or groundwater use restrictions;
   - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - a schedule of monitoring and frequency of submittals to the Department.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 30, 2019
Date

Michael J. Ryan, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

Bronx Psychiatric Center
Bronx, Bronx County
Site No. 203005
March 2019

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Westchester Square Library
2521 Glebe Avenue
Bronx, NY 10461
Phone: (718) 863-0436

Bronx Community board #11
1741 Colden Ave
Bronx, NY 10462
Phone: (718) 892-6262

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the selected remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the selected remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The site consists of Transformer Room No. 1 and Transformer Room No. 2 in Building No. 1 of the Bronx Psychiatric Center, located at 1500 Waters Place in Bronx County of New York City, tax block 4226, lot 30. The site occupies 0.1 acre on the 5-acre Bronx Psychiatric Center campus, which is in an urban area.

Site Features:
Transformer Rooms No. 1 and No. 2 are in the east side of the basement of Building No. 1. Access to the transformer rooms is limited to maintenance personnel. Transformer Rooms No. 1 and No. 2 currently contain active transformers that supply electricity to Building No 1.

Current Zoning and Land Use:
The current zoning of the site is R-5, which is residential that includes multifamily housing. Building No. 1 is owned by the New York State Office of Mental Health (OMH) and is currently vacant. The Bronx Psychiatric Center site is located in a mixed-use area of Bronx County. There are currently 31 buildings on the campus. Surrounding uses outside the hospital campus include residential, commercial, light industrial, and utility and transportation rights-of-way. The nearest residential structure from Building No. 1 is approximately 1,000 feet away east of the Hutchinson River Parkway.

Past Use of the Site:
The site has been used as transformer rooms for the psychiatric center for over 50 years and is also currently in use for electric power supply to the building. There are transformers and associated electrical equipment in the rooms. The prior transformers used at the facility contained PCB dielectric fluid, which leaked within the rooms, impacting the concrete floors

beneath and near the transformers and the soils below the floor. The former transformers were replaced and the current transformers contain non-PCB oil.

Site Geology and Hydrogeology:
Soils beneath the site consist of urban fill and the groundwater flows to the northeast. Depth to groundwater is approximately 11 feet below ground surface and 3 feet below the basement slab.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the RI to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

New York State Office of Mental Health

The Department and NYS OMH entered into a Consent Order on February 23, 2012, Index # R2-0668-06-11. The Order obligates the responsible party to implement a full remedial program.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,

- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- soil
- indoor air

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

PCB aroclor 1260

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

IRM - Epoxy Coating
The transformers containing PCB oils were replaced in 1993. In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both transformer Rooms No. 1 and 2.

The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fan and exterior walls and the space between the floors and electrical equipment were sealed, and annual surface wipe sampling and maintenance of the epoxy coating was conducted.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Nature and Extent of Contamination:
Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations conducted to date, the primary contaminant of concern is PCBs.

Soil/Concrete - The transformers were reported to have leaked and in 1993, soil and concrete within and below the transformer rooms was sampled. In Transformer Room No. 1, soil and concrete to 21,000 parts per million (ppm) and in the soil beneath the floors up to 23,000 ppm of PCBs. In Transformer Room No. 2, concrete had up to 68,000 ppm, and in the soil beneath the floors up to 49 ppm of PCBs. The depth of contamination appears to be limited. Further investigation underneath the electrical equipment has been impeded by the active use of the transformers. Monitoring for seepage of PCBs through the concrete floors, which were epoxy-coated in 1995 and recoated in 2005, was reduced from semi-annual to annual in January 2007. Data does not indicate any off-site impacts in soil related to this site.

Groundwater - Groundwater was monitored quarterly for approximately 10 years. There were no detections of PCBs, except once, in November 2003. The PCB concentration was 3.8 parts per billion (ppb), and the groundwater standard is 0.09 ppb. Data does not indicate any off-site impacts in groundwater related to this site.

Indoor Air - Indoor air sampling had occurred once per year for approximately 10 years. There were no detections of PCBs, except once, in May 2004. The PCB concentration was 0.16 micrograms per cubic meter (ug/m3), which was just over the reporting limit.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

There is a potential for people to come into contact with polychlorinated biphenyls (PCB) contamination in the concrete floors of the transformer rooms. However, access is restricted and the floors have been sealed with an epoxy coating.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

SECTION 7: SUMMARY OF THE SELECTED REMEDY

To be selected the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the feasibility study (FS) report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's remedy is set forth at Exhibit D.

The selected remedy is referred to as the Delineation of Hot Spots and Excavation remedy.

The estimated present worth cost to implement the remedy is $2,276,000. The cost to construct the remedy is estimated to be $2,193,000 and the estimated average annual cost is $4,600.

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

Prior to the excavation, the transformers will be taken out of service and removed. The concrete floor will be removed and disposed of, and the soils under the concrete floor will be excavated. The soils underneath the transformers will be sampled and excavated and end point samples will be collected. All on-site soils which exceed restricted-residential SCOs for PCBs (1 ppm), as defined by 6 NYCRR Part 375-6.8 and/or the presumptive remedy for PCBs as defined in CP-51 (1 ppm in the upper 2 feet, 10 ppm below that) will be excavated and transported off-site for disposal. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element #4. All soils in the upper two feet below the building slab in Transformer Rooms No. 1 and 2 which exceed the restricted residential SCOs for PCBs will be excavated and transported off-site for disposal. The volume of contaminated soil removed from the site will be determined during the design phase.

3. Backfill

On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element #4 to backfill the excavation. On-site soil which does not exceed the above excavation criteria or the protection of groundwater SCOs for any constituent may be used anywhere beneath the cover system, including below the water table, to backfill the excavation or re-grade the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site. The site will be re-graded to accommodate installation of a cover system as described in remedy element #4.

4. Cover System

A site cover currently exists and will be maintained and/or replaced to allow for restricted residential use of the site. Any site redevelopment will maintain the existing site cover, which consists either of the structures such as buildings, pavement, sidewalks or soil where the upper two feet of exposed surface soil meets the applicable soil cleanup objectives (SCOs) for restricted residential use. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6NYCRR part 375-6.7(d).

5. Institutional Controls

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

6. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   - Institutional Controls: The Environmental Easement discussed in Paragraph 5 above.
   - Engineering Controls: The cover system discussed in Paragraph 4.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and/or groundwater use restrictions;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 3 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - a schedule of monitoring and frequency of submittals to the Department.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are polychlorinated biphenyls (PCBs). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Groundwater

Groundwater has been sampled for PCBs since 1993 and was monitored semi-annually from 1996 to 2005. Additional samples were collected from the downgradient wells in 2014 and analyzed for PCBs. In 2003, one exceedance of PCBs was reported as a detection in MW-3. The well was located outside the building and adjacent to Transformer Room No. 2. The well was redeveloped, and the detection was never repeated. In 2013 and 2014, sampling was conducted for metals, VOCs, SVOCs, and PCB/Pesticides. There were no exceedances of groundwater standards for VOCs, metals, and pesticides. One SVOC compound, benzo(b)fluoranthene, was detected.

Table 1- Groundwater (wells are "off-site," downgradient, adjacent to transformer rooms)

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
No exceedances			
SVOCs			
Benzo(b)fluoranthene	3.5-3.6	0.002	2 of 2
Inorganics			
No exceedances			
Pesticides/PCBs			
Arochlor 1260	ND - 3.8	0.09	1 of 50

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b - SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

No site-related groundwater contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for groundwater.

Soil

Soil samples were collected at the site in 1993, in 2000 (PSA), and in 2013-2014 (RI). Soil samples were taken from under the concrete slab, which ranges in thickness from 6.5 to 15 inches. The depth of soil samples taken ranged from just below the concrete slab to a maximum of 28 inches below the slab. Groundwater was encountered at three feet from the surface of the concrete. All sampling events included PCB analysis, with the 1993 and 2000 sampling for PCBs only. In 2000, field kits were used to guide which samples would be analyzed in the lab as well as some for confirmation purposes. There was no correlation between values in the field kits with values from the laboratory analyses. The highest concentrations of PCBs were found near the floor drains in previous sampling events.

Investigations conducted in 2013-2014 included analysis for VOCs, SVOCs, metals, pesticides and PCBs. Those investigations indicate that soils at the site meet soil cleanup objectives (SCOs) for VOCs, metals, and pesticides, but three semi-volatile organic compounds exceed the unrestricted SCG, and one SVOC compound (benzo(a)anthracene) exceeds restricted residential SCOs. SVOC exceedances were attributed to historic fill, which was observed in boring logs outside the building during the RI in 2013-2014.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG*	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG*
VOCs**					
Acetone	0.46-1.3	0.05	4/4	100	0/4
SVOCs**					
Phenanthrene	0.96-2.3	100	0/4	100	0/4
Anthracene	0.23-0.4	100	0/4	100	0/4
Fluoranthene	1.5-2.4	100	0/4	100	0/4
Pyrene	1.6-2.8	100	0/4	100	0/4
Benzo(a)anthracene	0.94-1.2	1	1/4	1	1/4
Chrysene	0.98-1.3	1	1/4	3.9	0/4
Benzo(k)fluoranthene	0.49	0.8	0/4	3.9	0/4
Dibenzo(a,h)anthracene	0.21-0.23	0.33	0/4	0.33	0/4
Benzo(g,h,i)perylene	0.37-0.99	100	0/4	100	0/4
1,2,4-Trichlorobenzene	1.8	NS	NS	NS	NS
Benzo(a)Pyrene	0.97-1	1	0/4	1	0/4
Naphthalene	0.22	12	0/4	100	0/4
Benzo(b)fluoranthene	1.2-1.4	1	4/4	1.7[d]	0/4
PCBs					
PCBs, total	0.1-23,000	0.1	27/41	1	17/41

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted-Residential Use, unless otherwise noted with d.

NS – No standard
*Per total number of samples analyzed.
** VOCs and SVOCs are attributed to the historic fill material upon which the Bronx Psychiatric Center was constructed. The remedy for the site was developed to address the release of PCBs beneath the transformer rooms.

The primary soil contaminant is polychlorinated biphenyls (PCBs) associated with releases from transformers used for electric generation for Building No.1. Figures 3 and 4 present the PCB sampling results for soil in Transformer Room No. 1 and Transformer Room No. 2, respectively.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary contaminants of concern, to be addressed by the remedy selection process are PCBs.

Concrete

Concrete is a porous surface that was affected by releases to the building floor. Currently, most of the slab in the transformer rooms is covered with an epoxy coating. The epoxy coating is monitored with annual wipe sampling followed by clean up, if required. Annual monitoring is done to ensure the wipe samples taken on the surface meet the Toxic Substances Control Act (TSCA) requirement of 10 ug/100 cm2. If there is an exceedance, the epoxy coating is cleaned and resampled to confirm it meets the requirement.

Concrete core samples were collected at the site during the PSA (2000) and RI (2013-2014). The thickness of the concrete ranges from 6.5 to 15 inches. Samples were collected from the surface of the concrete (or just under the epoxy coating where applicable) and at the bottom. The results indicate that concrete at the site is impacted with PCBs. Figure 5 and 6 show the results of the concrete core testing that is presented in the RIR for Transformer Room No. 1 and Transformer Room No. 2, respectively. The table below presents a summary of the analytical data for concrete.

Table # 3 - Concrete

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG (ppm)	Frequency Exceeding Restricted SCG
PCBs					
PCBs, total	0.11-68,000	NA	NA	NA	NA

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in concrete.

Based on the findings of the Remedial Investigation, the past disposal of hazardous waste has resulted in the contamination of the concrete floors in Transformer Room No. 1 and Transformer Room No. 2. The site contaminants identified in the concrete, which are considered the primary contaminants of concern to be addressed by the remedy selection process, are PCBs.

Surface Water

No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediments

No site-related sediment contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for sediment.

Indoor Air

At this site, due to the impacted area being inside a building, indoor air samples were collected as part of a monitoring program prior to the RI to evaluate if site-related soil and concrete contamination was affecting the indoor air. PCBs were not detected in the indoor air samples collected between 1995-2003, except once, and just slightly above the reporting limit.

No site-related soil vapor contamination concerns were identified during the RI. Therefore, no remedial alternatives need to be evaluated for soil vapor.

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Further Action

The No Further Action Alternative recognizes the remediation of the site completed by the IRM(s) described in Section 6.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment. Included in this Alternative are the costs for annual monitoring and occasional cleanup of, or reapplication of, the epoxy coating.

Present Worth: ..... *$*207,000
Annual Costs: ..... *$*11,500

Alternative 2: Containment and Site Management

The Site Management Alternative requires institutional controls for the site and an engineering control in the form of an epoxy coating. This alternative was developed to comply with TSCA regulations that allow the continued use of PCB-impacted porous surfaces (concrete) and underlying materials under certain conditions. This alternative includes institutional controls, in the form of an environmental easement and a site management plan, necessary to protect public health and the environment from any contamination identified at the site. The engineering control would include the cleaning of the entire concrete floors in Transformer Room No. 1 and Transformer Room No. 2, and the re-application and maintenance of the epoxy coat over those floors.

The "Containment and Site Management" Alternative recognizes the remediation of the site completed by the IRM described in Section 6.2 and Site Management and Institutional Controls and Engineering Controls are necessary to confirm the effectiveness of the IRM. This alternative maintains engineering controls which were part of the IRM and includes institutional controls, in the form of and environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site after the IRM. Under Alternative 2, the electrical equipment would be de-energized, removed, and replaced after remedial construction. The concrete surface would be scarified to remove the existing epoxy and then cleaned. A double epoxy layer would be applied. Waste would be disposed at appropriately permitted facilities.

Present Worth: ..... *$*1,510,000
Capital Cost: ..... *$*1,306,000
Annual Costs: ..... *$*11,500

The time frame for this alternative would be approximately five months beginning with contractor submittals, mobilization and start-up through restoration and closeout. This alternative would require long-term maintenance and monitoring that would take a week or less per year.

Alternative 3: Limited Removal, Site Cover, and Institutional Controls

This alternative would include Remedial Design, Excavation, Backfill, a Cover System, and Engineering and Institutional Controls. A remedial design program will be implemented to provide the details necessary for the

construction, operation, optimization, maintenance, and monitoring of the remedial program. Prior to the excavation, the transformers will be taken out of service and removed. The opening from the building will be expanded to accommodate movement of equipment. The concrete floor will be removed to the extent of the grade beams and properly disposed of, and the soils under the concrete floor will be excavated to the limits determined in the Pre-Design Investigation. The soils underneath the transformers and beneath the rooms (to the extent of the grade beams) will be sampled to determine the limits of the excavation. End-point samples will be collected after excavation. All soils in the upper two feet which exceed the restricted residential SCOs will be excavated and transported off-site for disposal Subsurface soil with PCB concentrations greater than 10ppm would be removed. The site-specific cleanup SCO for PCBs is 1 ppm for surface soils and 10 ppm for soils greater than two feet below the concrete. The volume of contaminated soil to be removed from the site will be determined during the design phase. On-site soil which does not exceed the above excavation criteria may be used below the cover system, or clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil to establish the designed grades at the site. The site cover will be replaced to allow for restricted residential use of the site with a minimum of six inches concrete cover. Imposition of an institutional control in the form of an environmental easement and a Site Management Plan will be required.

Present Worth: ..... *$*2,276,000
Capital Cost: ..... *$*2,193,000
Annual Costs: ..... *$*4,600

The time frame to construct this alternative would be about 8.5 months beginning with contractor submittals, mobilization and start-up, through restoration and closeout. This alternative would require long-term maintenance and monitoring.

Alternative 4: Expanded Removal to Achieve Residential SCOs

This alternative achieves all the SCGs discussed in Section 6.1.1 and Exhibit A and the soil meets the unrestricted soil clean objectives listed in Part 375-6.8 (a). This alternative would include Remedial Design, Excavation, Backfill, a Cover System, and Engineering and Institutional Controls. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Prior to the excavation, the transformers will be taken out of service and removed. The basement opening will be expanded, and structural support will be added to allow excavation around and to the building footers. After removal and proper disposal of the concrete floor, soils underneath the transformers and the rooms will be sampled to determine the limits of the excavation. End-point samples will be collected after excavation. All soils which exceed the residential SCO for PCBs (i.e., 1 ppm) will be excavated and transported off-site for disposal. The volume of contaminated soil to be removed from the site will be determined during the design phase. Under this alternative, no long-term engineering or institutional controls would be required, and the site would be delisted.

Capital Cost: ..... *$*7,990,000

The time frame to construct this alternative would be about 21 months beginning with contractor submittals, mobilization and start-up, through restoration and closeout.

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Alternative 1 – No Further Action	0	$11,500	$207,000
Alternative 2 – Containment and Site Management	$1,306,000	$11,500	$1,510,000
Alternative 3 – Limited Removal, Site Cover, and Institutional Controls	$2,193,000	$4,600	$2,280,000.
Alternative 4 – Expanded Removal to Achieve Residential SCOs	$7,994,000	0	$7,990,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department selected Alternative 3, Limited Removal and Long-Term Management as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by removing contaminated soil to the limits of the grade beams. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figures 7 through 8.

Basis for Selection

Alternative 3 includes removal and off-site disposal of readily accessible concrete and of the more significantly impacted soil. This alternative is expected to achieve the cleanup level for PCBs in soil of 1 ppm in shallow soil (0-2 feet) and 10 ppm in subsurface soil, as set forth in NYSDEC's CP-51 and Part 375-6.8. The construction of a concrete cap meeting TSCA specifications over remaining impacted soil is protective of public health and complies with TSCA regulations. Alternative 3 presents construction challenges within the tight confines of working in the two basement transformer rooms. Excavation between pile caps, beneath grade beams, and possibly beneath the water table (depending on the outcome of the PDI) adds to the challenges, particularly because a substantial portion of the excavation may be performed by hand. Workers will follow a site-specific Health and Safety Plan during remedial construction. Alternative 3 relies on ICs/ECs and the SMP to provide protection to future workers.

Alternative 3 is the recommended remedy because it meets the RAO for the site with a lesser degree of building alteration and best value, and provides short and long-term protection to human health under current and future conditions through the removal of the highest concentrations of PCB-containing soil and the removal of the contaminated concrete floor to the extent of the grade beams. Furthermore, future workers are isolated from any remaining contaminated soil by the cover system, as well as by the ICs that prohibit uncontrolled excavation of contaminated soil and require periodic inspection and certification of the cover system.

This alternative would allow for re-classification of the site from a Class 3 to a Class 4 Inactive Hazardous Waste Disposal Site. This alternative meets the cleanup level of 10 ppm for PCBs in subsurface soil specified in CP-51 and is anticipated to result in a restricted-residential cleanup provided the ICs/ECs are implemented.

The selected remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The selected remedy (Alternative 3) would satisfy this criterion by removing the contaminated soils from below the concrete slab to meet the CP-51 cleanup level for PCBs in the subsurface. Alternative 4 addresses the PCB contamination in soil with removal to 1 ppm, which is the restricted residential soil cleanup objective in Part 375; however, significant structural shoring is required to excavate beyond the grade beams for the building.

Alternative 1 (No Further Action) does not provide adequate protection to public health and the environment and will not be evaluated further. Alternative 2 (Expanded Cover System with Site Management) includes no soil removal and does not meet soil cleanup values. Alternative 3, by removing all soil contaminated above the Restricted Residential soil cleanup objective specified in CP-51, meets the threshold criteria. Alternative 4 also complies with this criterion and to a greater degree. Alternatives 2 and 3 rely on an environmental easement with a restriction of groundwater use at the site, a cover system, and site management to protect human health.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternatives 1 and 2 do not comply with NYS SCGs for PCB cleanup, with concentrations up to 23,000 ppm remaining in soil. Alternative 3 complies with SCGs to the extent practicable by achieving the 1 ppm PCB SCO specified in 6NYCRR Part 375 for surficial soils and the 10 ppm PCB SCO specified in CP-51 for subsurface soils. It addresses removal of source areas of contamination and construction of a cover system over sub-surface soils containing between 1-10 ppm of PCBs. Alternative 4 also complies with SCGs by excavating to 1 ppm PCBs throughout the soil column. Because Alternatives 3 and 4 satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Long-term effectiveness is best accomplished by those alternatives involving excavation of the contaminated soils (Alternatives 3 and 4). Most of the contamination identified to date are in the areas around the drains in the transformer rooms, and Alternative 3 results in removal of the contamination at the site to the areal extent of the grade beams to 10 ppm PCBs. This alternative requires property use restrictions, a cover system, and long-term monitoring. Alternative 4 would result in the removal of all of the contaminated soil at the site to 0.1 ppm and would provide the greatest degree of permanence.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 3, excavation and off-site disposal, reduces the toxicity, mobility and volume of on-site waste by transferring the material to an approved off-site location. Alternative 4 also requires the excavation and disposal of contaminated soil. However, depending on the disposal facility, the volume of the material would not be reduced. With Alternative 3, a lesser volume would be removed, and the remaining contaminated soils require a concrete cover. Alternative 4 would reduce the toxicity, mobility and volume of contaminants to a greater extent by removal to 0.1 ppm PCBs.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other

alternatives.

Alternatives 3 and 4 have short-term impacts which involve expanding the entranceway to the transformer rooms for better access to the transformer replacements and soil and concrete removal. The time needed to achieve the remediation goals is the shorter for Alternative 3 and longer for Alternative 4 since Alternative 4 includes removal of a larger area of contamination to achieve the remediation goals.

Alternative 4 would present more construction challenges during the various phases of securing the structural integrity of the building, including underpinning work. Utilizing a low-clearance drill rig to install the mini-piles for temporary supports, transfer of the load from the original building pile caps to the temporary supports, and then back to newly constructed replacement pile caps, would be performed in a constrained space. Any dewatering that would be needed periodically throughout the project would be determined during the design phase, and depending on the depth of excavation, dewatering may have the potential to mobilize soil and undermine existing, temporary, and newly constructed foundation components.

In addition, Alternative 4 poses green remediation/sustainability issues in that an additional 1,815 cy of soil external to the building would have to be excavated in order to create access within the building to excavate 428 cy of PCB-contaminated soil and concrete. Removal of this additional soil requires substantially more excavation equipment and transportation vehicle equipment, in turn increasing fuel use and air emissions.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternative 3 presents a moderate level of construction implementation issues, while Alternative 4 would be more difficult to implement. The structural integrity of the building was assessed with regard to removing the concrete floor and excavating soil. Protection of the pile caps may be necessary for Alternative 4. Noise, traffic and safety concerns would be mitigated through adequate plans and specifications. Once suitable access was available, concrete removal and excavation of the volume of soil to the limits of the excavation as determined in the Remedial Design Investigation (RDI) which may extend deeper than the groundwater table. Additional excavation into the saturated zone would be challenging due to the space constraints and is assumed to be up to four feet for Alternative 4. Structural concerns are amplified for Alternative 4, where the removal of foundation components and/or the soil supporting the foundation components would be required, and the load supported by each building column affected would need to be transferred to an alternate support mechanism. This effort is limited to one location at a time per room. The complexity of step by step construction of new temporary foundation supports, transferring the load, performing removal, reconstructing the associate pile cap and grade beam, and then transferring the load back after the concrete has cured would approach technical infeasibility. Alternative 4 would have administrative challenges if, based upon the results of the pre-design investigation, a deeper excavation is necessary and the dewatering, that may be needed requires a permit from NYCDEP that stipulates treatment of discharge. Obtaining the permit would require a treatability study to document that the treatment train would be effective in treating water to the required discharge limits. Another potential administrative challenge would be identifying a specialty subcontractor skilled and experienced in underpinning work to meet the confidence level of the owner. Notification to USEPA of the intent to perform a self-implementing cleanup would be made prior to the start of work for Alternatives 3 and 4. For Alternative 3, in the event that circumstances beyond those anticipated are encountered during implementation that make achieving a

10 ppm cleanup objective for subsurface soil technically impracticable, the project objectives would be reviewed with NYSDEC and a risk-based approval from USEPA would be sought.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The capital costs of the alternatives vary significantly from just over two million dollars for Alternative 3 to eight million dollars for Alternative 4. The long-term maintenance cost of the capped area with Alternative 3 is less than $5,000 per year.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

Alternative 3 is expected to achieve the 10 ppm PCB cleanup level for subsurface soil specified in CP-51, which allows the site to be reclassified to a Class 4 Inactive Hazardous Waste Disposal Site. Alternative 3 relies, in part, on maintenance and monitoring to remain effective over time. Alternative 4 is expected to achieve the 6 NYCRR Part 375 restricted residential cleanup objective of 0.1 ppm PCBs that allows unrestricted use, meets TSCA criteria for high occupancy use without conditions, and the site would be delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative 3 is being selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Bronx Psychiatric Center
State Superfund Project
Bronx County, New York
Site No. 203005

The Proposed Remedial Action Plan (PRAP) for the Bronx Psychiatric Center site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 27, 2018. The PRAP outlined the remedial measure proposed for the contaminated soil and concrete at the Bronx Psychiatric Center site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 18, 2019, which included a presentation of the remedial investigation feasibility study (RI/FS) for the Bronx Psychiatric Center site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period ended on March 29, 2019.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Regarding land use – can single family homes be built under this remedy?

RESPONSE 1: The remedy to be implemented will allow for restricted residential use of the property in the future. The restricted residential category allows for multi-family residential development under single ownership (i.e., apartments), as well as commercial or industrial uses. Single family housing is not allowed under the restricted-residential use category unless there is one certifying entity for the entire site, such as a Homeowners Association. The actual development is controlled by local zoning regulations.

COMMENT 2: Do PCBs volatilize in air?

RESPONSE 2: PCBs are not volatile compounds but can become airborne under certain circumstances, such as in dust particles or under extremely high heat. The air samples collected as part of the Remedial Investigation were intended to establish whether persons with access to the transformer rooms were exposed to PCBs. The results indicated that PCBs were not detected in the indoor air. Therefore, there was no exposure hazard for workers who periodically access the transformer rooms. The proposed remedy will remove the source of the PCBs in concrete and soil, further reducing the potential for exposure.

COMMENT 3: Have any maintenance personnel reported health problems related to PCBs?

RESPONSE 3: Signs are posted at the entrance of both transformer rooms to notify workers of the PCB hazards. No one has reported any adverse health effects related to the PCBs.

COMMENT 4: Why were PCBs banned?

RESPONSE 4: Manufacture of PCBs was banned by the US Environmental Protection Agency in 1979 due to both the potential health effects and the chemicals' environmental persistence.

COMMENT 5: Are PCBs heavier than water?

RESPONSE 5: PCBs in pure form are denser than water. However, in this case the PCBs were contained in a petroleum-based transformer oil carrier fluid, which is lighter than water.

APPENDIX B

Administrative Record

ADMINISTRATIVE RECORD

Bronx Psychiatric Center
State Superfund Project
Bronx County, New York
Site No. 203005

1. *Proposed Remedial Action Plan for the Bronx Psychiatric Center site,* dated September 2018, prepared by the Department
2. Order on Consent, Index No. R2-0668-06-11, between the Department and New York State Office of Mental Health, executed on February 23, 2012
3. *Preliminary Site Assessment Report*, dated December 2000, prepared by Dvirka and Bartilucci Consulting Engineers
4. *Citizen Participation Plan*, dated March 2013 (revised June 2013), prepared by URS Corporation (URS)
5. *Remedial Investigation Work Plan*, dated October 2013, prepared by URS
6. *Remedial Investigation Report*, dated November 2016, prepared by URS
7. *Feasibility Study Report*, dated February 2019, prepared URS





SITE LOCUS

IMAGE SOURCE: geology.com

0 150 300

APPROXIMATE
GRAPHIC SCALE IN FEET

IMAGE SOURCE: DISCOVER GIS DATA NY

Title:	SITE LOCATION MAP
Location:	Bronx Psychiatric Center 1500 Waters Place Bronx, NY 10461-2796
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

URS

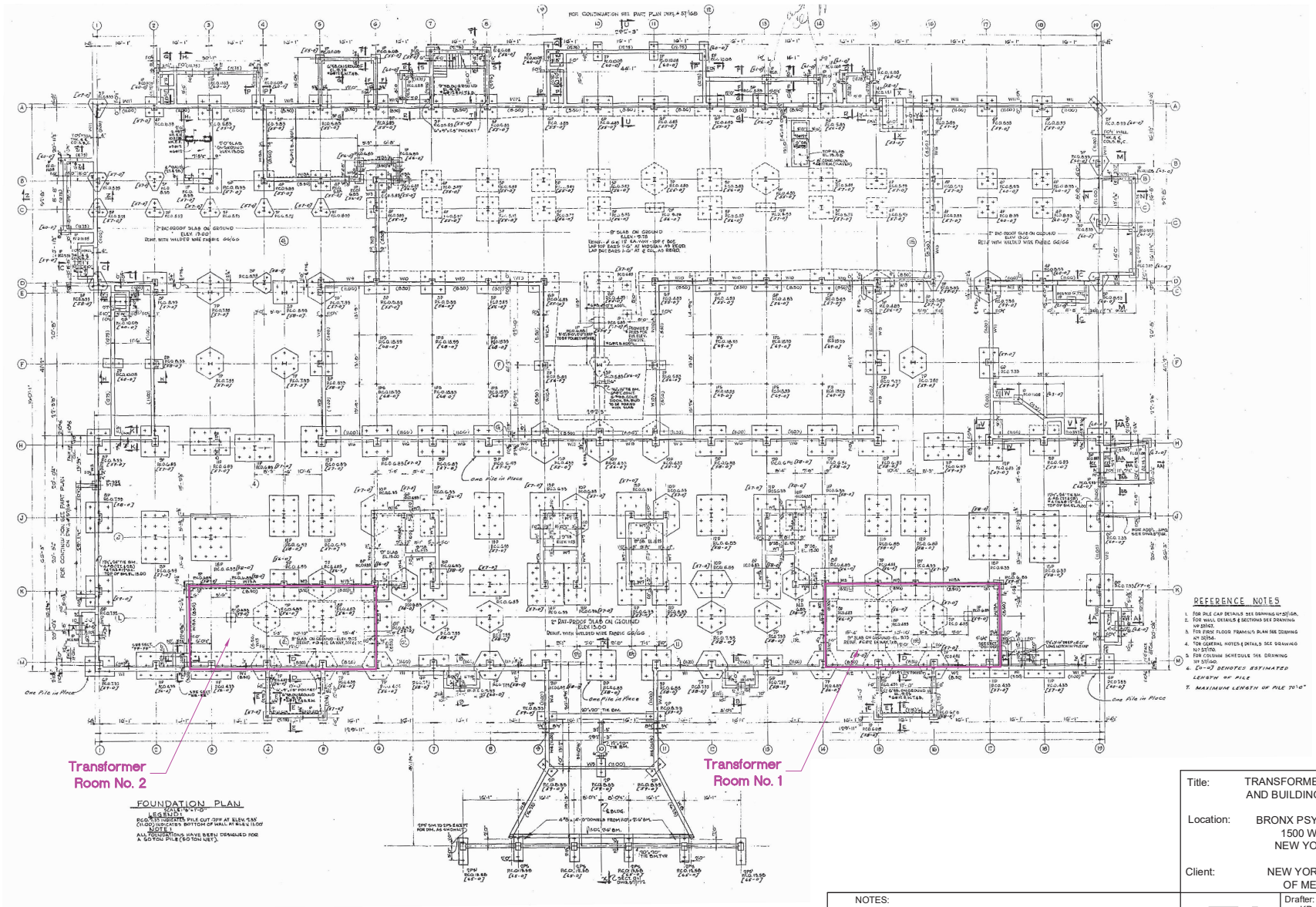
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: February 2019
Drg. Size: 8.5 x 11	Job No.: 60425929

FIGURE 1

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\Rev RI Fig 1\Fig1_RI-Rev3.dwg User:karen.peppin Feb 19, 2019 - 4:30pm

C:\Users\karen.peppin\Desktop\backup work hd 2014-06-12\karen desktop 4\Bronx PC\2016-17 CAD\2016 CAD\FIGURE 2-new.dwg User:karen.peppin Jan 12, 2017



NOTES:
Not to scale.

SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, 12/04/58

Title: TRANSFORMER ROOM LOCATIONS AND BUILDING FOUNDATION PLAN

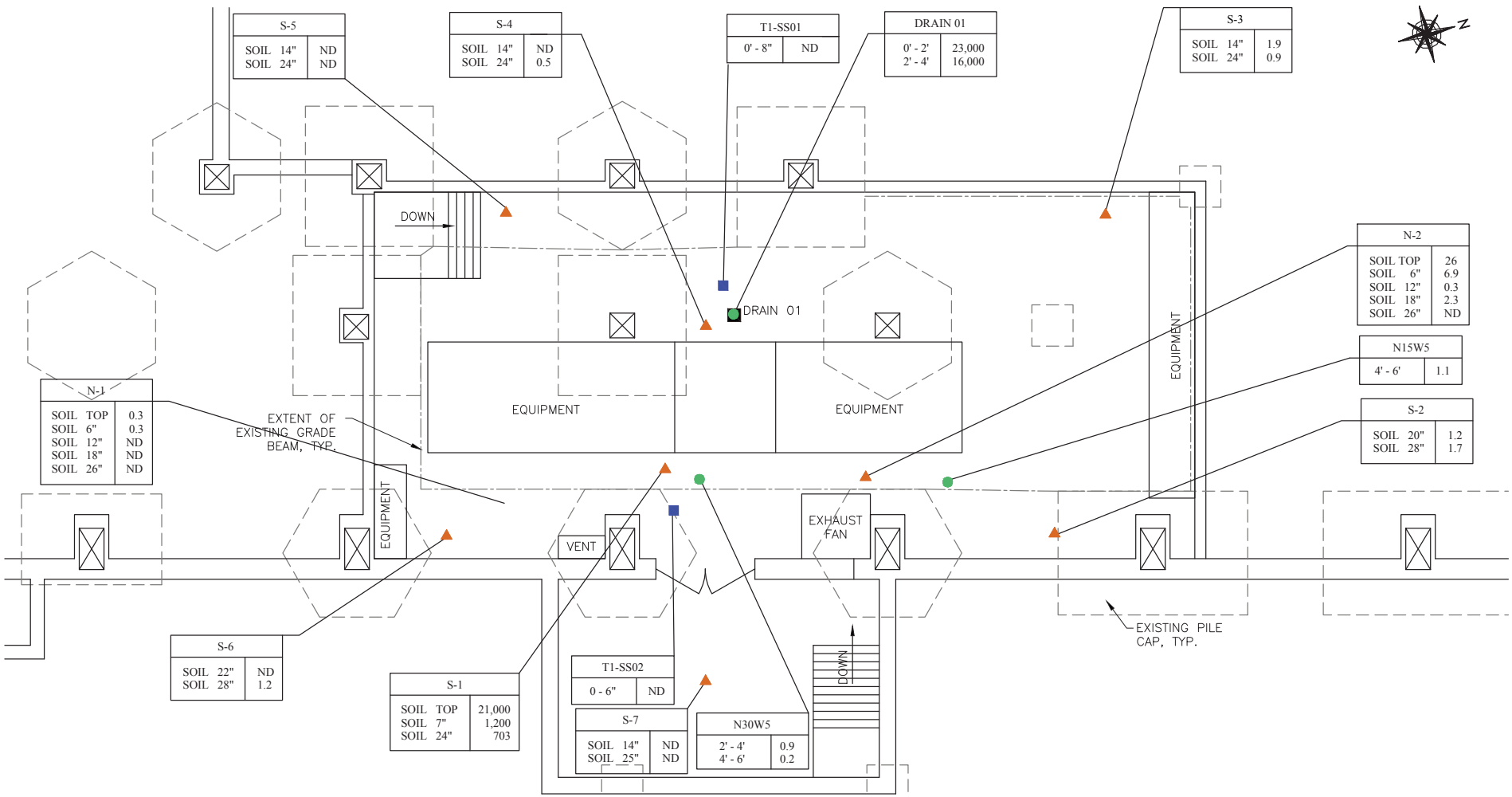
Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: January 2017
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 2



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Soil Sample Location - 1993
- Soil Sample Location - 2000
- Soil Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

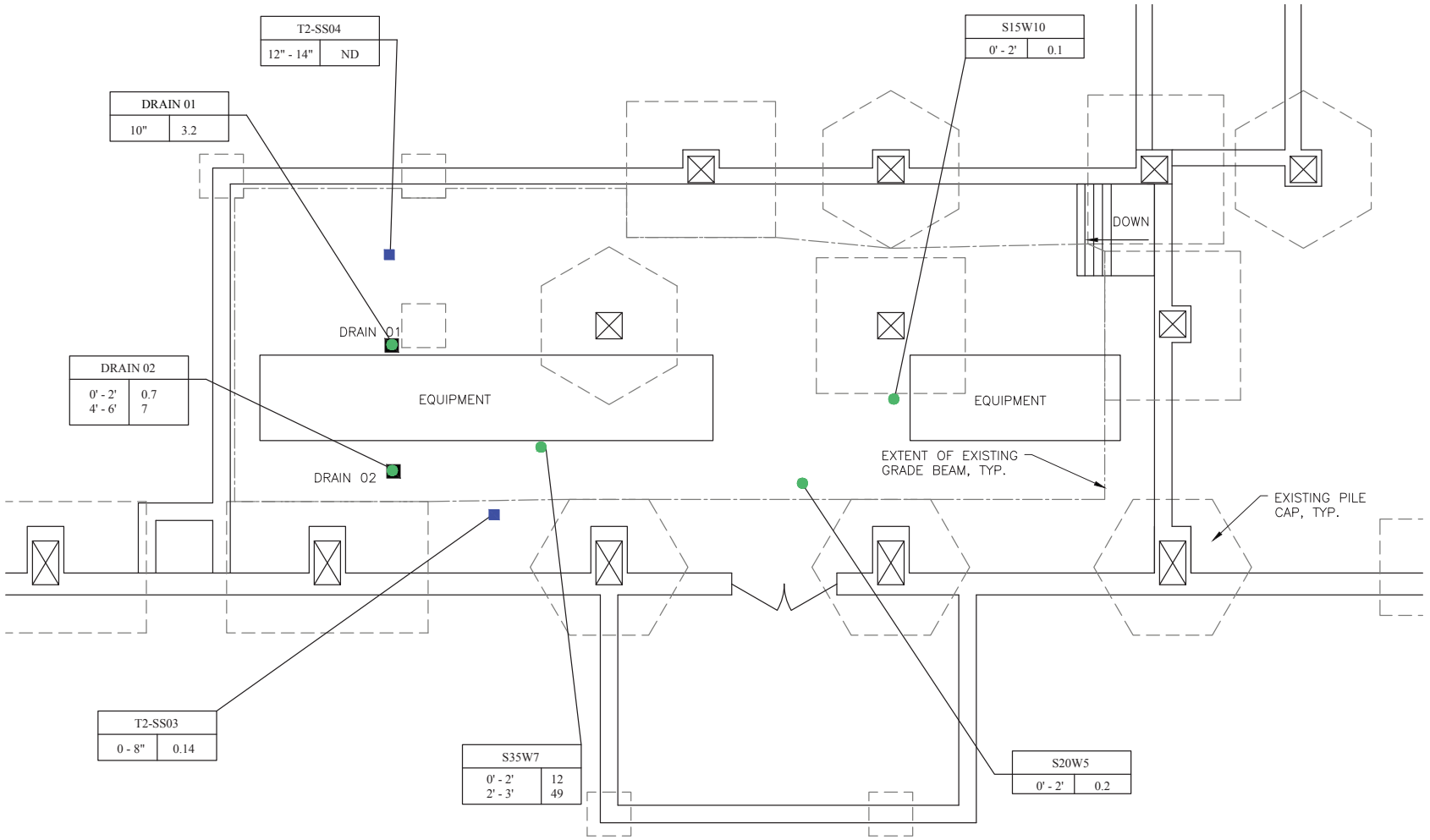
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 3

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Soil Sample Location - 2000
- Soil Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

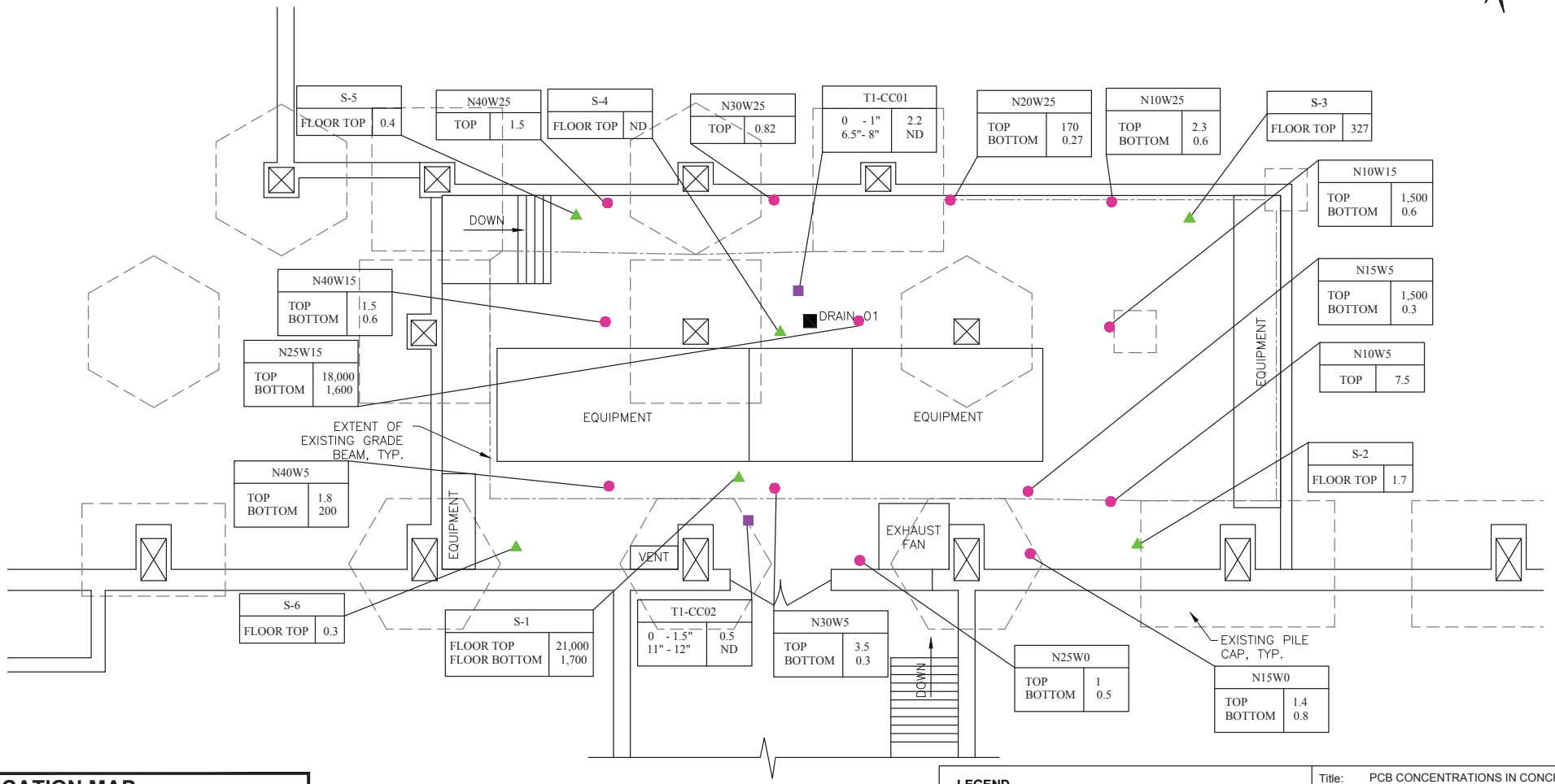
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 4

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

6' 0 6'
SCALE IN FEET

LEGEND

- Structural Column
- Concrete Sample Location - 1993
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

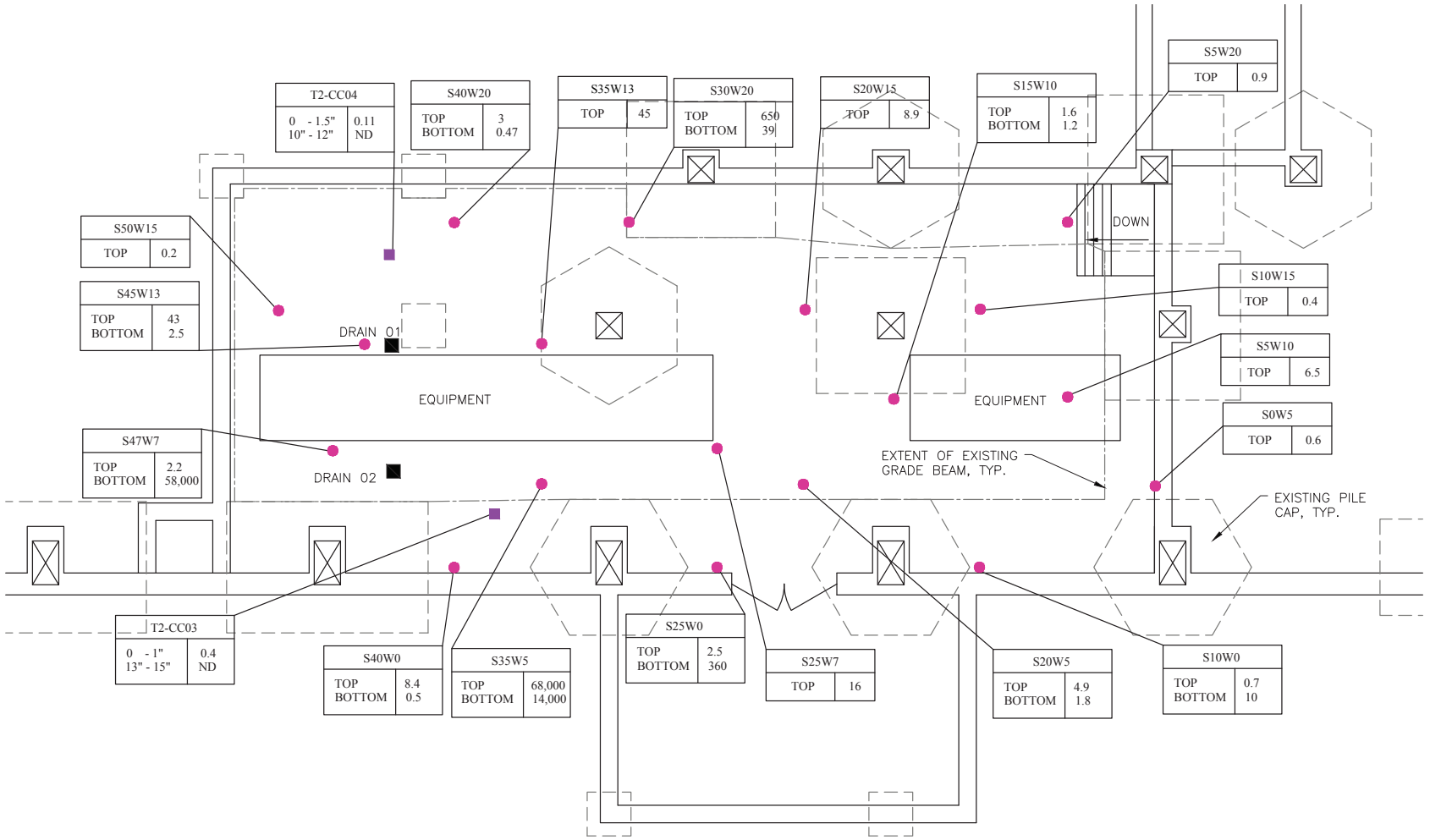
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP
Date: February 2018
Drg. Size: 11 x 17
Job No.: 60425929

FIGURE 5

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:55am



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

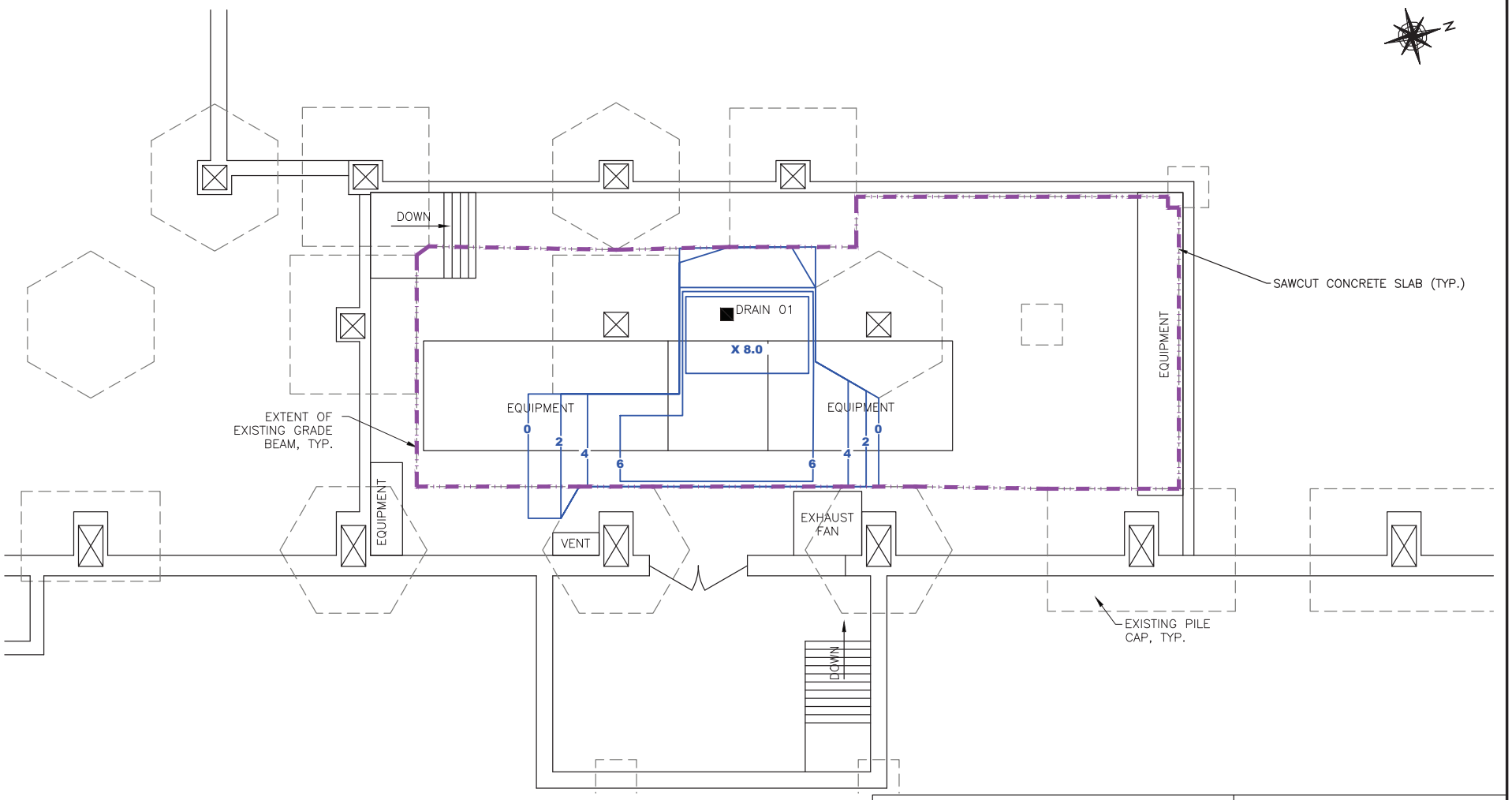
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 6

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:55am



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- Impacted Soil Excavation Depth Contours (Estimated)

NOTE:
All locations are approximate

Title: ALTERNATIVE 3 ESTIMATED REMOVAL TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

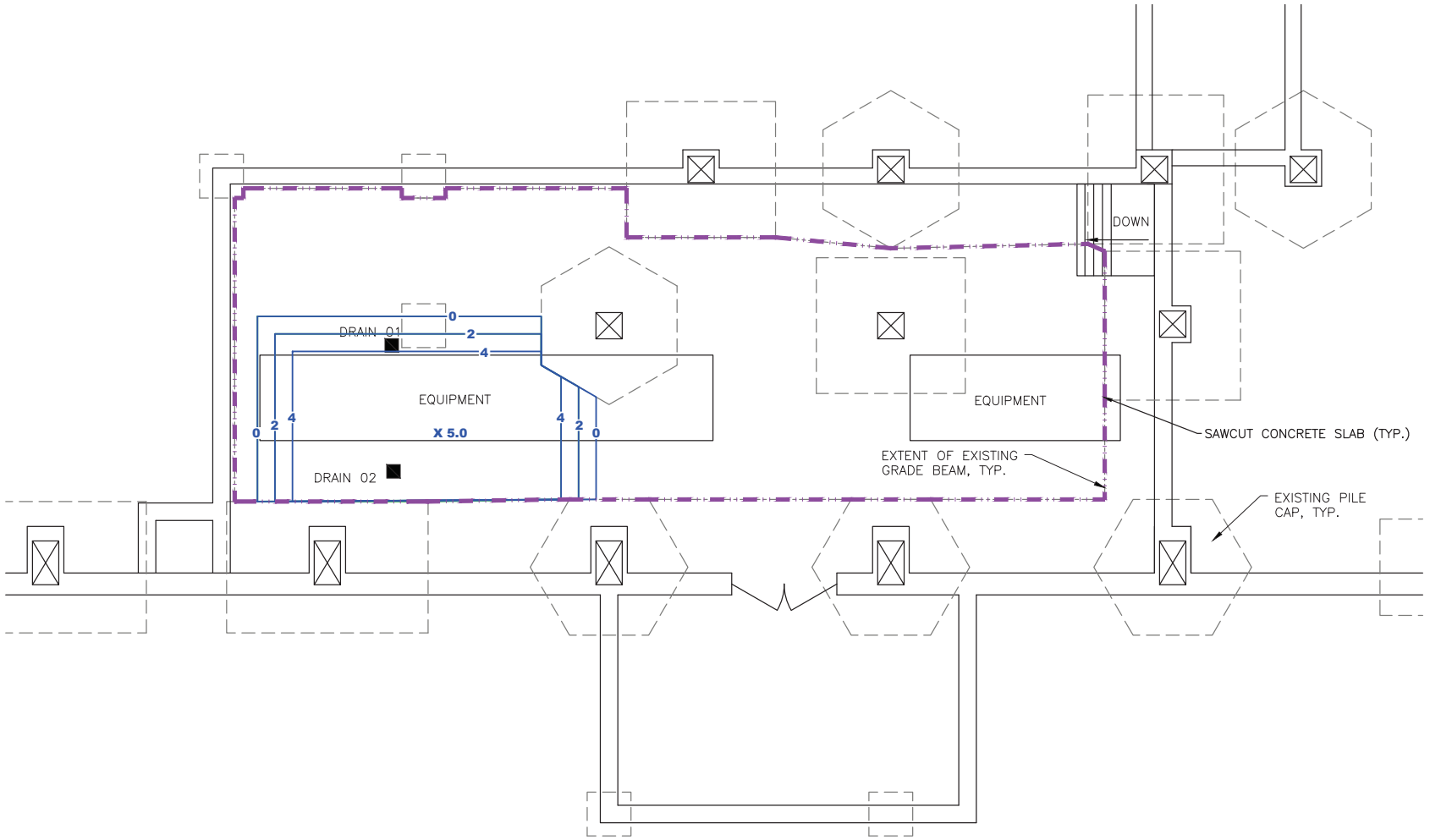
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 7

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- Impacted Soil Excavation Depth Contours (Estimated)

NOTE:
All locations are approximate.

Title: ALTERNATIVE 3 ESTIMATED REMOVAL TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 8

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am

APPENDIX C – FEBRUARY 2020 MINOR RECORD OF DECISION MODIFICATION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 2
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4995
www.dec.ny.gov

M E M O R A N D U M

TO: Gerard Burke, Director, Remedial Bureau B, DER

THRU: Jane O'Connell, RHWRE

FROM: Sondra Martinkat, Project Manager

SUBJECT: Minor ROD Modification
Site Name: Bronx Psychiatric Center
Site No. 203005

DATE: February 11, 2020

The Department signed a Record of Decision (ROD) dated March 30, 2019 for the Bronx Psychiatric Center project under the State Superfund Program. This memo provides clarification on the interpretation of Commissioner's Policy 51 (CP-51) regarding surface soil and subsurface soil and corrects some typographical errors. The selected remedy does not change.

The ROD was executed after the required 30-day public comment period on the Proposed Remedial Action Plan, and the required public meeting which was held on March 19, 2019. No formal written comments were received during the comment period, and questions posed at the public meeting are documented in the Responsiveness Summary, which is appended to the ROD.

The Responsible Party, New York State Office of Mental Health (OMH), proposed a cleanup alternative that used CP-51 presumptive remedy guidance for PCBs. Specifically, CP-51 requires cleanup to 1 ppm PCBs in surface soil and 10 ppm PCBs in subsurface soils for non-BCP sites. The DEC wrote the PRAP using language directly from CP-51 regarding PCB presumptive remedy. OMH did not comment on the PRAP within the public comment period. However, considering that the concrete slab will be replaced with a clean concrete slab, the DEC will accept the Soil Cleanup Objective (SCO) of 1 part per million (ppm) for surface soil to be met within the concrete slab. Therefore, below the new concrete slab, the subsurface soil must meet the CP-51 guidance value of 10 ppm.

Typographical errors in the ROD include:

- Page 1, Statement of Purpose and Basis: The first sentence should say a Class 3 site, not Class 2.
- Page 8, Section 6.3 Summary of Environmental Assessment: The word "soil" is referenced twice in one sentence, the first incidence should say "concrete."

NOT SUBJECT TO FOIL

- Exhibits, Page 2 and 3, Nature and Extent of Contamination, Soil: The values for the thickness of concrete slabs and depth of samples are not correct. Concrete slab is up to 18 inches in thickness, not 15. Depth of soil samples collected were to six feet below grade, not 28 inches.
- Exhibits, Page 4, Nature and Extent of Contamination, Indoor Air: The indoor air samples were taken until 2006, not 2003.
- Responsiveness summary – The date for meeting was March 19, 2019, not March 18.
- References – The date of the PRAP was February 2019, not September 2018; the Citizen Participation Plan dated 2013 was updated in February 2019.
- Figure 8: An older version was used. There is a revised figure in the Feasibility Study (only change was a footnote) dated Feb 2019.

After careful review of CP-51 and Part 375 for surface soil removal and cover systems, and in conformance with DER-2, we have determined that this represents a minor modification to the ROD. This determination is based on the following factors:

- The approved ROD will address the residual PCB source area in soil. The remedial actions include the complete removal of the concrete slab to the grade beams; removal of subsurface soil to 10 ppm (approximately 72 square foot area); reinstallation of the concrete cover; and the implementation of a Site Management Plan and Environmental Easement to prevent future exposure to remaining contamination.

- The typographical errors do not change the remedy.

We recommend that the minor modification to the ROD be approved. This memo will be placed in the project file to document the minor modification to the approved remedy.

ec: Heather Leibowitz - NYSDEC
Scarlett McLaughlin, Stephanie Selmer - NYSDOH

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APPENDIX D – NOVEMBER 2016 REVISED REMEDIAL INVESTIGATION REPORT

Remedial Investigation Report
Building 1 Transformer Rooms

Prepared for

New York State Office of Mental Health
Bronx Psychiatric Center
1500 Waters Place
Bronx, New York 10461

Prepared by

URS Corporation
40 British American Boulevard
Latham, New York 12110

Original August 2012
Revised January 2015
Revised November 2016

TABLE OF CONTENTS

Section 1 Introduction 1-1

1.1 Certification 1-1
1.2 Site Description 1-1
1.3 Physical Setting 1-2
1.3.1 Site Geology 1-2
1.3.2 Site Hydrogeology 1-2
1.4 Contaminant Fate and Transport 1-3
1.4.1 Potential Routes of Migration 1-3
1.4.2 Contaminant Persistence 1-3
1.4.3 Contaminant Migration 1-3
1.5 Human Health Exposure Assessment 1-4

Section 2 Remedial Investigations 2-1

2.1 1993 Remedial Investigation 2-1
2.1.1 Results and Findings 2-2
2.2 Encapsulation of Concrete Floors 2-3
2.3 Post Encapsulation Environmental Monitoring Events 2-3
2.3.1 May 1995 Environmental Monitoring Event 2-3
2.3.2 January and February 1996 Environmental Monitoring Events 2-3
2.3.3 October 1996 Environmental Monitoring Event 2-3
2.3.4 April/May 1997 Monitoring Event 2-4
2.3.5 August 1997 Monitoring Event 2-4
2.3.6 December 1997 Monitoring Event 2-4
2.3.7 April 1998 Monitoring Event 2-5
2.3.8 July/August 1998 Monitoring Event 2-5
2.3.9 December 1998 Monitoring Event 2-5
2.3.10 January 1999 Monitoring Event 2-6
2.3.11 April/May 1999 Monitoring Event 2-6
2.3.12 October 1999 Monitoring Event 2-6
2.3.13 May 2000 Monitoring Event 2-7
2.4 2000 Preliminary Site Assessment 2-7
2.4.1 Sample Collection and Analysis 2-8
2.4.1.1 Concrete Sampling 2-8
2.4.1.2 Soil Sampling 2-8
2.4.2 Results and Findings 2-9
2.4.2.1 Transformer Room No. 1 2-9
2.4.2.2 Transformer Room No. 2 2-10
2.5 Continued Environmental Monitoring 2-11
2.5.1 October 2000 Monitoring Event 2-11
2.5.2 May 2001 Monitoring Event 2-11
2.5.3 September 2001 Monitoring Event 2-12
2.5.4 May 2002 Monitoring Event 2-12

2.5.5 November 2002 Monitoring Event 2-13
2.5.6 June 2003 Monitoring Event..... 2-13
2.5.7 November 2003 Monitoring Event 2-13
2.5.8 January/February 2004 Monitoring Well Rehabilitation and Re-Sampling..... 2-14
2.5.9 May/June 2004 Monitoring Event 2-14

Section 3 Interim Remedial Measures.....3-1

3.1 Implementation 3-1
3.1.1 Environmental Monitoring Requirements 3-1
3.1.1.1 Groundwater Sampling..... 3-1
3.1.1.2 Wipe Sampling 3-2
3.1.1.3 Air Sampling 3-2
3.1.2 Environmental Monitoring Results..... 3-2
3.1.2.1 2004 Biannual Monitoring 3-2
3.1.2.2 2005 1st Biannual Monitoring 3-2
3.1.2.3 2005 2nd Biannual Monitoring..... 3-3
3.1.2.4 2006 1st Biannual Monitoring..... 3-3
3.2 Site Reclassification and Continued Monitoring 3-4
3.2.1 January 2007 Environmental Monitoring Event..... 3-4
3.2.2 December 2007 Environmental Monitoring Event..... 3-5
3.2.3 2008 Environmental Monitoring Event 3-5
3.2.4 2009 Environmental Monitoring Event 3-5
3.2.5 2010 Environmental Monitoring Event 3-6
3.2.6 2011 Environmental Monitoring Event 3-6
3.3 New Order On Consent and Continued Monitoring..... 3-6
3.3.1 2012 Environmental Monitoring Event 3-7
3.3.2 2013 Environmental Monitoring Event 3-7
3.3.3 2014 Environmental Monitoring Event 3-7
3.3.4 2015 Environmental Monitoring Event 3-8

Section 4 Supplemental Remedial Investigations.....4-1

4.1 2013 Supplemental Remedial Investigation 4-1
4.1.1 Sample Collection and Analysis 4-1
4.1.1.1 Concrete Chip Sampling..... 4-1
4.1.1.2 Sub-Slab Soil Sampling..... 4-1
4.1.1.3 Soil Borings Outside of Transformer Rooms..... 4-2
4.1.1.4 Groundwater Sampling..... 4-2
4.1.2 Results and Findings 4-2
4.1.2.1 Concrete Chip Sampling..... 4-2
4.1.2.2 Sub-Slab Soil Sampling..... 4-2
4.1.2.3 Soil Borings Outside of Transformer Rooms..... 4-3
4.1.2.4 Groundwater Sampling..... 4-3
4.2 2014 Supplemental Remedial Investigation 4-3

TABLE OF CONTENTS

4.2.1 Sample Collection and Analysis 4-4
4.2.1.1 Soil Borings Outside Transformer Room No. 1 4-4
4.2.1.2 Groundwater Sampling 4-4
4.2.2 Results and Findings 4-4
4.2.2.1 Soil Borings Outside Transformer Room No. 1 4-4
4.2.2.2 Groundwater Sampling 4-5

Section 5 Conclusions and Recommendations 5-1

Section 6 References 6-1

List of Tables

Table 1 Summary of Soil Results, PCBs, Transformer Room No. 1
Table 2 Summary of Soil Results, PCBs, Transformer Room No. 2
Table 3 Summary of Concrete Results, PCBs, Transformer Room No. 1
Table 4 Summary of Concrete Results, PCBs, Transformer Room No. 2
Table 5 Summary of Soil Results, Detected Compounds: VOCs, SVOCs, Pesticides, Herbicides, and Metals, Transformer Room No. 1
Table 6 Summary of Soil Results, Detected Compounds: VOCs and SVOCs, Transformer Room No. 2

List of Figures

Figure 1 Site Location Map
Figure 2 Monitoring Well Locations and Groundwater Elevations, May 2005
Figure 3 Soil Sampling Locations, Transformer Room No. 1
Figure 4 Soil Sampling Locations, Transformer Room No. 2
Figure 5 Concrete Sampling Locations, Transformer Room No. 1
Figure 6 Concrete Sampling Locations, Transformer Room No. 2
Figure 7 PCB Concentrations in Soil Samples – Transformer Room No. 1
Figure 8 PCB Concentrations in Soil Samples – Transformer Room No. 2
Figure 9 PCB Concentrations in Concrete Samples – Transformer Room No. 1
Figure 10 PCB Concentrations in Concrete Samples – Transformer Room No. 2

Appendices

Appendix A Human Health Exposure Assessment
Appendix B Historical Tables and Figures
Appendix C Available Data Usability Study Reports
Appendix D Available Soil Sample Descriptions and Soil Boring Logs

This Remedial Investigation Report (RIR) has been prepared by URS Corporation-New York (URS) on behalf of the New York State Office of Mental Health (OMH) for the Bronx Psychiatric Center located at 1500 Waters Place in Bronx, New York (Figure 1). The original RIR was submitted to the New York State Department of Environmental Conservation (NYSDEC) in August 2012. The NYSDEC provided comments in September 2012. OMH has been conducting additional investigation activities at the site since 2012 to be incorporated into this comprehensive RIR. A Revised RIR was submitted in January 2015. The NYSDEC provided additional comments in October 2016 which have been incorporated into this document.

The RIR summarizes all previous investigations conducted for the Building 1 transformer rooms at the Site. The historical investigations summarized in this report were conducted prior to the NYSDEC issuing the Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10). This report is being submitted in partial fulfillment of the terms of an Order on Consent and Administrative Settlement (Index # R2-0668-06-11) that was issued to OMH by the New York Department of Environmental Conservation (NYSDEC) in early 2012.

1.1 CERTIFICATION

I, Don Porterfield, PE, certify that I am currently a NYS registered professional engineer and that this RIR was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modification.

2016-11-29

Don Porterfield, PE



1.2 SITE DESCRIPTION

The Bronx Psychiatric Center was constructed approximately 50 years ago. The facility is a 360-bed facility that provides inpatient stabilization programs for individuals with co-occurring mental illness and substance abuse disorders.

The Building 1 transformers are located in two basement rooms located along the eastern side of the building (see Figure 2). The northern room has been designated as Room No. 1 and the southern room as Room No. 2. Each transformer room can be accessed from the outside through a set of double doors in concrete-walled areaways. There are locked gates at the top of the areaways and the entrance room doors are also locked. Access to the rooms from inside the building is controlled by a series of several locked basement doors and a single door for each transformer room. The building is constructed on piles to bedrock with

pile caps under the building columns and perimeter walls. The transformer room floors are approximately ten feet below the ground surface at the front (eastern side) of the building.
It was observed that the former polychlorinated biphenyl (PCB)-containing transformers leaked PCBs onto the concrete floors and into the underlying soil in Room No. 1 and Room No. 2. The PCBs have impacted the concrete floors in both of the transformer rooms and have migrated down into the underlying soil though the floor drains and cracks or seams in the concrete.

The former PCB-containing transformers were replaced in February 1993 with non-PCB (silicone-based) transformers. Currently, Room No. 1 contains a 13,800-280 volt double-ended unit substation, consisting of primary switches, transformers, and switch gear. Room No. 2 contains a 13,800-480 volt double-ended unit substation, consisting of primary switches, transformers, and secondary switchgear, as well as switchgear that is served from Room No. 1.

1.3 PHYSICAL SETTING

1.3.1 Site Geology

The Site is generally flat and is at an elevation of approximately 30 feet above mean sea level, according to the National Geodetic Vertical Datum of 1929 (NGVD 1929). The two nearest surface water bodies are Eastchester Bay, approximately one-mile east of the Site, and Westchester Creek, approximately ½- mile south of the Site.

The Site is within the Manhattan Prong geologic region. This geologic region is characterized by rolling hills and valleys. Metamorphic rocks (such as gneiss, schist, and quartzite) that are more resistant to erosion form the hills, while marble is present in the valleys. The Site is near the contact between metamorphic rock formations: the Hartland Formation and the Manhattan Formation (New York State Science Service, 1970). According to the Surficial Geologic Map of New York (New York State Geological Survey 1989), the Site is underlain by relatively impermeable glacial till. During a previous investigation, fill comprised of fine to medium sand with fragments of coal, brick, glass, and wood was encountered beneath the transformer rooms. Saturated fill was encountered approximately four to six feet below the concrete floor of the rooms.

1.3.2 Site Hydrogeology

A review of the results of the previous and recent investigations indicates that groundwater at the Site occurs at depths ranging from approximately 10 feet to 15 feet below the existing surface grades. Based on groundwater level measurements obtained in May 2005, the groundwater flow direction is generally towards the northeast. Figure 2 shows the monitoring well network and the May 2005 groundwater elevation data.

1.4 CONTAMINANT FATE AND TRANSPORT

The following section discusses the fate and transport of PCBs at the Site.

1.4.1 Potential Routes of Migration

PCBs were detected in the concrete and subsurface soil underlying both of the transformer rooms in Building 1 at the Site. PCBs are mixtures of different congeners of chlorinated biphenyls and the relative importance of the environmental fate mechanisms generally depends on the degree of chlorination. PCBs tend to adsorb to soil particles and have a very low solubility in water. PCBs can volatilize from concrete surfaces and soil when the temperature is elevated.

1.4.2 Contaminant Persistence

PCBs do not readily break down and may remain in the environment for long periods of time. The persistence of PCBs increases with the degree of chlorination. Mono-, di- and tri-chlorinated biphenyls degrade rapidly, tetra-chlorinated biphenyls degrade slowly, and higher chlorinated biphenyls are resistant to degradation. PCBs in water tend to adsorb to suspended matter. PCBs have been shown to bioconcentrate significantly in aquatic organisms and humans. The main exposure route to humans is through eating contaminated fish and drinking contaminated water. There are interim remedial measures (IRMs), which are discussed in Section 3, in place that limit human exposure.

1.4.3 Contaminant Migration

Natural and other man-made mechanisms that can result in the migration of contaminants from their source areas include: surface water flow, infiltration, groundwater flow, subsurface utilities, volatilization, excavation, grading and vehicular traffic. The impact of these mechanisms varies by source area and Site-specific conditions.

At the Site, the applicable migration mechanisms would be volatilization and groundwater flow. PCBs are not readily volatilized at or below room temperatures. In addition, the presence of an epoxy coating on the concrete surface, which is discussed in Section 3, would preclude volatilization of the PCBs from the concrete in the transformer rooms and the underlying soil.

Overburden groundwater flow would be expected to allow both vertical and lateral migration of contaminants located within the saturated zone. Groundwater flow is considered a significant transport mechanism for contaminants that are water-soluble. PCBs are not readily soluble in water and PCBs were only detected in one of the groundwater samples collected over a nine-year period (Sections 2 and 3). PCBs were detected in the groundwater sample collected from MW-3 in November 2003. The monitoring well was rehabilitated and re-sampled in February 2004. PCBs were not detected in the groundwater sample collected after the well had been rehabilitated. Therefore, PCBs found in the soil do not appear to be impacting groundwater at the Site.

1.5 HUMAN HEALTH EXPOSURE ASSESSMENT

A qualitative human health exposure assessment was completed by URS in accordance with paragraph 3.3(c)4 and Appendix 3B of DER-10 Technical Guidance for Site Investigation and Remediation (DER-10) and is presented in Appendix A. The assessment did not identify any complete exposure pathways for the environmental media that were evaluated.

Remedial investigations and environmental monitoring events have been conducted at the Site since 1993. Described below is an overview of the investigation and environmental monitoring programs along with a summary of their results and their findings.

Section 6 lists the references that were used to prepare these summaries. The full reports should be referenced for complete details of the investigations and environmental monitoring events. The historical tables and figures from these reports are provided in Appendix B.

The tables and figures compiled for this RIR summarize the soil and concrete data available for the Site, as these are the media of concern for future remedial alternatives. All soil sampling locations for Transformer Rooms No. 1 and 2 can be found in Figures 3 and 4, respectively. All concrete sampling locations for Transformer Rooms No. 1 and 2 can be found in Figures 5 and 6, respectively. The PCB data for soil and concrete are presented in Figures 7 thru 10. Tables 1 and 2 summarize the PCB data in soil samples collected from Transformer Rooms No .1 and 2, respectively. Tables 3 and 4 summarize the PCB data in concrete samples collected from Transformer Rooms No .1 and 2, respectively.

The majority of the available data was collected prior to the NYSDEC issuing DER-10. Full ASP Category B deliverables were not available for these data sets. The available Data Usability Study Reports are provided in Appendix C.

2.1 1993 REMEDIAL INVESTIGATION

The initial investigation for PCB contamination within the concrete floors and underlying soil was conducted in Room No. 1 by Willow Contracting, Verona, New Jersey. The scope of work for this investigation included:

- Collecting concrete and soil samples from the transformer locations in Room 1 and analyzing samples for PCBs using EPA method 8080;
- Installing four monitoring wells outside Building No.1; and
- Collecting groundwater samples and analyzing samples for PCBs using EPA method 608.

The locations of the soil and concrete floor samples in Room No. 1 are shown in Figures 3 and 5. Samples S-1 through S-6 were collected at various locations. With the exception of sample S-1, concrete samples were obtained by saw cutting the concrete floor and collecting samples from the surface of the concrete floor. At sample S-1, two samples were collected (top and bottom of the concrete floor).

The subsurface soil samples were collected at typically two soil depth intervals at each of the sample locations except for sample S-1 where three soil samples were collected. Additional soil samples N-1 and N-2 were collected in May 1993 to provide a more focused delineation at these two locations. Multiple sample depths were targeted for sample locations N-1 and N-2.

Monitoring wells MW-1 through MW-4 were installed in September and October of 1993 using a hollow stem auger drill rig. The locations of the monitoring wells are shown in Figure 2.

In addition, five (5) hexane-wipe samples from 100 square centimeter areas of the floor in front of the transformer pad in Room 2 were collected and analyzed to investigate the oily residue observed on the concrete floor.

2.1.1 Results and Findings

The results of the concrete and soil PCB analyses were compared to the recommended soil cleanup objectives for PCBs, 1.0 milligrams per kilogram (mg/kg) and 10 mg/kg for surface soil and subsurface soil respectively, that were published by NYSDEC at that time. The results of the concrete and soil sampling analysis are presented in Figures 7 thru 10. Two samples (S-1 and S-3) showed elevated PCB concentrations which primarily consisted of Arochlor 1260. At sample location S-1, PCB concentrations up to 21,000 mg/kg (ppm) were detected in both the concrete and soil immediately below the floor. PCB concentrations decreased with depth to 703 ppm at the 2-foot depth horizon. At sample location S-3, only the concrete floor sample showed PCBs at 327 ppm; no PCB exceedances were detected in soil samples collected at location S-3.

The PCB concentrations at N-1 were 0.3 ppm just below the floor to 6-inches below the floor. PCBs were not detected at N-1 at depths of 12-inches to 26-inches below the floor. PCBs were detected at a concentration of 26 ppm just below the floor surface at N-2. PCB concentrations decreased with depth at N-2 to non-detect at 26-inches below the floor.

PCBs were not detected in the groundwater samples collected at any of the monitoring well locations. Historical data tables are found in Appendix B.

The analytical results of the wipe samples from the floor in Room 2 indicated that PCBs were detected at concentrations ranging from 8.7 to 360 micrograms per 100 square centimeters ($\mu g/100\ cm^2$). Wipe sampling data is provided in Appendix B. The results exceed the United States Environmental Protection Agency (USEPA) Toxic Substance Control Acts (TSCA) cleanup standard of 10 $\mu g/100\ cm^2$.

In August 1993, OMH, NYSDEC, DOH, and the USEPA agreed to defer remediation of the area until an anticipated major renovation project was completed. The primary reason for deferring remediation was the concern that the complete removal of the contaminated concrete and soil would cause the building to become structurally unsafe while the building is in use and the transformers are energized. Since 1993, the building has remained in continuous service without major renovations.

2.2 ENCAPSULATION OF CONCRETE FLOORS

In 1995, the floors in both transformer rooms were encapsulated (sealed) with a two-layer epoxy system. The entire floor in Room No. 1 was epoxy sealed and only a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed as shown in Figure 4.

2.3 POST ENCAPSULATION ENVIRONMENTAL MONITORING EVENTS

2.3.1 May 1995 Environmental Monitoring Event

In May 1995, post encapsulation air and wipe sampling was conducted by Applied Technology Services, Inc. Four air samples and eight wipe samples were collected in May 1995. Historical wipe and air sample locations and data can be found in Appendix B. The air samples were analyzed for PCBs by NYSDOH 311-1 and the wipe samples were analyzed for PCBs by EPA Method 8080.

PCBs were not detected in the air samples. PCBs were detected in all eight wipe samples (1.0 µg/100 cm^2 to 7.8 µg/100 cm^2) at concentrations less than the TSCA cleanup standard for PCBs in wipe samples of 10 µg/100 cm^2.

2.3.2 January and February 1996 Environmental Monitoring Events

Four wipe samples were collected from Transformer Room No. 1 (WS-1, WS-2, WS-3, and WS-4) and four wipe samples were collected from Transformer Room No. 2 (WS-5, WS-6, WS-7, and WS-8) in January 1996. Historical wipe sample locations and data can be found in Appendix B. WS-1 and WS-2 had concentrations of PCBs above the TSCA cleanup standard for PCBs in wipe samples of 10 µg/100 cm2. All other sample concentrations were non-detect or below the TSCA cleanup standard. Confirmation sampling was conducted in February 1996. Based upon the confirmation sampling, PCBs were above the TSCA cleanup standard in the location of WS-2.

The four existing wells (MW-1 thru MW-4) were surveyed in February 1996 and measurements of depth to water were recorded to determine the direction of groundwater flow. Groundwater flow was determined to be to the west and therefore the need for two additional monitoring wells was evaluated. Groundwater samples were collected from all four monitoring wells. PCBs were not detected in any of the groundwater samples collected.

2.3.3 October 1996 Environmental Monitoring Event

A semi-annual environmental monitoring event was completed in October 1996 and included the installation, surveying, and development of two monitoring wells (MW-5 and MW-6), gauging of all site wells (MW-1 through MW-6), and sampling of four monitoring wells (MW-2, MW-3, MW-5, and MW-6).

The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the collected groundwater samples. Historical groundwater flow maps can be found in Appendix B.

2.3.4 April/May 1997 Monitoring Event

A semi-annual environmental monitoring event was completed in April/May 1997 and consisted of floor wipe sampling, air sampling, and groundwater sampling. Nine wipe samples (WS-1 thru WS-8 and duplicate sample WS-11) were collected from the Transformer Room floors and four air samples were collected (inside and outside of the Transformer Rooms) in April 1997. The two upgradient wells (MW-2 and MW-3) and two downgradient wells (MW-5 and MW-6) were gauged and sampled in May 1997.

Historical wipe and air sample locations and data can be found in Appendix B. The wipe and air samples were submitted for analysis of PCBs. PCBs were not detected in any of the wipe or air samples that were collected.

The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the collected groundwater samples. Historical groundwater flow maps can be found in Appendix B.

2.3.5 August 1997 Monitoring Event

A semi-annual environmental monitoring event was completed in August 1997 and consisted of groundwater sampling and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs were below the TSCA cleanup standard for PCBs of 10 µg/100 cm^2.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.3.6 December 1997 Monitoring Event

A semi-annual environmental monitoring event was completed in December 1997 and consisted of groundwater sampling and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs were below the TSCA cleanup standard for PCBs of 10 µg/100 cm^2.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.3.7 April 1998 Monitoring Event

An environmental monitoring event was completed in April 1998 and consisted of indoor air sampling.

Historical air sample locations can be found in Appendix B. All collected air samples were submitted for analysis of PCBs. PCBs were not detected in any of the air samples that were collected.

2.3.8 July/August 1998 Monitoring Event

A semi-annual environmental monitoring event was completed in July 1998 and consisted of groundwater sampling and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. PCBs were not detected in the wipe samples collected from Transformer Room No. 1. One wipe sample, WS-8, collected from Transformer Room No. 2, had a total PCB concentration of 16.7 µg/100 cm^2, which is above the TSCA cleanup standard of 10 µg/100 cm^2.

In August 1998, three confirmation floor wipe samples were collected in the vicinity of the July 1998 wipe sample, WS-8. The three wipe samples were submitted for analysis of PCBs. PCBs were detected in all three wipe samples. Two of the three wipe samples contained concentrations of PCBs exceeding the TSCA cleanup standard of 10 µg/100 cm^2. Upon receiving the confirmation wipe sampling results, re-cleaning of the floor in Transformer Room No. 2 was scheduled.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples collected. Historical groundwater flow maps can be found in Appendix B.

2.3.9 December 1998 Monitoring Event

A semi-annual environmental monitoring event was completed in December 1998 and consisted of floor wipe sampling.

The floor of Transformer Room No. 2 was cleaned prior to the December 1998 wipe sampling event. Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. PCBs were not detected in the wipe samples collected from Transformer Room No. 1. The detected concentrations of PCBs in the wipe samples collected from Transformer Room No. 2 were below the TSCA cleanup standard of 10 µg/100 cm^2.

2.3.10 January 1999 Monitoring Event

A semi-annual environmental monitoring event was completed in January 1999 and consisted of groundwater sampling.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.3.11 April/May 1999 Monitoring Event

A semi-annual environmental monitoring event was completed in April/May 1999 and consisted of groundwater, floor wipe, and air sampling.

Historical wipe and air sample locations and data can be found in Appendix B. All collected wipe and air samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs were below the TSCA cleanup standard of 10 µg/100 cm^2. PCBs were not detected any of the air samples collected.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.3.12 October 1999 Monitoring Event

A semi-annual environmental monitoring event was completed in October 1999 and consisted of groundwater and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs in the wipe samples collected from Transformer Room No. 1 were below the TSCA cleanup standard. One wipe sample collected from the floor in Transformer Room No. 2 exceeded the TSCA cleanup of 10 µg/100 cm^2 (SW-6 at a concentration of 19 µg/100 cm^2). PCBs were not detected in any of the other wipe samples collected from Transformer Room No. 2. As a result of the wipe sampling, cleaning of the floor in Transformer Room No. 2 was scheduled.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.3.13 May 2000 Monitoring Event

A semi-annual environmental monitoring event was completed in May 2000 and consisted of groundwater, floor wipe, and indoor air sampling.

The floor of Transformer Room No. 2 was cleaned prior to the May 2000 wipe sampling event. Historical wipe and air sample locations and data can be found in Appendix B. All collected wipe and air samples were submitted for analysis of PCBs. All of the detected PCB concentrations in the wipe samples collected from Transformer Room No. 2 were below the TSCA cleanup standard. Two wipe samples collected from the floor of Transformer Room No. 1 contained concentrations of PCBs that exceed the TSCA cleanup criteria of 10 µg/100 cm^2 (T1-2 at a concentration of 33 µg/100 cm^2 and T1-3 at a concentration of 14 µg/100 cm^2). PCBs were not detected in any of the air samples collected.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.4 2000 PRELIMINARY SITE ASSESSMENT

In January 1997, OMH and the NYSDEC entered into an Order on Consent No. W2-0779-96-12 (the 1997 Order). The goal of the Order was "*the development and implementation of a Preliminary Site Assessment (PSA)*" at Building No. 1 at the Bronx Psychiatric Center to evaluate whether hazardous wastes were present that "*would constitute a significant threat to public health or the environment necessitating remediation.*"

Therefore, in August and September 2000, a PSA was conducted at the site by Dvirka and Bartilucci Consulting Engineers (D&B). The objective of the PSA was to evaluate the extent of the PCB contamination in the transformer rooms in Building No. 1. The work was described in D&B's Preliminary Site Assessment Work Plan, Building 1 Transformer Rooms Remediation, Contract No. D5597732-MH10 (PSA Work Plan), dated March 2000. The PSA Work Plan was approved by NYSDEC in July 2000. The results of the PSA were presented in D&B's report Preliminary Site Assessment, Building 1 Transformer Rooms Remediation, Contract No. D559773Z, dated December 2000. Described below is an overview of the PSA program.

The PSA sampling program was designed to be flexible, taking advantage of field information collected during its implementation. Initial sampling locations were selected based on existing data from the northern room (floor wipes, concrete and soil sample analyses) and from the southern room (floor wipe sample analyses). Subsequent sampling locations and depths were guided on the findings of the initial samplings. These findings included sample observations (e.g., odor, staining) and PCB semi-quantification results using immunoassay field kits.

2.4.1 Sample Collection and Analysis

2.4.1.1 Concrete Sampling

Prior to performing sampling, a grid was established in each room to locate sample points with axes that paralleled the transformer room walls. Transects were established every 5 feet. Concrete sample locations in Transformer Rooms No. 1 and 2 are shown in Figures 5 and Figure 6.

Concrete floor samples were collected using a portable coring machine with a 3-inch diameter core bit. The concrete contained rebar and the floor thicknesses ranged from 6 to 18 inches. Distilled water was used to keep the core bit cool and mitigate the generation of dust. The core drill bit was decontaminated between sampling locations by steam cleaning or a detergent wash water and distilled water rinse.

2.4.1.2 Soil Sampling

The soil beneath the concrete floors of each transformer room was sampled through concrete core holes using a 1.5-inch diameter stainless steel drive point with dedicated acetate liner. The sample points were located near previously identified areas of PCB contamination in concrete and soil. Additionally, test holes were constructed at the former floor drain locations. The drains and potential impacts were investigated by constructing test holes directly through the former drains. Access to the former drains was made by coring through the circular concrete drain patch in Room No. 1 and coring through the underlying soil after removing the drain seal in Room No. 2.

The soil samples were collected in two-foot length cores. Cores were advanced up to eight feet below the concrete floors and two feet into groundwater. Samples for analysis (field and laboratory) were collected from six-inch to two-foot increments depending on recovery volumes.

PCBs in the soil samples were quantified in the field using immunoassay kits (D-TECH Item# TK-1002-1). These kits enabled the quantification of PCBs from 0.5 ppm to greater than 25 ppm. The field test activities were carefully conducted in the areaways of the transformer rooms following D-TECH protocols. For confirmation purposes, 12 soil samples (approximately 20 percent of the total soil samples) were selected for laboratory analysis. The samples for laboratory analysis covered a range of field test results: non-detect, non-detect to 4 ppm; and 5 to 25 ppm.

All test hole construction, sampling and observations were logged by a geologist. Descriptions of the sampled materials are provided in Appendix D.

2.4.2 Results and Findings

For evaluation purposes, screening values utilized for PCBs in soil are based on the NYSDEC Part 375 Restricted Use Soil Cleanup Objectives (SCO). The Restricted Use SCO for PCBs is 1 ppm in surface soil. This level was developed to protect human health resulting from ingestion of soil by sensitive receptors, such as children, and ecological resources. The Restricted Use SCO for protection of groundwater as potable water supply is 3.2 ppm. With regard to concrete, based on discussions with NYSDEC, the typical cleanup level for PCBs in concrete is 1 ppm although a higher level can be established on a site-specific basis. The typical cleanup levels for both soil and concrete are not applicable to the transformer rooms because of the following factors:

- The transformer rooms have controlled and restricted access for use by adult facility personnel;
- The entire concrete floor in Room No. 1 and the concrete in the vicinity of the transformer in Room No. 2 has been coated with epoxy, which precludes direct contact with concrete, and restricts migration of transformer fluid through the floor;
- The concrete surface is routinely monitored and, if warranted, cleaned to mitigate contact with contaminated surfaces;
- The soil below the transformer room concrete floors is inaccessible. The concrete floors also mitigate vertical migration of fluids in the underlying soil;
- Routine groundwater quality monitoring conducted since 1994 in the vicinity and downgradient of the transformers rooms has shown that the groundwater has not been impacted by PCBs (less than the detection level of 1 ppm); and
- The groundwater in the area of the facility is not used for potable purposes.

2.4.2.1 Transformer Room No. 1

A total of 13 concrete cores were collected from Room No. 1 during the PSA. The thickness of the concrete floor ranged from 7 to 16 inches. There was no apparent evidence of cracks in the concrete floor in Room No. 1. The PCB analytical results for the concrete samples in Room No. 1 are provided in Table 3. The distribution of the PCB concentrations in the top and bottom samples of the concrete floor in Room No. 1 is shown in Figure 9.

Based on the PCB analytical results, the top inch portion of the floor near the central and northern portions of the transformer (see Figure 9) contains PCBs concentrations that ranged from 1,500 to 18,000 mg/kg (ppm). The maximum concentration was at grid node N25W15 on the west side of the transformer near the former floor drain. The contaminated area, including the area under the transformer, is approximately 400 square feet. Historical figures showing contours are provided in Appendix B.

Table 1 shows the PCB results for soil samples collected in Transformer Room No. 1. The results indicate only one area of soil, the former drain (sample Drain 01), with significant concentrations of PCBs (see Figure 7). At this location, PCBs were detected between 16,000 and 23,000 ppm in the top four feet of soil. The material encountered below the drain was

similar in nature to the ubiquitous fill below. A chemical odor was associated only with the top four feet of materials. There was no sensory indication of PCB impacts (e.g. staining, odor) below four feet. The PCB field test results did not indicate contamination below four feet. The water table was present at approximately four feet below the floor at this location. The sample cores were collected through the concrete floor. These findings support the facility information that the drain allowed material to drain directly into the subsurface material at the drain point.

2.4.2.2 Transformer Room No. 2

A total of 18 concrete core samples were collected in Room No. 2. The thickness ranged from 6 to 18 inches. The top and bottom inch of the cores were initially analyzed in the areas of staining and at other selected areas to help delineate the extent of contamination. The top inch of the concrete cores was analyzed at the other core locations. Based on an evaluation of these results, three additional bottom inch core samples were analyzed.

The PCB analytical results for the concrete samples are provided in Table 4. The distribution of PCBs in the top and bottom inch samples of the concrete floor in Room No. 2 and are shown in Figure 10. Based on the analytical results, two localized areas of significant PCB contamination of the top inch of the concrete floor exist in Room No. 2. One area is adjacent to the central portion of the east side of the transformer (concentration of 68,000 ppm at sample location S35W5) and the other area is adjacent to the western room wall in the center of the room (concentration of 650 ppm at sample location S30W20). The 68,000 ppm concentration was at the approximate location of staining reported in 1993.

In the bottom portion of the floor, the area east of the transformer contained elevated levels of PCBs between 14,000 ppm at sample location S35W5 and 58,000 ppm at sample location S47W7 (see Figure 10). This area contains one of the transformer room's two former floor drains. Approximately 10 feet to the northeast, near the areaway door entrance, the PCB concentration was 360 ppm at sample location S25W0.

A total of 30 soil samples were collected and field tested for PCBs. Seven of these samples were selected for laboratory analysis to cover the range of screening results for correlation purposes between the field and laboratory results. The field test results are provided in Appendix B. The results of the laboratory analyses are summarized in Table 2. Similar to Room No. 1, there generally was good correlation between the field test results and the laboratory analyses for the presence of contamination. For samples where the field test result indicated a positive result above 1 ppm, PCBs were generally detected by the laboratory in the soil sample at higher concentrations. For samples where the field kit values were below 1 ppm. The laboratory value generated was below 1 ppm.

The soil field test results and laboratory analytical results indicate only one area with significant PCB concentrations in soil. This area is at the eastern side of the transformer where the concentrations ranged from 12 to 49 ppm (S35W7) between 0 and 3 feet below the

floor. This area is directly below where elevated PCB concentrations were detected in the concrete in the floor (Figure 8 and 10).

PCBs were detected in soil samples collected below the two former floor drains located adjacent to the contaminated concrete floor areas. PCBs were detected at concentration of 3.2 ppm within the top 10 inches of soil at Drain 01. At Drain 01, well-sorted medium-grained sand was encountered to a depth of 10 inches. At 10 inches, concrete with rebar was encountered and coring was advanced one foot into the concrete. It is believed that because of the thickness and presence of rebar, this concrete was not a catch basin base associated with a drain, but rather a structural building feature such as a pile cap. In sample Drain 02, PCBs were detected between 0.7 and 7 ppm in the top 4 feet of soil. The material encountered at Drain 02 was similar in nature to fill material. No drainpipes or concrete were encountered below the concrete floor at Drain 02. The field findings at the transformer room's drains support the facility information that the drains allowed fluids to discharge directly to the subsurface below the drain.

2.5 CONTINUED ENVIRONMENTAL MONITORING

Environmental monitoring continued at the site under the 1997 Order. The environmental monitoring consisted of groundwater and floor wipe sampling on a semi-annual basis and indoor air sampling on an annual basis.

2.5.1 October 2000 Monitoring Event

A semi-annual environmental monitoring event was completed in October 2000 and consisted of groundwater and floor wipe sampling.

The floor of Transformer Room No. 1 was cleaned prior to the October 2000 wipe sampling event. Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All of the detected PCB concentrations in the wipe samples collected from both Transformer Rooms were below the TSCA cleanup standard.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.5.2 May 2001 Monitoring Event

A semi-annual monitoring event was completed in May 2001 and consisted of groundwater, floor wipe, and indoor air sampling.

Historical wipe and air sample locations and data can be found in Appendix B. During the event, light surface stains were observed on the floor in Transformer Room No. 1 and wipe samples were biased to these locations. No staining was observed in Transformer Room No.

2. All collected wipe and air samples were submitted for analysis of PCBs. One wipe sample collected from Transformer Room No. 1 (T1-4 at a concentration of 16 µg/100 cm^2) exceeded the TSCA cleanup standard. Three wipe samples collected from Transformer Room No. 2 (T2-2 at a concentration of 11 µg/100 cm^2, T2-3 at a concentration of 11 µg/100 cm^2, and T2-4 at a concentration of 21 µg/100 cm^2) exceeded the TSCA cleanup standard. PCBs were not detected in any of the air samples collected for analysis.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.5.3 September 2001 Monitoring Event

A semi-annual monitoring event was completed in September 2001 and consisted of groundwater and wipe sampling.

The floors of Transformer Rooms No. 1 and 2 were cleaned prior to the September 2001 wipe sampling event. Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. PCBs were not detected in any of the wipe samples that were collected.

The groundwater sampling event consisted of gauging and sampling of one upgradient well (MW-3) and two downgradient wells (MW-5 and MW-6). MW-2 could not be located during the event due to excavation and construction in the area. The three groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.5.4 May 2002 Monitoring Event

A semi-annual monitoring event was completed in May 2002 and consisted of groundwater, floor wipe, and air sampling.

Historical wipe and air sample locations and data can be found in Appendix B. During the event, light surface stains were observed on the floor in Transformer Room No. 1 and wipe samples were biased to these locations. No staining was observed in Transformer Room No. 2. All collected wipe and air samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs were below the TSCA cleanup standard of 10 µg/100 cm^2. PCBs were not detected in any of the air samples collected.

The groundwater sampling event consisted of gauging and sampling of one upgradient well (MW-3) and two downgradient wells (MW-5 and MW-6). MW-2 could not be located and was assumed to be destroyed as the result of construction activities. The three groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the

groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.5.5 November 2002 Monitoring Event

A semi-annual monitoring event was completed in November 2002 and consisted of groundwater and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All four wipe samples collected from Transformer Room No. 1 contained concentrations of PCBs exceeding the TSCA cleanup criteria of 10 µg/100 cm^2 (T1-1 at a concentration of 12 µg/100 cm^2, T1-2 at a concentration of 340 µg/100 cm^2, T1-3 at a concentration of 24 µg/100 cm^2, and T1-4 at a concentration of 32 µg/100 cm^2). All of the detected concentrations of PCBs in the wipe samples collected from Transformer Room No. 2 were below the TSCA cleanup standard.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and two downgradient wells (MW-5 and MW-6). The four groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B. .

2.5.6 June 2003 Monitoring Event

A semi-annual monitoring event was completed in June 2003 and consisted of groundwater, floor wipe, and air sampling.

Historical wipe and air sample locations and data can be found in Appendix B. The floor in Transformer Room No.1 was cleaned prior to sampling in June 2003. All collected wipe and air samples were submitted for analysis of PCBs. All of the detections of PCBs in the wipe samples collected from both Transformer Rooms were below the TSCA cleanup criteria of 10 µg/100 cm^2. PCBs were not detected in any of the air samples collected for analysis.

The groundwater sampling event consisted of gauging and sampling of the two downgradient wells (MW-5 and MW-6). MW-2 and MW-3 were not required to be sampled during this event. The two groundwater samples were submitted for analysis of PCBs. PCBs were not detected in either of the groundwater samples that were collected. Historical groundwater flow maps can be found in Appendix B.

2.5.7 November 2003 Monitoring Event

A semi-annual monitoring event was completed in November 2003 and consisted of groundwater and floor wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. All collected wipe samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs in

the wipe samples collected from both Transformer Rooms were below the TSCA cleanup criteria of 10 µg/100 cm^2.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and two downgradient wells (MW-5 and MW-6). All collected groundwater samples were submitted for analysis of PCBs. PCBs were detected in the groundwater sample collected from MW-3 at a concentration of 3.8 µg/L. PCBs were not detected in any of the other monitoring wells, which is consistent with historical data. Following a review of the analytical results, it was determined that the detection of PCBs in the groundwater sample collected from MW-3 during this event was not representative. It was noted that during the sampling event, the well was uncovered and unprotected and fragments of wood and leaves were observed when the well was purged. Historical groundwater flow maps can be found in Appendix B.

2.5.8 January/February 2004 Monitoring Well Rehabilitation and Re-Sampling

The condition of MW-3 was investigated in January 2004. The investigation indicated that there was a blockage comprised of soil and leaves inside MW-3 at a depth near the water table, approximately 15 feet bgs. The material was removed and MW-3 was re-developed. A protective curb box with a locking compression cap was installed at the surface.

In February 2004, a groundwater sample was re-collected from MW-3 and analyzed for PCBs. PCBs were not detected in the groundwater sample collected from MW-3 after it had been properly rehabilitated.

2.5.9 May/June 2004 Monitoring Event

A semi-annual monitoring event was completed in May 2004 and consisted of groundwater, wipe, and air sampling.

Historical wipe and air sample locations and data can be found in Appendix B. All collected wipe and air samples were submitted for analysis of PCBs. All of the detected concentrations of PCBs in the wipe samples collected from both Transformer Rooms were below the TSCA cleanup criteria of 10 µg/100 cm^2. PCBs were detected in one air sample, located north of Transformer Room No. 1, at a concentration of 0.16 µg/m^3. This concentration is just above the detection limit and does not pose any concern to human health.

The groundwater sampling event consisted of gauging and sampling of the two upgradient wells (MW-2 and MW-3) and two downgradient wells (MW-5 and MW-6). All collected groundwater samples were submitted for analysis of PCBs. PCBs were not detected in any of the groundwater samples that were collected. The monitoring wells were surveyed and depth to water measurements were recorded at all six existing monitoring wells. Historical groundwater flow maps can be found in Appendix B.

Interim Remedial Measures (IRMs) were developed and implemented at the Site in order to minimize the exposure potential of site personnel to the PCBs within and below the transformer rooms. The IRM Work Plan dated November 23, 2004 provides details on the scope of work and implementation. Key elements of the IRM included:

1. Task 1 – Seal the openings between ventilation fan and exterior walls.
2. Task 2 – Seal space between the floors and electrical equipment.
3. Task 3 – Inject cement grout to stabilize PCBs in the subsoil.
4. Task 4 – Prepare IRM summary report
5. Task 5 – Continue routine sampling of groundwater, surface wipes, and indoor air to ensure PCB levels below cleanup standards and report findings and/or progress.

In a letter dated October 20, 2005, NYSDEC approved all elements of the IRM Work Plan except for Task 3 (grout injection). Discussed below are implementation details of the IRM.

3.1 IMPLEMENTATION

OMH completed Tasks 1 and 2 and continued environmental monitoring as required by the prior Order. On July 27, 2005, URS sealed the openings (up to ½-inch gaps) in the exterior walls of Rooms No. 1 and No. 2 with a polyurethane caulk to prevent wind-swept rain from entering the transformer room. The majority of the openings were between the ventilation fans and exterior walls.

Similarly, the space between the base of the electrical equipment and the floor (typically less than a 1/8 of an inch) was sealed with a polyurethane caulk to isolate the floor beneath the transformers from the concrete flooring surrounding the transformers.

3.1.1 Environmental Monitoring Requirements

Environmental monitoring consisted of bi-annual groundwater sampling, bi-annual wipe sampling, and annual air quality monitoring. The details of the groundwater sampling, wipe sampling and air quality sampling procedures are discussed in detail in the approved IRM Work Plan dated November 23, 2004. An overview of the periodic environmental monitoring activities is presented below.

3.1.1.1 Groundwater Sampling

Groundwater samples were collected from monitoring wells MW-1 through MW-6 on a bi-annual basis. Prior to sampling the monitoring wells, a synoptic round of groundwater levels were collected from the monitoring wells. The monitoring wells were purged and sampled following USEPA's low-flow purging and sampling protocol (EPA 540/S-95/504) to ensure representative groundwater samples were collected. All samples were collected, contained and stored, and transported to the laboratory in accordance with applicable regulations and guidelines and under chain-of-custody as outlined in the IRM Work Plan.

3.1.1.2 Wipe Sampling

Wipe samples were collected from the epoxy-coated areas of the concrete floors at four locations in each of the transformer rooms on a bi-annual basis. The wipe samples were collected by wiping a 100 cm^2 area with a gauze wipe soaked with hexane. The eight wipe samples were submitted for PCB analysis (EPA Method 8082) in accordance with applicable regulations and guidelines and under chain-of-custody as outlined in the IRM Work Plan.

3.1.1.3 Air Sampling

A single air sample was collected from each of the two Transformer Rooms in Building No. 1 on an annual basis. The two air samples were collected using florisil tubes and submitted for analysis of PCBs following National Institute for Occupational Safety and Health (NIOSH) Method 5503. All samples were collected, contained, stored, and transported to the laboratory in accordance with applicable regulations and guidelines and under chain of custody as outlined in the IRM Work Plan.

3.1.2 Environmental Monitoring Results

Biannual environmental monitoring was conducted in 2004, 2005 and 2006. The available results and findings from the monitoring events are discussed below.

3.1.2.1 2004 Biannual Monitoring

A biannual environmental monitoring event was completed in December 2004 and consisted of groundwater sampling and wipe sampling.

Historical groundwater data and flow maps are provided in Appendix B. The groundwater elevations indicate there is a relatively flat gradient and the groundwater flow direction is generally northeast.

Historical data tables are found in Appendix B. No PCBs were detected in the groundwater samples collected from any of the monitoring wells or in any of the QA/QC samples.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. The concentrations of Arochlor 1260 ranged from not detected at the three locations (T1-1, T1-2 and T2-3) to 3.3 µg/100 cm^2 at wipe sample T1-3. The maximum detected PCB concentration of 3.3 µg/100 cm^2 is below the TSCA cleanup standard for PCBs in wipe samples of 10 µg/100 cm^2.

3.1.2.2 2005 1st Biannual Monitoring

The first biannual environmental monitoring event of 2005 was completed in May 2005 and consisted of groundwater sampling, wipe sampling, and air sampling.

Historical groundwater data and flow maps are provided in Appendix B. The groundwater elevations indicate there is a relatively flat gradient and the groundwater flow direction is generally northeast.

Historical data tables are found in Appendix B. No PCBs were detected in the groundwater samples collected from any of the monitoring wells or in any of the QA/QC samples.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. The concentrations of Arochlor 1260 ranged from not detected at Wipe-03 to 67 µg/100 cm^2 at wipe sample Wipe-07. The TSCA cleanup standard for total PCBs in wipe samples is 10 µg/100 cm^2. The Arochlor 1260 concentrations in two of the eight wipe samples, Wipe-01 at 19 µg/100 cm^2 and Wipe-07 at 67 µg/100 cm^2 exceed the TSCA cleanup standard.

The area surrounding Wipe-07 was cleaned and re-epoxyed on July 27, 2005 and the area surrounding Wipe-01 was cleaned and re-epoxyed on August 11, 2005.

Two air samples were collected using florisil tubes. Air sample Air-T1-01 was collected from Transformer Room No. 1 and Air-T2-01 was collected from Transformer Room No. 2. PCBs were not detected in any of the air samples.

3.1.2.3 2005 2nd Biannual Monitoring

The second biannual environmental monitoring event of 2005 was completed in December 2005 and consisted of groundwater sampling and wipe sampling.

Historical groundwater data and flow maps are provided in Appendix B. The groundwater elevations indicate there is a relatively flat gradient and the groundwater flow direction is generally northeast.

Historical data tables are found in Appendix B. No PCBs were detected in the groundwater samples collected from any of the monitoring wells or in any of the QA/QC samples.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only PCB compound detected in the wipe samples and was only detected at one wipe sample location (WIPE-05). The concentrations of Arochlor 1260 ranged from not detected to 2.2 µg/100 cm^2 at wipe sample WIPE-05, which is below the TSCA cleanup standard for total PCBs in wipe samples of 10 µg/100 cm^2.

3.1.2.4 2006 1st Biannual Monitoring

The first biannual environmental monitoring event of 2006 was completed in May 2006 and consisted on wipe sampling and air sampling. Groundwater sampling was waived by NYSDEC per email from Ms. Martinkat dated May 11, 2006.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. The concentrations of Arochlor 1260 ranged from 3.4 µg/100 cm^2 in wipe sample TR1-Wipe 3 to 10 µg/100 cm^2 in wipe sample TR1-Wipe4 in Transformer Room No. 1. The concentrations of Arochlor 1260 ranged from 1.3 µg/100 cm^2 in wipe sample TR2-Wipe5 to 9.5 µg/100 cm^2 in wipe sample TR2-Wipe6 in Transformer Room No. 2. None of the wipe samples exceed the TSCA cleanup standard of 10 µg/100 cm^2.

Two air samples were collected using florisil tubes. Air sample TR1-Air01 was collected from Transformer Room No. 1 and air sample TR2-Air02 was collected from Transformer Room No. 2. PCBs were not detected in either of the air samples.

3.2 SITE RECLASSIFICATION AND CONTINUED MONITORING

On July 27, 2006 OMH received a letter from NYSDEC indicating reclassification of the Bronx P.C. from a Class 2 to a Class 3. The Inactive Hazardous Waste Disposal Report attached to the letter stated that the quarterly groundwater monitoring for the last ten years has not detected any migration of PCBs. In addition, there have been no detections of PCBs in indoor air samples in the past ten years. Therefore, no further action is required at the facility until either the facility is taken out of service or the equipment in the transformer rooms needs to be upgraded or replaced.

Based on discussions between OMH and the NYSDEC, URS has continued annual collection of wipe samples from the floors of the transformer rooms and visual inspection of the epoxy coatings in the transformer rooms. The epoxy coating has been repaired if damage is observed during the inspections. The results of each annual sampling and monitoring event have been submitted to NYSDEC and are summarized below. Annual groundwater sampling and air sampling are no longer required.

3.2.1 January 2007 Environmental Monitoring Event

An environmental monitoring event was completed in January of 2007 and consisted of wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. Aroclor 1260 was the only Aroclor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Aroclor 1260 ranged from 1.3 micrograms per 100 µg/100 cm^2 in wipe sample TR1-Wipe 1 to 6.6 µg/100 cm^2 in wipe sample TR1-Wipe 4. In Transformer Room No. 2, the concentrations of Aroclor 1260 ranged from 1.5 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 4.4 µg/100 cm^2 in wipe sample TR2-Wipe 7. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

3.2.2 December 2007 Environmental Monitoring Event

An environmental monitoring event was completed in December of 2007 and consisted of wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. Aroclor 1260 was the only Aroclor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Aroclor 1260 ranged from 2.1 micrograms per 100 µg/100 cm^2 in wipe sample TR1-Wipe 1 to 9.2 µg/100cm^2 in wipe sample TR1-Wipe 4. In Transformer Room No. 2, the concentrations of Aroclor 1260 ranged from 1.0 µg/100 cm^2 in wipe sample TR2-Wipe 3 to 83 µg/100 cm^2 in wipe sample TR2-Wipe 4. The total PCB concentration in wipe sample TR2-Wipe 4 exceeded the TSCA cleanup standard for total PCBs of 10 µg/100cm^2.

A four foot by four foot area surrounding wipe sample TR2-Wipe 4 in Transformer Room No. 2 was cleaned in February 2008. PCBs were not detected in the confirmation wipe sample, TR2 Wipe 4b, collected after cleaning activities were complete. The cleaned area was re-epoxyed.

3.2.3 2008 Environmental Monitoring Event

An annual environmental monitoring event was completed in November of 2008 and consisted of wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. Aroclor 1260 was the only Aroclor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Aroclor 1260 ranged from 1.1 µg/100 cm^2 in wipe sample TR1-Wipe 1 to 2.7 µg/100cm^2 in wipe sample TR1-Wipe 4. In Transformer Room No. 2, the concentrations of Aroclor 1260 ranged from 0.53 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 3.8 µg/100 cm^2 in wipe sample TR2-Wipe 5. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

3.2.4 2009 Environmental Monitoring Event

An annual environmental monitoring event was completed in November of 2009 and consisted of wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. Aroclor 1260 was the only Aroclor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Aroclor 1260 ranged from 1.5 µg/100 cm^2 in wipe sample TR1-Wipe 4 to 2.4 µg/100cm^2 in wipe sample TR1-Wipe 3. In Transformer Room No. 2, the concentrations of Aroclor 1260 ranged from 0.78 µg/100 cm^2 in wipe sample TR2-Wipe 6 to 4.5 µg/100 cm^2 in wipe sample TR2-Wipe 5. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

3.2.5 2010 Environmental Monitoring Event

An annual monitoring event was completed in October of 2010 and consisted of wipe sampling.

Historical wipe sample locations and data can be found in Appendix B. Aroclor 1260 was the only Aroclor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Aroclor 1260 ranged from 4.4 µg/100 cm^2 in wipe sample TR1-Wipe 3 to 58.0 µg/100cm^2 in wipe sample TR1-Wipe 2. In Transformer Room No. 2, the concentrations of Aroclor 1260 ranged from 1.6 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 8.0 µg/100 cm^2 in wipe sample TR2-Wipe 6. Wipe samples TR1-Wipe 1 (36.0 µg/100cm^2) and TR1-Wipe 2 (58.0 µg/100cm^2) exceeded the TSCA cleanup standard for total PCBs of 10 µg/100cm^2.

The floor in Transformer Room No. 1 was cleaned in January 2011. PCBs were not detected in the four confirmation wipe samples (TR1-Wipe 1 through TR1-Wipe 4) collected after the cleaning activities were complete. The cleaned area was re-epoxyed.

3.2.6 2011 Environmental Monitoring Event

Inspections of the floors in the Transformer Rooms were conducted in April, May, and September of 2011. An annual monitoring event was completed in November of 2011 and consisted of wipe sampling.

The floor in Transformer Room 1 was noted to be damaged during the September 2011 inspection. On November 9, 2011, URS repaired the portion of the floor where the existing epoxy coating had cracked and broken. The area, approximately 30 square feet, was cleaned and re-epoxyed.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Arochlor 1260 ranged from 6.8 µg/100cm^2 in wipe sample TR1-Wipe 2 to 56 µg/100cm^2 in wipe sample TR1-Wipe 3. In Transformer Room No. 2, the concentrations of Arochlor 1260 ranged from 0.95 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 28 µg/100 cm^2 in wipe sample TR2-Wipe 5. Wipe samples TR1-Wipe 3 (56 µg/100cm^2) and TR2-Wipe 5 (28 µg/100 cm^2) exceeded the TSCA cleanup standard for total PCBs of 10 µg/100cm^2.

The areas were cleaned and re-sampled on December 13, 2011. PCBs were not detected in the confirmation wipe samples collected after the cleaning activities were completed.

3.3 NEW ORDER ON CONSENT AND CONTINUED MONITORING

In early 2012, OMH and the NYSDEC entered into a new Order on Consent and Administrative Settlement – Index # R2-0668-06-11 (New Order). The goal of the New Order is the development and implementation of a remedial program to address the PCB contamination associated with the two transformer rooms in the basement of Building 1 at

the Bronx Psychiatric Center. The effective date of the New Order is March 4, 2012. Environmental monitoring continues on an annual basis and is summarized below.

3.3.1 2012 Environmental Monitoring Event

URS completed a visual inspection of the epoxy floor coatings in both Transformer Room No. 1 and Transformer Room No. 2 in Building 1 on February 15, 2012. On May 22, 2012, URS repaired the entire floor in Transformer Room No. 1 and the two localized areas of damaged epoxy floor coating in Transformer Room No. 2 in Building 1.

Annual wipe sampling was conducted in December 2012. Historical wipe sample locations and data can be found in Appendix B. Aroclor-1260 was the only Arochlor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Arochlor 1260 ranged from 0.590 µg/100 cm^2 in wipe sample TR1-Wipe 2 to 0.930 µg/100cm^2 in wipe sample TR1-Wipe 4. In Transformer Room No. 2, the concentrations of Arochlor 1260 ranged from 0.410 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 1.30 µg/100cm^2 in wipe sample TR2-Wipe 7. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

During the annual sampling in December 2012, it was noted that the epoxy floor coating in Transformer Room No. 1 showed evidence of water damage from water infiltration as a result of Hurricane Sandy. The damaged area was repaired in January 2013.

3.3.2 2013 Environmental Monitoring Event

An annual monitoring event consisting of wipe sampling and inspection of the Transformer Room floors was conducted in December of 2013.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Arochlor 1260 ranged from 0.820 µg/100 cm^2 in wipe sample TR1-Wipe 1 to 4.10 µg/100 cm^2 in wipe sample TR1-Wipe 3. In Transformer Room No. 2, the concentrations of Arochlor 1260 ranged from 0.570 µg/100 cm^2 in wipe sample TR2-Wipe 8 to 0.610 µg/100 cm^2 in wipe sample TR2-Wipe 7. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

3.3.3 2014 Environmental Monitoring Event

An annual monitoring event consisting of wipe sampling and inspection of the Transformer Room floors was conducted in December of 2014.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Arochlor 1260 ranged from 1.70 µg/100cm^2 in wipe sample TR1-Wipe 1 to 22.0 µg/100cm^2 in wipe sample TR1-Wipe 3. Samples TR1-Wipe 2 and TR1-Wipe 3 collected in Transformer Room No. 1 had PCB concentrations that exceed the TSCA cleanup standard for total PCBs of 10 µg/100cm^2. In Transformer Room No. 2, the concentrations of

Arochlor 1260 ranged from 0.780 µg/100cm^2 in wipe sample TR2-Wipe 6 to 3.90 µg/100cm^2 in wipe sample TR2-Wipe 7. None of the wipe samples collected in Transformer Room No. 2 had PCB concentrations that exceed the TSCA cleanup standard for total PCBs of 10 µg/100cm^2.

The areas surrounding TR1-Wipe 2 and TR1-Wipe 3 were cleaned and re-sampled on January 23, 2015. PCBs were detected in the confirmation wipe samples collected after the cleaning activities were completed at concentrations below the TSCA cleanup standard. During the annual sampling in December 2014, it was noted that there were several cracks in the epoxy floor coating in Transformer Room No. 1. The damaged area was repaired in January 2015.

3.3.4 2015 Environmental Monitoring Event

An annual monitoring event consisting of wipe sampling and inspection of the Transformer Room floors was conducted in December of 2015.

Historical wipe sample locations and data can be found in Appendix B. Arochlor 1260 was the only Arochlor detected in the wipe samples. In Transformer Room No. 1, the concentrations of Arochlor 1260 ranged from 0.880 µg/100cm^2 in wipe sample TR1-Wipe 1 to 2.90 µg/100cm^2 in wipe sample TR1-Wipe 3. In Transformer Room No. 2, the concentrations of Arochlor 1260 ranged from 0.380 µg/100cm^2 in wipe sample TR2-Wipe 6 to 2.50 µg/100cm^2 in wipe sample TR2-Wipe 7. None of the wipe samples exceeded the TSCA cleanup standard of 10 µg/100cm^2.

Supplemental Remedial Investigations were conducted in 2013 and 2014 in order to evaluate whether volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) were present beneath the concrete floors in the Transformer Rooms and to provide additional data for future remedial design at the Site.

The Data Usability Study Reports for the supplemental remedial investigations are provided in Appendix C.

4.1 2013 SUPPLEMENTAL REMEDIAL INVESTIGATION

A supplemental remedial investigation was conducted in July 2013 to provide additional data for the Site. A utility markout and geophysical survey were conducted prior to conducting the investigation activities. The scope of work consisted of the following tasks:

- Collection of Concrete Chip Samples;
- Sub-slab Soil Samples in Transformer Rooms;
- Soil Borings Outside Transformer Rooms; and
- Collection of Groundwater Samples.

4.1.1 Sample Collection and Analysis

4.1.1.1 Concrete Chip Sampling

URS collected two concrete chip samples from concrete cores in Transformer Room No. 1 (T1-CC01 and T1-CC02) and two concrete chip samples from concrete cores in Transformer Room No. 2 (T2-CC03 and T2-CC04). The locations were chosen to correspond to areas where historical soil impacts beneath the concrete had been noted. The concrete cores ranged in thickness from 8 to 15 inches. The locations are shown on Figures 5 and 6. Concrete chip samples were collected from both the bottom of the core, as well as the top of the core once the epoxy coating had been removed. Concrete chip samples were analyzed for PCBs by EPA Method 8082.

4.1.1.2 Sub-Slab Soil Sampling

URS collected two sub-slab soil samples in Transformer Room No. 1 (T1-SS01 and T1-SS02) and two sub-slab soil samples in Transformer Room No. 2 (T2-SS03 and T2-SS04). The locations were chosen to correspond to areas where historical soil impacts beneath the concrete had been noted. The locations are shown on Figures 3 and 4. The soil beneath the concrete slab was field screened for the presence of total volatile organic vapors utilizing a PID. The soil sample exhibiting the highest PID reading was collected and submitted for laboratory analysis from T1-SS01 and T2-SS03. All PID readings for samples collected from T1-SS02 and T2-SS04 were non-detect, therefore a soil sample was collected from the maximum depth attained and submitted for laboratory analysis. Soil samples were submitted for analysis of TCL VOCs by EPA Method 8260B and TCL SVOCs by EPA Method 8270C. In addition, the subslab soil samples were analyzed for PCBs by EPA Method 8082.

4.1.1.3 Soil Borings Outside of Transformer Rooms

Two soil borings (T1-SB01 and T2-SB02) were advanced to the water table, which was encountered at 14 feet below ground surface (bg), downgradient of the Transformer Rooms. Soil Boring T1-SB01 was advanced outside of Transformer Room No. 1 and soil boring T2-SB02 was advanced outside of Transformer Room No. 2. The locations are shown on Figures 3 and 4. Soil samples were field screened for the presence of total volatile organic vapors utilizing a PID. Recovery of soil in the macrocores was very low. Therefore, soil samples were collected from the 0 to 4 feet bgs and 5 to 10 feet bgs intervals from each boring. Soil samples were submitted for analysis of TCL VOCs by EPA Method 8260B and TCL SVOCs by EPA Method 8270C.

4.1.1.4 Groundwater Sampling

URS collected groundwater samples from the existing monitoring wells on site. The monitoring well outside of Transformer Room No. 2 was denoted as MW-1. The monitoring well outside of Transformer Room No. 1 was denoted as MW-2. Prior to the investigation in 2013, URS believed that these monitoring wells had been abandoned and did not have the correct identifications at the time of sampling. MW-1 corresponds to MW-2 and MW-2 corresponds to MW-3. Groundwater samples were collected following the USEPA's low-flow sampling protocol for purging and sampling (EPA/540/S-95/504). Groundwater samples were analyzed for TCL VOCs by EPA Method 8260B and TCL SVOCs by EPA Method 8270C.

4.1.2 Results and Findings

4.1.2.1 Concrete Chip Sampling

Tables 3 and 4 provide a summary of the concrete core samples. The results are presented on Figures 9 and 10. PCBs were detected in the upper zero to 1.5 inch interval in each of the concrete cores. The PCB concentrations detected in the upper zero to 1.5 inches of the concrete core ranged from 0.11 mg/kg to 2.2 mg/kg and are encapsulated by the epoxy coating. PCBs were not detected at the bottom of the concrete core that is in contact with the sub-sab soil.

4.1.2.2 Sub-Slab Soil Sampling

Tables 1 and 2 provide a summary of the sub-slab soil sampling results for PCBs. PCBs were detected in all four sub-slab soil samples at concentrations ranging from 0.041 mg/kg at T1-SS01 (0-8 inches) to 0.11 mg/kg at T2-SS03 (0 to 8 inches). The maximum concentration of 0.11 mg/kg barely exceeded the NYSDEC Unrestricted Use SCO of 0.1 mg/kg.

Tables 5 and 6 provide a summary of the compounds that were detected, other than PCBs, including VOCs and SVOCs. Acetone and methylene chloride were detected in at least one

sub-slab soil sample. Acetone was the only VOC that exceeded its respective NYSDEC Unrestricted Use Soil Cleanup Objective (SCO) established in 6 NYCRR Part 375-6.8(a). Acetone and methylene chloride are common laboratory contaminants.

Four SVOCs (benzo(a)anthracene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene) were detected in at least one sub-slab soil sample above their respective NYSDEC Unrestricted Use SCO. These PAHs are often attributed to the historical fill used in the New York City area.

4.1.2.3 Soil Borings Outside of Transformer Rooms

Tables 5 and 6 provide a summary of the compounds that were detected, other than PCBs, including VOCs and SVOCs. Fill material, consisting of fine to coarse brown sands with trace silt, brick fragments, and rock fragments, were encountered in the soil borings. The soil borings were advanced to 14 feet bgs. The floor of the transformer rooms are approximately 10 feet below grade. Therefore, these borings were drilled approximately four feet below the floor level of the transformer rooms.

Five VOCs (acetone, methylene chloride, naphthalene, styrene, and 1,2,4-trimethylbenzene) were detected in at least one soil sample collected at the site. Acetone was the only VOC that exceeded its respective NYSDEC Unrestricted Use SCO. Acetone is a common laboratory contaminant.

Eleven SVOCs (acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, and pyrene) were detected in at least one soil sample above their respective NYSDEC Unrestricted Use SCO. These PAHs are often attributed to the historical fill used in the New York City area.

4.1.2.4 Groundwater Sampling

The groundwater data tables are found in Appendix B. VOCs were not detected in the groundwater samples collected from the existing monitoring wells located downgradient of the transformer rooms. One SVOC, benzo(b)fluoranthene, was detected in the groundwater samples collected from the existing monitoring wells (3.5 ug/L in MW-2 and 3.6 ug/L in MW-1). The NYSDEC guidance value established in Technical and Operational Guidance Series (TOGS) 1.1.1, 2004 for benzo(b)fluoranthene is 0.002 ug/L.

4.2 2014 SUPPLEMENTAL REMEDIAL INVESTIGATION

Additional remedial investigation activities were conducted in July 2014 to further delineate the impacts outside of Transformer Room No. 1. A utility markout and geophysical survey were conducted prior to conducting the investigation activities. The scope of work consisted of the following tasks:

- Soil Borings Outside Transformer Room No. 1; and
- Collection of Groundwater Sample Outside Transformer Room No. 1.

4.2.1 Sample Collection and Analysis

4.2.1.1 Soil Borings Outside Transformer Room No. 1

URS advanced four soil borings approximately ten feet to the north (T1-SB02), five feet to the south (T1-SB04), ten feet to the east (T1-SB03), and ten feet to the west (T1-SB05) of soil boring T1-SB01. The locations of the borings are shown in Figure 3.

Soil samples were field screened for the presence of total volatile organic vapors utilizing a PID. All PID readings were non-detect. Due to low recovery in the split spoons at the surface, a hand auger was used to collect samples from the 0-2 feet bgs interval. With the exception of T1-SB05, three soil samples were collected from each soil boring. A surface soil sample was collected from the zero to two-foot interval, a soil sample was collected from the five to ten-foot interval, and a soil sample was collected from ten-foot to the water table. No soil sample was collected from the interval 10 feet bgs to the water table at T1-SB05 due to a lack of sufficient material to sample. The water table was encountered at 11 feet bgs at T1-SB05. Soil samples were submitted for analysis of TCL VOCs plus tentatively identified compounds (TICs) by EPA Method 8260C, TCL SVOCs plus TICs by EPA Method 8270D, target analyte list (TAL) inorganics by EPA Method 6010C/7471B, PCBs by EPA Method 8082, pesticides by EPA Method 8081A, and herbicides by EPA Method 8151A.

4.2.1.2 Groundwater Sampling

URS developed the existing monitoring well outside Transformer Room No. 1 (MW-2) prior to collecting a groundwater sample. The groundwater sample was collected from MW-2 following the USEPA's low-flow sampling protocol for purging and sampling (EPA/540/S-95/504). Groundwater samples were analyzed for TCL VOCs plus TICs by EPA Method 8260C, TCL SVOCs plus TICs by EPA Method 8270D, TAL inorganics by EPA Method 6010C/7470A, dissolved (filtered) TAL inorganics by EPA Method 6010C/7470A, PCBs by EPA Method 8082, pesticides by 8081A, and herbicides by 8151A.

4.2.2 Results and Findings

4.2.2.1 Soil Borings Outside Transformer Room No. 1

Table 1 provides a summary of the soil sampling results for PCBs. Table 5 provides a summary of the compounds that were detected, other than PCBs, including VOCs, SVOCs, pesticides, herbicides, and metals. Fill material, consisting of fine to coarse brown sands with trace silt, brick fragments, and rock fragments, were encountered in the soil borings. Soil boring logs are provided in Appendix D. A clay layer was observed in soil borings T1-SB02, T1-SB03, and T1-SB04 at depths ranging from 12.5 feet bgs to 15.5 feet bgs.

One TCL VOC, acetone, was detected in at least one soil sample collected at the site. The detected concentrations of acetone were below the NYSDEC Unrestricted Use SCO. No other TCL VOCs were detected in the soil samples.

Seven TCL SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene) were detected in at least one soil sample above their respective NYSDEC Unrestricted Use SCO. These PAHs can be attributed to the historical fill used in the New York City area.

PCBs (Arochlor 1260) were detected in soil sample T1-SB05 (0 to 2 feet bgs) at a concentration of 0.12 mg/kg. This concentration slightly exceeds the NYSDEC Unrestricted Use SCO of 0.1 mg/kg. PCBs were not detected in any of the other soil samples.

Four pesticides (dieldrin, 4,4-DDE, 4,4-DDD, and 4,4-DDT) were detected in at least one soil sample above their respective NYSDEC Unrestricted Use SCO.

Silvex (2,4,5-TP) was not detected in any of the soil samples.

Eight TAL inorganic compounds (arsenic, barium, chromium, copper, lead, nickel, mercury, and zinc) were detected in at least one soil sample above their respective NYSDEC Unrestricted Use SCO. It is likely that these metals can be attributed to the historical fill used in the New York City area.

4.2.2.2 Groundwater Sampling

The groundwater data tables are found in Appendix B. TCL VOCs, TCL SVOCs, PCBs, pesticides, and herbicides were not detected in the groundwater sample collected from monitoring well MW-2.

Six TAL inorganics (arsenic, barium, chromium, lead, manganese, and zinc) were detected in the groundwater sample collected from MW-2. None of the detected concentrations were above the NYSDEC TOGS 1.1.1 Groundwater Effluent Concentrations (Class GA). Five dissolved TAL inorganics (arsenic, barium, copper, manganese, and zinc) were detected in the groundwater sample collected from MW-2. The concentrations of dissolved (filtered) TAL inorganics were similar to the unfiltered groundwater sample collected from MW-2. None of the detected concentrations of dissolved TAL inorganics were above the NYSDEC TOGS 1.1.1 Groundwater Effluent Concentrations (Class GA).

Remedial investigations and environmental monitoring have been conducted at the Site since 1993. The investigations evaluated the extent of PCB contamination within the concrete floor, concrete surfaces, subsurface soils, groundwater and ambient air. The results of the investigations determined that PCB contamination is limited to concrete and subsurface soils and that the delineation of PCBs in these two units is sufficient to determine the next steps. Additional investigation to determine the extent of PCBs in the subsurface may be needed during remedial design after the transformers are taken out of service.

In addition, investigations have shown that VOCs, SVOCs, pesticides, herbicides, and metals have been detected in the subsurface soils at the Site above their respective NYSDEC Unrestricted Use SCO. These compounds are likely attributed to the historical fill used in the New York City area.

IRMs were developed and implemented beginning in 2005 to sever PCB migration pathways and also limit direct contact with stained concrete surfaces. The monitoring programs conducted since the implementation of the IRMs did not detect PCBs in either groundwater beneath the site or air in the transformer rooms. PCBs have been detected on the surface of the epoxy-coated concrete floors within the transformer rooms. However, when PCBs are detected above the TSCA cleanup standard, the floors are cleaned, re-epoxyed, and resampled to verify that concentrations are below the TSCA cleanup standard. The condition of the epoxy coating is visually inspected on an annual basis and repaired as necessary.

The remedial investigations and IRMs undertaken at the Site since 1993 have defined the nature and extent of PCB contamination in all media to the extent feasible given the physical constraints and fulfilled the technical requirements for completing Remedial Investigation as per DER-10. Remedial action is required as stated in the 2012 Order when OMH discontinues occupancy and the transformers are permanently taken out of service, or OMH considers demolition of the structure. It is anticipated that further delineation of the PCBs underneath the transformers will be undertaken as part of the remedial design.

URS recommends that a focused feasibility study (FS) be performed to evaluate potential alternatives that are practical and cost effective for remediation of PCBs in the concrete and soil beneath transformer rooms 1 and 2 within Building 1 at the Bronx Psychiatric Center. The FS will also consider the need for remediation of VOCs, SVOCs, pesticides, herbicides, and metals that have been detected in the soil beneath the Transformer Rooms with the remedial goal to meet Restricted Use Residential and Protection of Groundwater Soil Cleanup Objectives (SCOs).

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TABLES

Table 1
Summary of Soil Results
PCBS
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
S-1	3/8/1993	TOP	21,000
S-1	3/8/1993	7 inches b.c.	1,200
S-1	3/19/1993	24 inches b.c.	703
S-2	3/22/1993	20 inches b.c.	1.2
S-2	3/22/1993	28 inches b.c.	1.7
S-3	3/19/1993	14 inches b.c.	1.9
S-3	3/19/1993	24 inches b.c.	0.9
S-4	3/19/1993	14 inches b.c.	ND
S-4	3/19/1993	24 inches b.c.	0.5
S-5	3/19/1993	14 inches b.c.	ND
S-5	3/19/1993	24 inches b.c.	ND
S-6	3/19/1993	22 inches b.c.	ND
S-6	3/19/1993	28 inches b.c.	1.2
S-7	3/19/1993	14 inches b.c.	ND
S-7	3/19/1993	25 inches b.c.	ND
N-1	5/93	TOP	0.3
N-1	5/93	6 inches b.c.	0.3
N-1	5/93	12 inches b.c.	ND
N-1	5/93	18 inches b.c.	ND
N-1	5/93	26 inches b.c.	ND
N-2	5/93	TOP	26
N-2	5/93	6 inches b.c.	6.9
N-2	5/93	12 inches b.c.	0.3
N-2	5/93	18 inches b.c.	2.3
N-2	5/93	26 inches b.c.	ND
DRAIN 01	8/29/2000	0-2'	23,000
DRAIN 01	8/29/2000	2'-4'	16,000
N15W5	8/30/2000	4'-6'	1.1
N30W5	8/29/2000	2'-4'	0.9
N30W5	8/31/2000	4'-6'	0.2
T1-SS01	6/11/2013	0 - 8 inches b.c.	ND
T1-SS02	6/12/2013	0 - 6 inches b.c.	ND
T1-SB02	7/23/2014	0 - 2'	ND
T1-SB02	7/23/2014	5' - 10'	ND
T1-SB02	7/23/2014	10' - WT	ND
T1-SB03	7/23/2014	0 - 2'	ND

Table 1
Summary of Soil Results
PCBS
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
T1-SB03	7/23/2014	5' - 10'	ND
T1-SB03	7/23/2014	10' - WT	ND
T1-SB04	7/23/2014	0 - 2'	ND
T1-SB04	7/23/2014	5' - 10'	ND
T1-SB04	7/23/2014	10' - WT	ND
T1-SB05	7/23/2014	0 - 2'	0.12
T1-SB05	7/23/2014	5' - 10'	ND

Notes

ND	: Not detected
-	: Not available
>	: Greater than the indicated depth
b.c.	: Below concrete
PCBs	: Polychlorinated Biphenyls
mg/kg	: milligrams per kilogram
WT	: Water Table

Table 2
Summary of Soil Results
Building 1 - Transformer Room No. 2
PCBS

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Depth	Total PCBs (mg/kg)
DRAIN-01	8/30/2000	10 inches b.c.	3.2
DRAIN-02	8/30/2000	0-2'	0.7
DRAIN-02	8/30/2000	4'-6'	7
S15W10	8/31/2000	0-2'	0.1
S20W5	8/31/2000	0-2'	0.2
S35W7	8/31/2000	0-2'	12
S35W7	8/31/2000	2'-3'	49
T2-SS03	6/11/2013	0 - 8 inches b.c.	0.14
T2-SS04	6/12/2013	12 - 14 inches b.c.	ND

Notes

ND	: Not detected
b.c.	: Below concrete
feet bgs	: feet below ground surface
PCBs	: Polychlorinated Biphenyls
mg/kg	: milligrams per kilogram

Table 3
Summary of Concrete Results
PCBs
Building 1 - Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Core Thickness (inches)	Depth (inches)	Total PCBs (mg/kg)
S-1 TOP	3/8/1993	-	-	21,000
S-1 BOTTOM	3/8/1993	-	-	1,700
S-2 FLOOR TOP	3/19/1993	-	-	1.7
S-3 FLOOR TOP	3/22/1993	-	-	327
S-4 FLOOR TOP	3/19/1993	-	-	ND
S-5 FLOOR TOP	3/19/1993	-	-	0.4
S-6 FLOOR TOP	3/19/1993	-	-	0.3
N10W5 TOP	8/31/2000	11	-	7.5
N10W15 TOP	8/28/2000	10	-	1,500
N10W15 BOTTOM	8/28/2000	-	-	0.6
N10W25 TOP	8/28/2000	8	-	2.3
N10W25 BOTTOM	8/28/2000	-	-	0.6
N15W0 TOP	8/29/2000	15	-	1.4
N15W0 BOTTOM	8/30/2000	-	-	0.8
N15W5 TOP	8/28/2000	9	-	1,500
N15W5 BOTTOM	8/28/2000	-	-	0.33
N20W25 TOP	8/28/2000	9	-	170
N20W25 BOTTOM	8/28/2000	-	-	0.27
N25W0 TOP	8/29/2000	16	-	1.0
N25W0 BOTTOM	8/29/2000	-	-	0.54
N25W15 TOP	8/28/2000	12.5	-	18,000
N25W15 BOTTOM	8/28/2000	-	-	1,600
N30W5 TOP	8/28/2000	7.5	-	3.5
N30W5 BOTTOM	8/28/2000	-	-	0.3
N30W25 TOP	8/28/2000	>7	-	0.82
N40W5 TOP	8/28/2000	9	-	1.8
N40W5 BOTTOM	8/28/2000	-	-	200
N40W15 TOP	8/30/2000	16	-	1.5
N40W15 BOTTOM	8/30/2000	-	-	0.6
N40W25 TOP	8/28/2000	>12	-	1.5
T1-CC-01	7/9/2013	-	0 - 1	2.2
T1-CC-01	7/9/2013	-	6.5 - 8	ND
T1-CC-02	7/9/2013	-	0 - 1.5	0.5
T1-CC-02	7/9/2013	-	11 - 12	ND

Notes

ND	: Not detected
-	: Not available
>	: Greater than the indicated depth
PCBs	: Polychlorinated Biphenyls
mg/kg	: milligrams per kilogram

Table 4
Summary of Concrete Results
PCBs
Building 1 - Transformer Room No. 2

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification	Sample Date	Core Thickness (inches)	Depth (inches)	Total PCBs (mg/kg)
S0W5 TOP	8/30/2000	15	-	0.6
S5W10 TOP	8/30/2000	9	-	6.5
S5W20 TOP	8/30/2000	13	-	0.9
S10W0 TOP	8/30/2000	14	-	0.7
S10W0 BOTTOM	8/30/2000	-	-	10
S10W15 TOP	8/30/2000	8	-	0.4
S15W10 TOP	8/30/2000	8.5	-	1.6
S15W10 BOTTOM	8/30/2000	-	-	1.2
S20W5 TOP	8/30/2000	8	-	4.9
S20W5 BOTTOM	8/30/2000	-	-	1.8
S20W15 TOP	8/30/2000	10	-	8.9
S25W0 TOP	8/30/2000	13	-	2.5
S25W0 BOTTOM	8/30/2000	-	-	360
S25W7 TOP	8/30/2000	9	-	16
S30W20 TOP	8/30/2000	9	-	650
S30W20 BOTTOM	8/30/2000	-	-	39
S35W5 TOP	8/30/2000	8	-	68,000
S35W5 BOTTOM	8/30/2000	-	-	14,000
S35W13 TOP	8/30/2000	8	-	45
S40W0 TOP	8/30/2000	15	-	8.4
S40W0 BOTTOM	8/30/2000	-	-	0.5
S40W20 TOP	8/30/2000	11	-	3
S40W20 BOTTOM	8/30/2000	-	-	0.47
S45W13 TOP	8/30/2000	7	-	43
S45W13 BOTTOM	8/30/2000	-	-	2.5
S47W7 TOP	8/30/2000	6.5	-	2.2
S47W7 BOTTOM	8/30/2000	-	-	58,000
S50W15 TOP	8/30/2000	10	-	0.2
T2-CC-03	7/9/2013	-	0 - 1	0.4
T2-CC-03	7/9/2013	-	13 - 15	ND
T2-CC-04	7/9/2013	-	0 - 1.5	0.11
T2-CC-04	7/9/2013	-	10 - 12	ND

Notes

ND : Not detected
- : Not available
PCBs : Polychlorinated Biphenyls
mg/kg : milligrams per kilogram

Table 5
Summary of Soil Results
Detected Compounds: VOCs, SVOCs, Pesticides, Herbicides, Metals
Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification		T1-SS01	T1-SS02	T1-SB01	T1-SB01	T1-SB02	T1-SB02	T1-SB02	T1-SB03
Sample Depth (feet bgs)		0 - 8 (in. b.c.)	0 - 6 (in. b.c.)	0 - 4	5 - 10	0 - 2	5 - 10	10 - WT	0 - 2
		6/11/2013	6/12/2013	6/12/2013	6/12/2013	7/23/14	7/23/14	7/23/14	7/23/14
Compound	**SCO* (mg/kg)**	**Results (mg/kg)**							
Volatile Organic Compounds									
Acetone	0.05	**0.46**	**1.2**	**0.25**	**1.9**	ND	ND	ND	ND
Styrene	NS	ND	ND	ND	0.0049	NA	NA	NA	NA
Semivolatile Organic Compounds									
Naphthalene	12	ND	ND	ND	**16**	0.19	ND	ND	ND
Acenaphthylene	100	ND	ND	ND	ND	ND	ND	0.41	ND
Acenaphthene	20	ND	ND	ND	**21**	0.44	ND	0.19	ND
Dibenzofuran	7	ND	ND	ND	8.5	0.33	ND	0.20	ND
Fluorene	30	ND	ND	ND	18	0.50	ND	0.29	ND
Phenanthrene	100	0.96	2.3	0.38	**130**	4.0	0.13	3.3	0.62
Anthracene	100	ND	**0.4**	ND	29	1.0	ND	0.68	0.16
Fluoranthene	100	1.5	2.4	0.58	**130**	4.4	0.12	4.1	1.0
Pyrene	100	1.6	2.8	0.65	**130**	3.0	0.0981	3.3	0.80
Benzo(a)anthracene	1	1	**1.2**	0.37	**70**	**1.7**	ND	**1.8**	0.51
Chrysene	1	1	**1.3**	0.38	**62**	**1.6**	ND	**2.0**	0.42
Benzo(b)fluoranthene	1	**1.4**	**1.2**	0.58	**77**	**1.6**	ND	**2.6**	0.61
Benzo(k)fluoranthene	0.8	0.49	0.49	0.21	**23**	0.69	ND	0.53	0.18
Benzo(a)pyrene	1	ND	ND	ND	ND	**1.5**	ND	**1.7**	0.48
Indeno(1,2,3-cd)pyrene	0.5	ND	ND	ND	**32**	**0.83**	ND	**1.0**	0.25
Dibenzo(a,h)anthracene	0.33	ND	0.21	ND	**8.1**	0.17	ND	0.26	ND
Benzo(g,h,i)perylene	100	0.37	0.67	0.21	25	0.81	ND	1.1	0.30
1,2,4-Trichlorobenzene	NS	ND	**1.8**	ND	ND	NA	NA	NA	NA
2-methylnaphthalene	NS	ND	ND	ND	13	NA	NA	NA	NA
Carbazole	NS	ND	ND	ND	10	NA	NA	NA	NA
Pesticides									
Dieldrin	0.005	NA	NA	NA	NA	**0.0059**	ND	ND	ND
4,4-DDE	0.0033	NA	NA	NA	NA	**0.13**	**0.0025**	**0.0077**	**0.0348**
4,4-DDD	0.0033	NA	NA	NA	NA	**0.0062**	ND	0.0016	ND
4,4-DDT	0.0033	NA	NA	NA	NA	**0.12**	**0.0053**	**0.0173**	**0.0374**
Herbicides									
2,4,5-TP (Silvex)	3.8	NA	NA	NA	NA	0.0731	0.0811	0.0831	0.0713
Metals									
Arsenic	13	NA	NA	NA	NA	6.96	4.29	9.39	**15.6**
Barium	350	NA	NA	NA	NA	233	172	**472**	216
Beryllium	7.2	NA	NA	NA	NA	0.635	0.542	0.659	0.611
Cadmium	2.5	NA	NA	NA	NA	ND	ND	1.53	ND
Chromium	30	NA	NA	NA	NA	21.9	19.9	**36.2**	22.5
Copper	50	NA	NA	NA	NA	47.2	**57.2**	**77.3**	39.1
Lead	63	NA	NA	NA	NA	62.4	**125**	**488**	**197**
Manganese	1,600	NA	NA	NA	NA	309	238	277	273
Mercury	0.18	NA	NA	NA	NA	0.078	**0.342**	**0.278**	0.161
Nickel	30	NA	NA	NA	NA	**42.7**	**39.7**	**38.1**	**34.6**
Selenium	3.9	NA	NA	NA	NA	1.46	1.03	1.06	1.54
Silver	2	NA	NA	NA	NA	ND	ND	0.267	ND
Zinc	109	NA	NA	NA	NA	**152**	**144**	**429**	**218**

Notes:

Soil samples analyzed by Chemtech Analytical Laboratory in Mountainside, New Jersey.
Bold: Indicates an exceedance in the SCO
mg/kg: milligrams per kilogram
ND: Not Detected
feet bgs: feet below ground surface
SCO*: New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objective (SCO), 6 NYCRR Part 375-6.8(a), December 14, 2006.
WT: Water Table

Table 5
Summary of Soil Results
Detected Compounds: VOCs, SVOCs, Pesticides, Herbicides, Metals
Transformer Room No. 1

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification		T1-SB03	T1-SB03	T1-SB04	T1-SB04	T1-SB04	T1-SB05	T1-SB05
Sample Depth (feet bgs)		5 - 10	10 - WT	0 - 2	5 - 10	10 - WT	0 - 2	5 - 10
		7/23/14	7/23/14	7/23/14	7/23/14	7/23/14	7/23/14	7/23/14
Compound	**SCO* (mg/kg)**	**Results (mg/kg)**						
Volatile Organic Compounds								
Acetone	0.05	ND	ND	ND	0.0119	0.0102	ND	0.017
Styrene	NS	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds								
Naphthalene	12	ND	ND	ND	1.1	ND	ND	0.50
Acenaphthylene	100	0.49	0.36	ND	0.64	1.1	ND	0.63
Acenaphthene	20	0.30	ND	ND	1.4	ND	ND	0.62
Dibenzofuran	7	0.18	ND	ND	0.54	ND	ND	0.24
Fluorene	30	0.38	ND	ND	1.2	0.16	ND	0.53
Phenanthrene	100	4.3	1.1	0.41	8.4	0.79	0.14	3.4
Anthracene	100	1.2	0.33	0.0845	2.1	0.36	ND	0.97
Fluoranthene	100	7.3	1.9	0.53	10	3.2	0.23	4.0
Pyrene	100	5.6	2.4	0.40	8.5	8.1	0.19	4.9
Benzo(a)anthracene	1	**3.5**	**1.3**	0.23	**5.3**	**3.1**	0.11	**3.1**
Chrysene	1	**3.1**	**1.2**	0.21	**4.4**	**2.4**	0.10	**2.3**
Benzo(b)fluoranthene	1	**3.6**	**1.9**	0.24	**6.3**	**4.0**	0.13	**3.7**
Benzo(k)fluoranthene	0.8	**1.2**	0.51	0.0893	**1.1**	**1.7**	ND	**1.0**
Benzo(a)pyrene	1	**2.9**	**1.6**	0.18	**4.8**	**4.8**	0.0946	**3.3**
Indeno(1,2,3-cd)pyrene	0.5	**1.6**	**0.93**	0.0977	**2.8**	**2.5**	ND	**1.9**
Dibenzo(a,h)anthracene	0.33	**0.41**	0.20	ND	**0.71**	**0.54**	ND	**0.41**
Benzo(g,h,i)perylene	100	1.7	1.5	0.0977	3.5	4.3	ND	2.7
1,2,4-Trichlorobenzene	NS	NA	NA	NA	NA	NA	NA	NA
2-methylnaphthalene	NS	NA	NA	NA	NA	NA	NA	NA
Carbazole	NS	NA	NA	NA	NA	NA	NA	NA
Pesticides								
Dieldrin	0.005	ND	ND	ND	ND	ND	ND	ND
4,4-DDE	0.0033	**0.0115**	0.0016	0.0014	0.0021	ND	**0.0246**	ND
4,4-DDD	0.0033	ND	ND	ND	ND	ND	ND	ND
4,4-DDT	0.0033	**0.0165**	0.0026	ND	**0.004**	ND	**0.0262**	ND
Herbicides								
2,4,5-TP (Silvex)	3.8	0.074	0.0858	0.0738	0.0739	0.0776	0.0885	0.0826
Metals								
Arsenic	13	12.3	**22.9**	6.28	6.11	5.11	**20.4**	**18.8**
Barium	350	328	341	180	290	**390**	181	**455**
Beryllium	7.2	0.601	0.741	0.545	0.711	0.733	0.5	1.04
Cadmium	2.5	0.079	2.06	ND	0.26	0.174	ND	1.69
Chromium	30	21.6	29.1	20.3	25	23.9	19.1	21.9
Copper	50	36.9	**65**	35.2	**54.6**	47.1	28.3	**80.2**
Lead	63	**276**	**326**	**134**	**273**	**267**	**155**	**580**
Manganese	1,600	266	269	281	288	310	252	314
Mercury	0.18	**0.208**	**0.195**	0.109	**0.388**	0.179	0.123	**0.468**
Nickel	30	**32.7**	**38.3**	**31.9**	**55**	**40.7**	22.8	**44.6**
Selenium	3.9	1.1	1.3	1.11	1.28	1.24	0.895	1.25
Silver	2	ND	ND	ND	ND	ND	ND	0.310
Zinc	109	**302**	**372**	**186**	**289**	**274**	**120**	**769**

Notes:

Soil samples analyzed by Chemtech Analytical Laboratory in Mountainside, New Jersey.
Bold: Indicates an exceedance in the SCO
mg/kg: milligrams per kilogram
ND: Not Detected
feet bgs: feet below ground surface
SCO*: New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objective (SCO), 6 NYCRR Part 375-6.8(a), December 14, 2006.
WT: Water Table

Table 6
Summary of Soil Results
Detected Compounds: VOCs and SVOCs
Transformer Room No. 2

Bronx Psychiatric Center
1500 Waters Place, Bronx, New York

Sample Identification		T2-SS03	T2-SS04	T2-SB02	T2-SB02
Sample Depth (feet bgs)		0 - 8 (in. b.c.)	12 - 14 (in. b.c)	0 - 4	5 - 10
Collection Date		6/11/2013	6/12/2013	6/12/2013	6/12/2013
Compound	**SCO* (mg/kg)**	**Results (mg/kg)**			
Volatile Organic Compounds					
Acetone	0.05	**1.1**	**1.3**	**2**	**0.51**
Naphthalene	12	ND	ND	ND	0.026
Semivolatile Organic Compounds					
Acenaphthene	20	ND	ND	0.67	0.39
Anthracene	100	0.31	0.23	1.3	1
Benzo(a)Anthracene	1	0.99	0.94	**3.8**	**3.1**
Benzo(a)Pyrene	1	0.97	1	**3.7**	**2.9**
Benzo(b)Fluoranthene	1	**1.2**	**1.2**	**4.2**	**3.3**
Benzo(g,h,i)Perylene	100	0.71	0.99	2.3	1.9
Benzo(k)Fluoranthene	0.8	0.49	0.49	**1.6**	**1.3**
Carbazole	NS	ND	ND	0.58	0.38
Chrysene	1	0.99	0.98	**3.6**	**2.8**
Dibenz(a,h)Anthracene	0.33	ND	0.23	**0.61**	**0.5**
Fluoranthene	100	1.8	1.6	6.1	5.2
Fluorene	30	ND	ND	0.61	0.35
Naphthalene	12	ND	0.22	0.85	0.39
Phenanthrene	100	1.4	1.3	5.5	3.5
Pyrene	100	2.2	2	8.4	6.7

Notes:

Soil samples analyzed by ConTest Analytical Laboratory in East Longmeadow, Massachusetts.

mg/kg: milligrams per kilogram

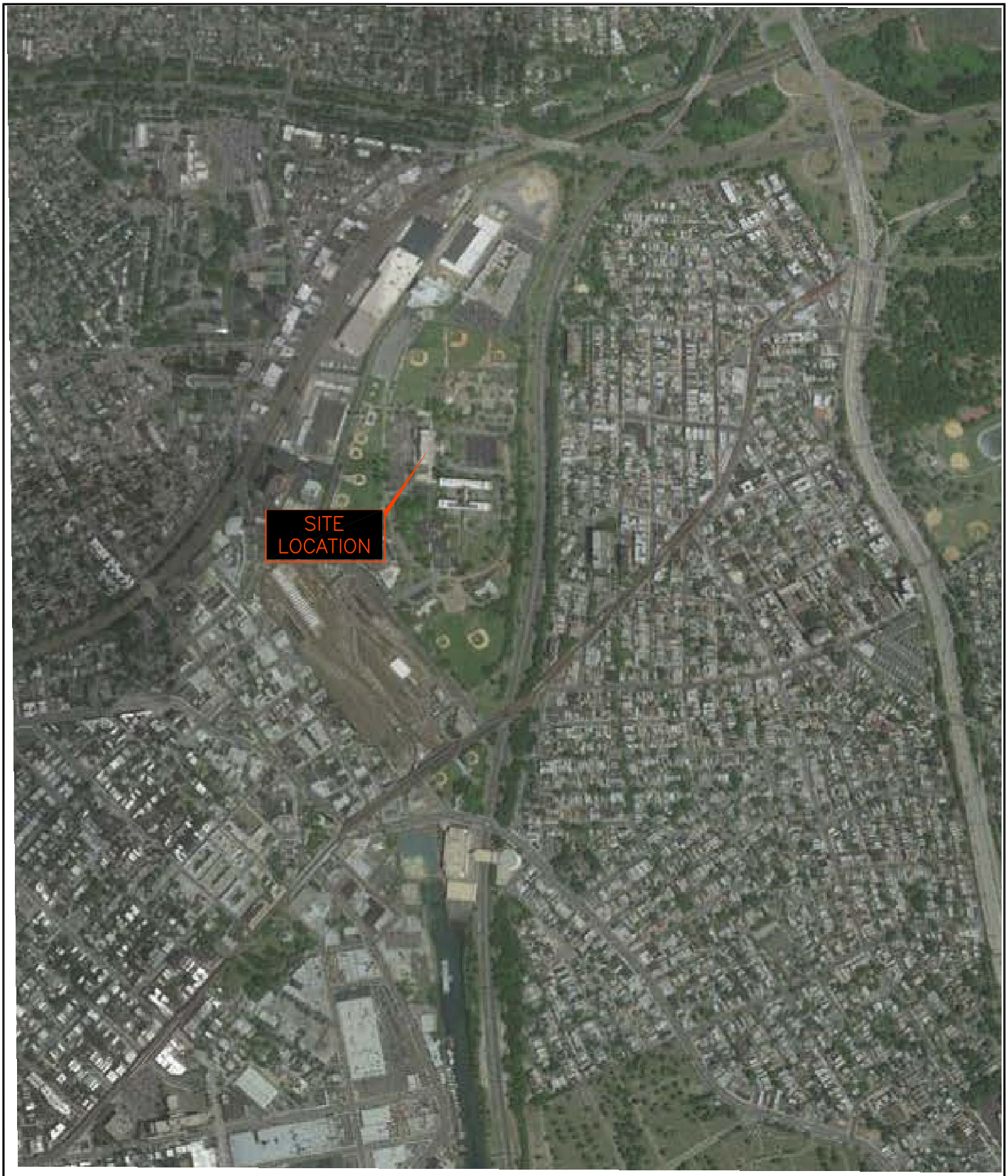
feet bgs: feet below ground surface

in. b.c.: inches below concrete

NS: SCO not established in 6 NYCRR Part 375-6.8(a).

*: New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objective (SCO), 6 NYCRR Part 375-6.8(a), December 14, 2006.

FIGURES



0 0.125 0.25

APPROXIMATE SCALE (MILE)

MAP SOURCE:

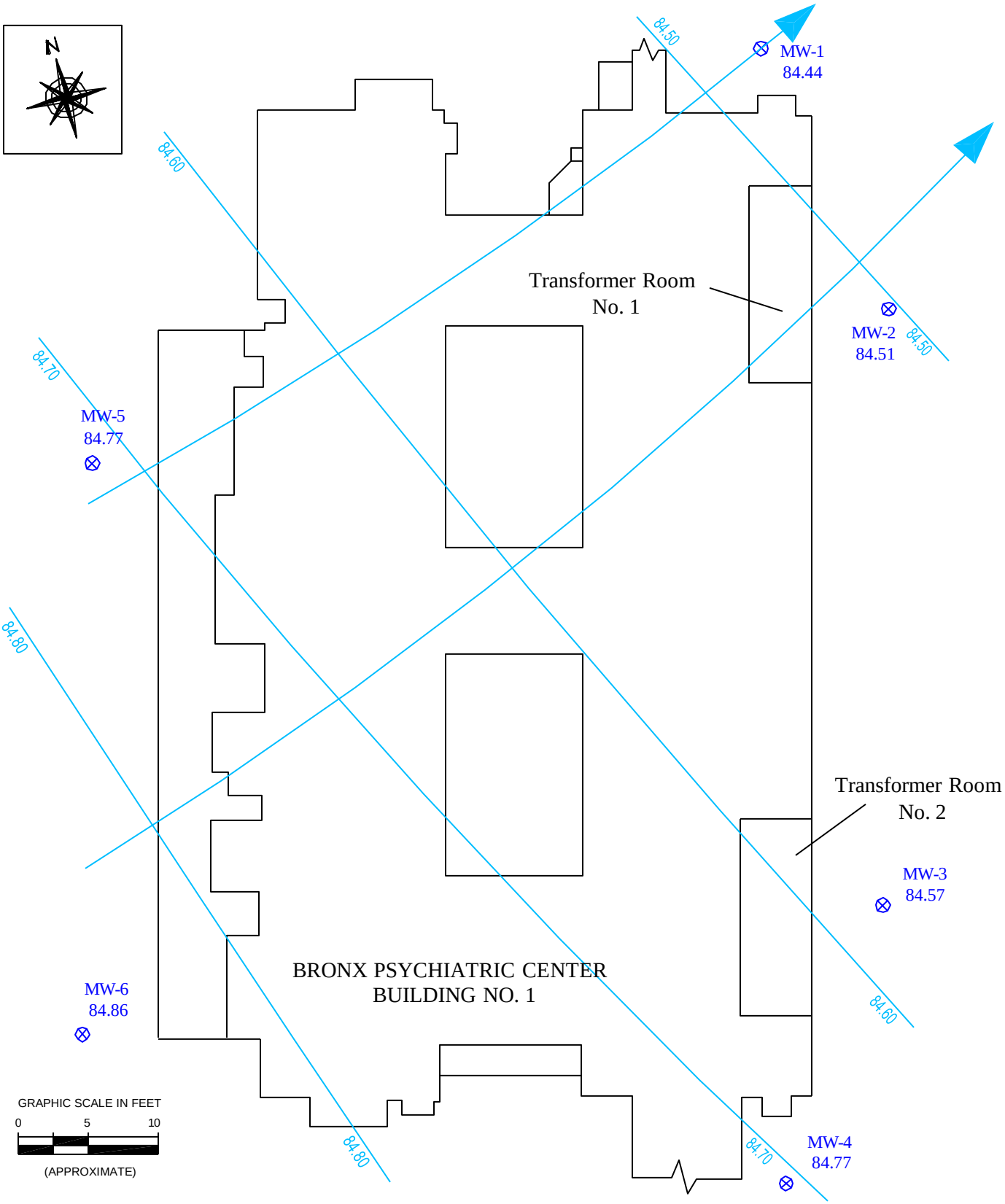
GOOGLE EARTH IMAGERY DATE 06/17/2010

N

SITE LOCATION MAP
1500 WATERS PLACE, BRONX, NEW YORK STATE
OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO. 38395095-15	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	1



LEGEND

- MW-1 84.44 — Groundwater Monitoring Well with Groundwater Elevations (feet)
- Groundwater Elevation Contour (feet)
- Groundwater Flow Line

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: MONITORING WELL LOCATIONS AND GROUNDWATER ELEVATIONS MAY 2005

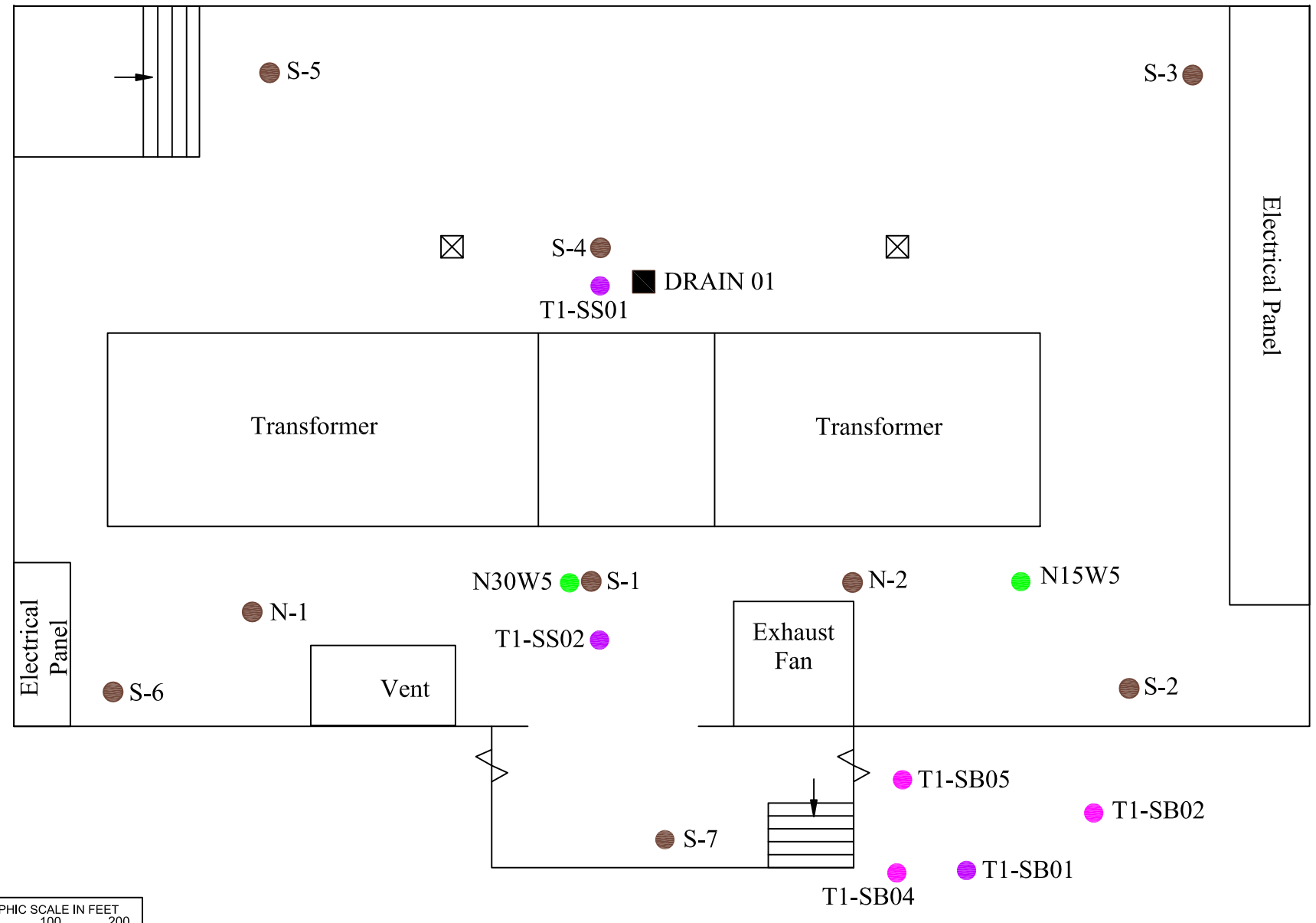
Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

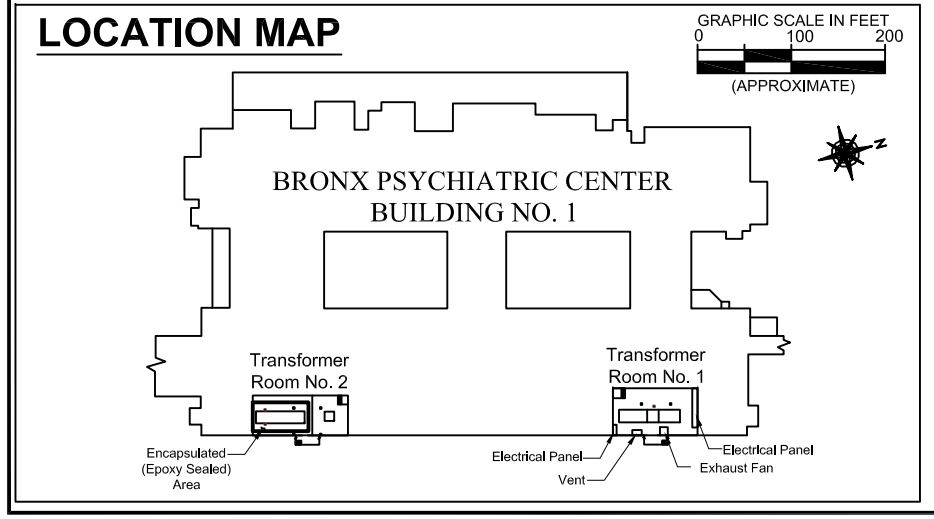
URS Corporation
Clifton, New Jersey

Drafter:	Date:
DAD	January 2015
Drg. Size:	Job No.:
8.5 x 11	38395331

FIGURE 2



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Soil Sample Location (1993)
- Soil Sample Location (2000)
- Former Drain (2000)
- Soil Sample Location (2013)
- Soil Sample Location (2014)

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: SOIL SAMPLING LOCATIONS TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

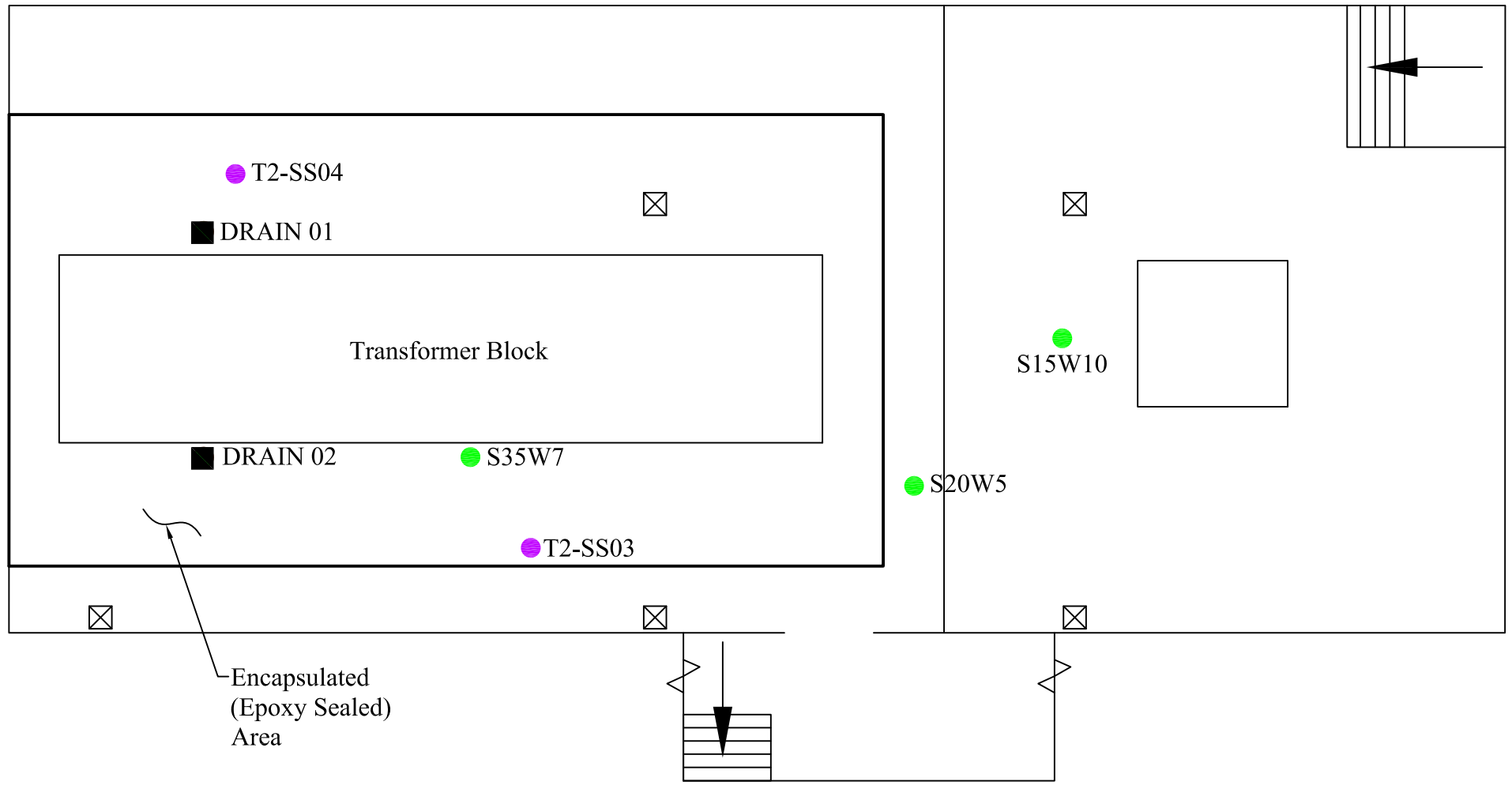
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

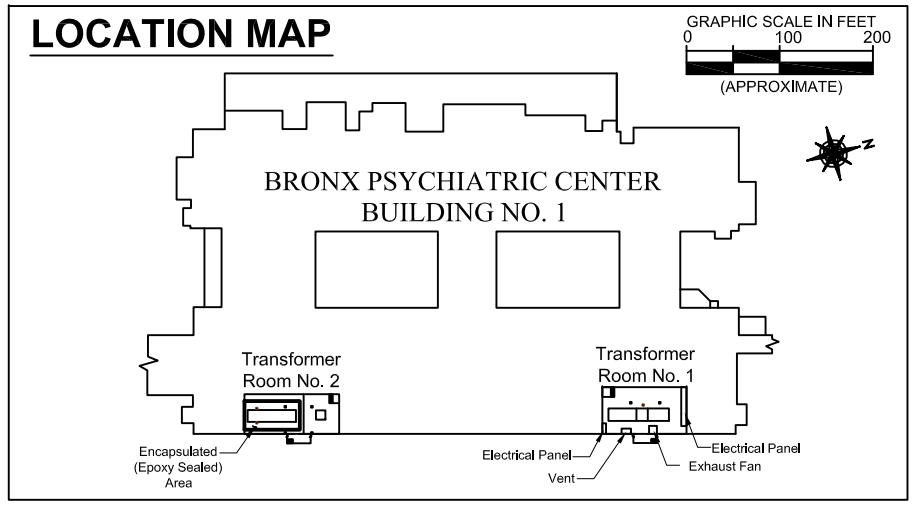
Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 3

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation-Remediation\Building 1 PCB Project\2014 Comprehensive RIR\PWM Locations 2015.dwg User:corrie_szczepanski Jan 16, 2015 - 10:24am



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Former Drain (2000)
- Soil Sample Location (2000)
- Soil Sample Location (2013)

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: SOIL SAMPLING LOCATIONS
TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

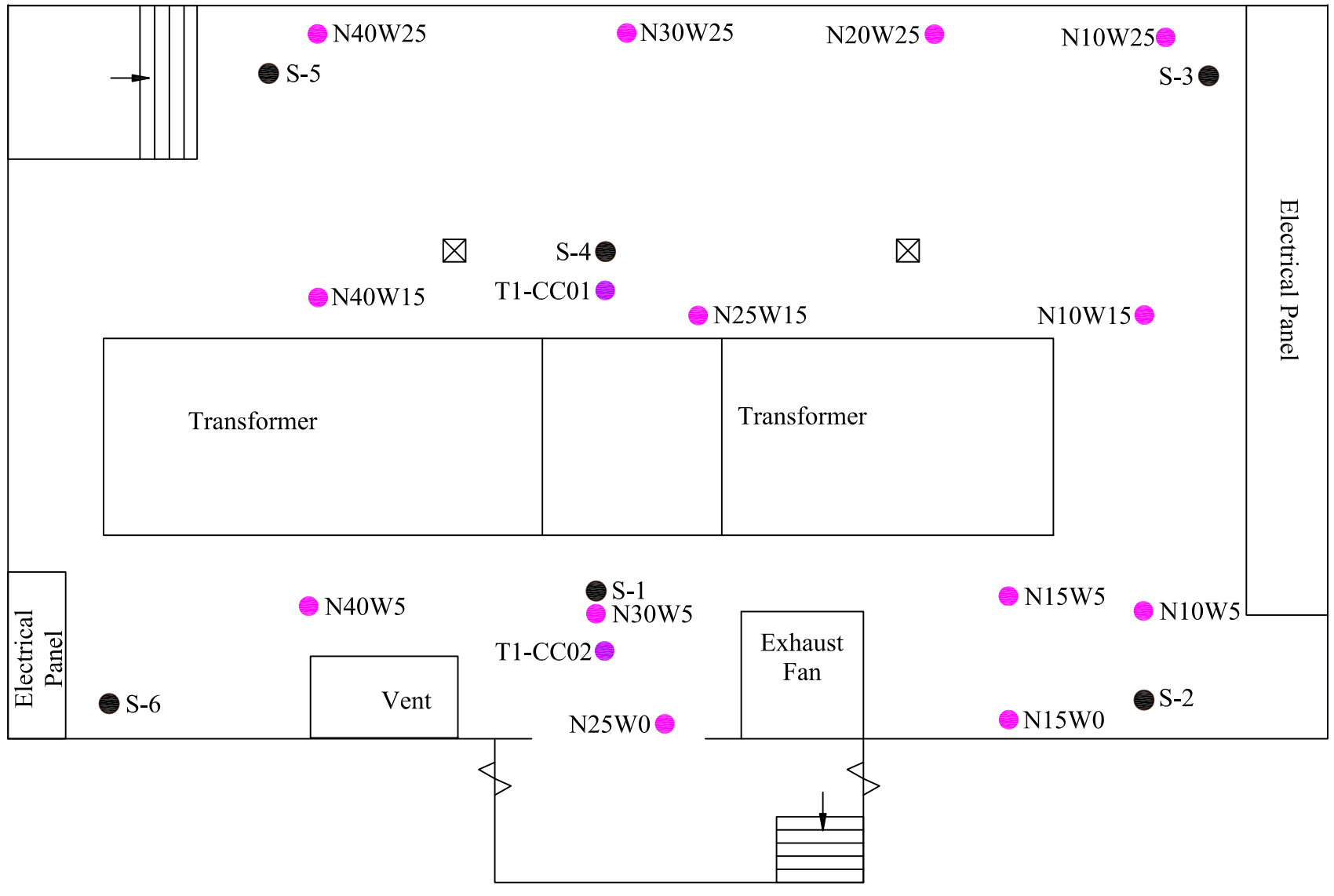
Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

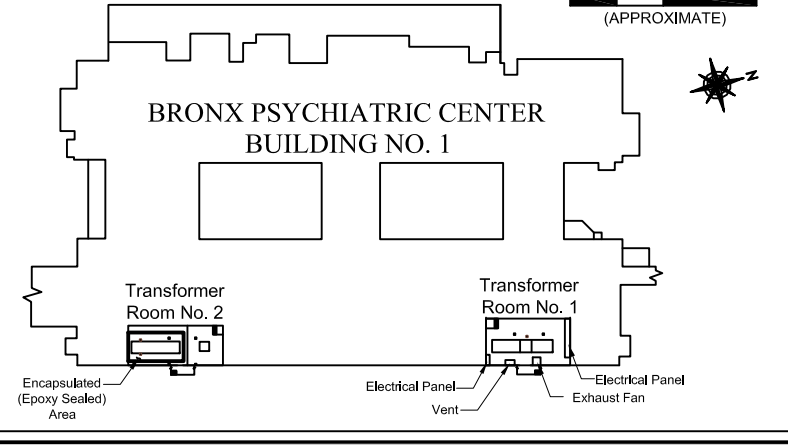
Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 4

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation-Remediation\Building 1 PCB Project\2014 Comprehensive RIR\FMW Locations 2015.dwg User:carrie_szczepanski Jan 16, 2015 - 10:25am



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Concrete Sample Location (1993)
- Concrete Sample Location (2000)
- Concrete Sample Location (2013)

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: CONCRETE SAMPLING LOCATIONS TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

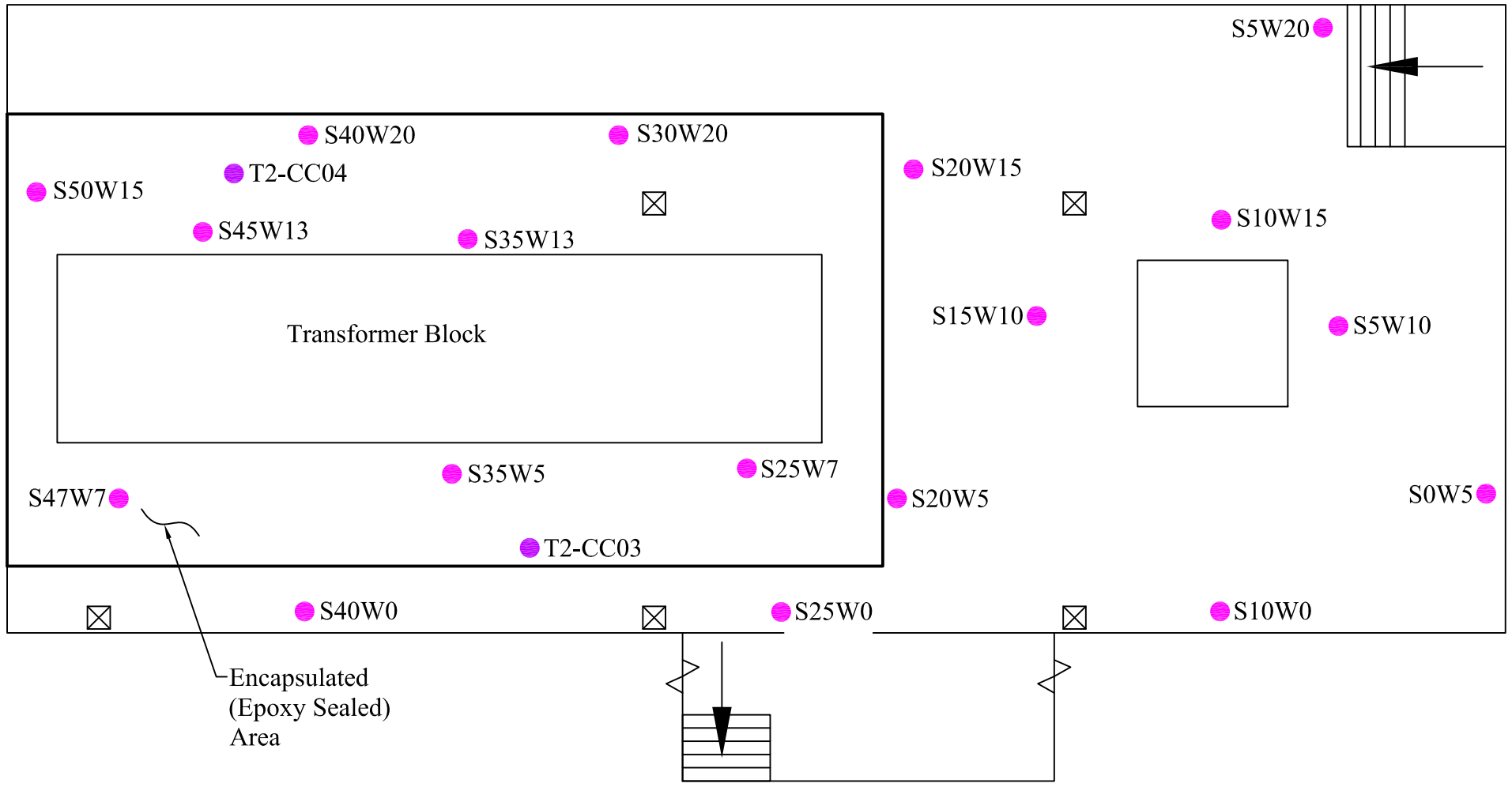
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

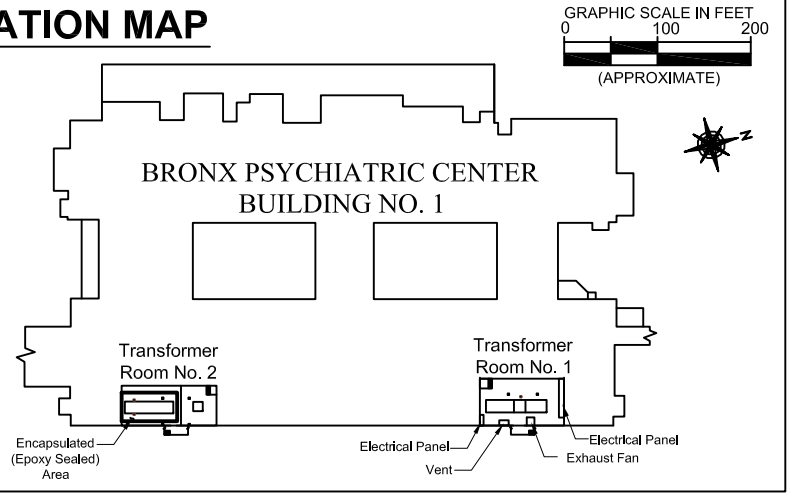
Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 5

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation,Remediation\Building 1 PCB Project\2014 Comprehensive RIR\F\Concrete MW Locations 2015.dwg User: carrie_szczepanski Jan 16, 2015 - 10:06am



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Concrete Sample Location (2000)
- Concrete Sample Location (2013)

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: CONCRETE SAMPLING LOCATIONS
TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 6

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation-Remediation\Building 1 PCB Project\2014 Comprehensive RIR\FConcrete MW Locations 2015.dwg User:carrie_szczepanski Jan 16, 2015 - 10:08am

T1-SS01	
0' - 8"	ND

S-4	
SOIL 14"	ND
SOIL 24"	0.5

DRAIN 01	
0' - 2'	23,000
2' - 4'	16,000

S-3	
SOIL 14"	1.9
SOIL 24"	0.9

S-5	
SOIL 14"	ND
SOIL 24"	ND

N15W5	
4' - 6'	1.1

S-2	
SOIL 20"	1.2
SOIL 28"	1.7

N-1	
SOIL TOP	0.3
SOIL 6"	0.3
SOIL 12"	ND
SOIL 18"	ND
SOIL 26"	ND

Transformer

Transformer

Electrical Panel

S-6	
SOIL 22"	ND
SOIL 28"	1.2

T1-SB05	
0 - 2'	0.12
5' - 10'	ND

Electrical Panel

Vent

Exhaust Fan

N30W5	
2' - 4'	0.9
4' - 6'	0.2

T1-SB01
NA

T1-SB02	
0 - 2'	ND
5' - 10'	ND
10' - WATER TABLE	ND

T1-SB03/T1-SB04	
0 - 2'	ND
5' - 10'	ND
10' - WATER TABLE	ND

T1-SS02	
0 - 6"	ND

N-2	
SOIL TOP	26
SOIL 6"	6.9
SOIL 12"	0.3
SOIL 18"	2.3
SOIL 26"	ND

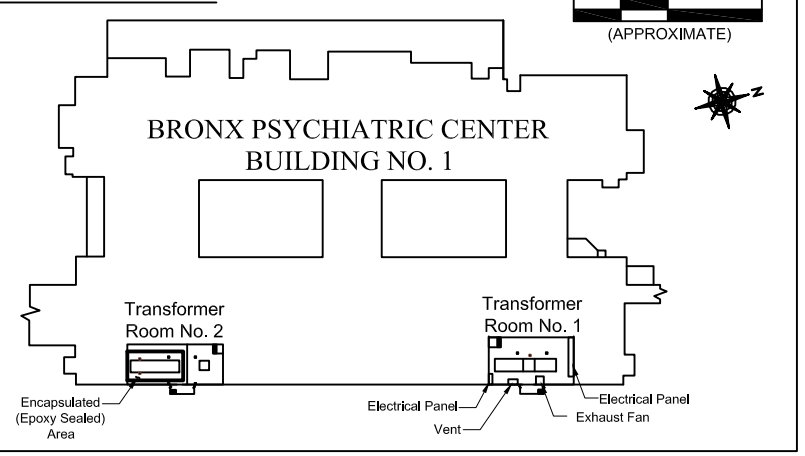
S-1	
SOIL TOP	21,000
SOIL 7"	1,200
SOIL 24"	703

S-7	
SOIL 14"	ND
SOIL 25"	ND

GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LOCATION MAP

GRAPHIC SCALE IN FEET
0 100 200
(APPROXIMATE)



LEGEND

- Structural Column
- Soil Sample Location (1993)
- Soil Sample Location (2000)
- Former Drain (2000)
- Soil Sample Location (2013)
- Soil Sample Location (2014)

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND Not Detected
NA Not Analyzed

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: PCB CONCENTRATIONS IN SOIL SAMPLES TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 7

J:\11173717 DASNY\General Services\00010--Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\2014 Comprehensive RIR\FPCB CONC MW Locations_rev 2015.dwg User:carrie_szczeponski Jan 16, 2015 - 9:56am

DRAIN 01	
10"	3.2

T2-SS04	
12" - 14"	ND

S15W10	
0' - 2'	0.1

Transformer Block

DRAIN 02	
0' - 2' 4' - 6'	0.7 7

Encapsulated
(Epoxy Sealed)
Area

S20W5	
0' - 2'	0.2

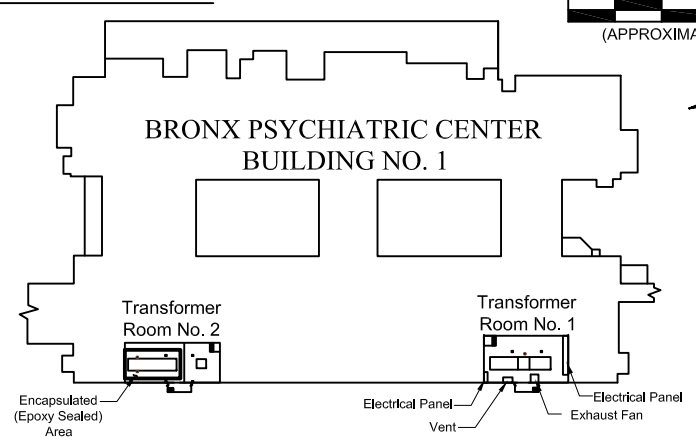
S35W7	
0' - 2' 2' - 3'	12 49

T2-SS03	
0 - 8"	0.14

T2-SB02
NA

LOCATION MAP

GRAPHIC SCALE IN FEET
0 100 200
(APPROXIMATE)



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Soil Sample Location (1993)
- Former Drain (2000)
- Soil Sample Location (2000)
- Soil Sample Location (2013)

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND Not Detected
NA Not Analyzed

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: PCB CONCENTRATIONS IN SOIL SAMPLES
TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

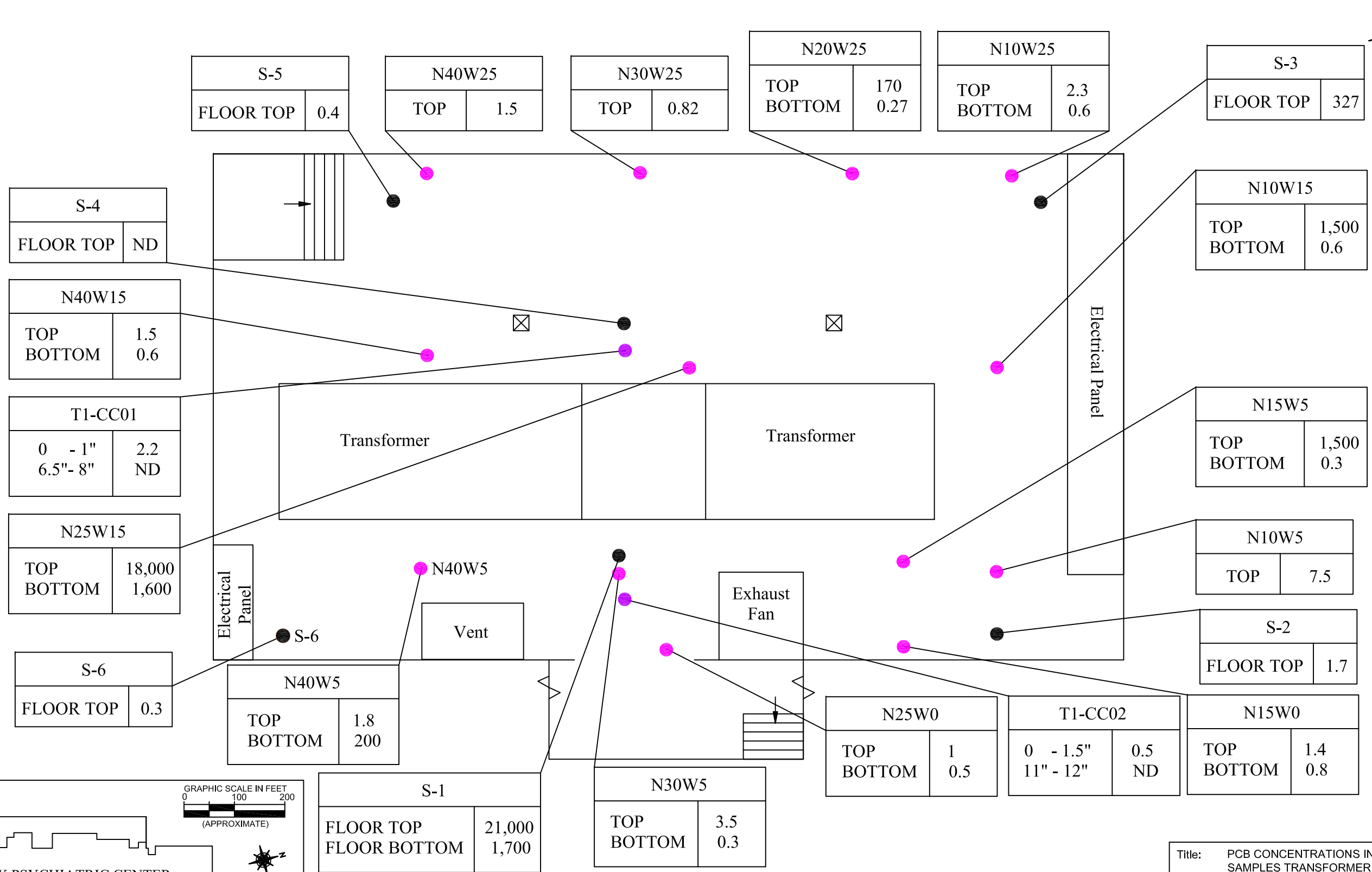
Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

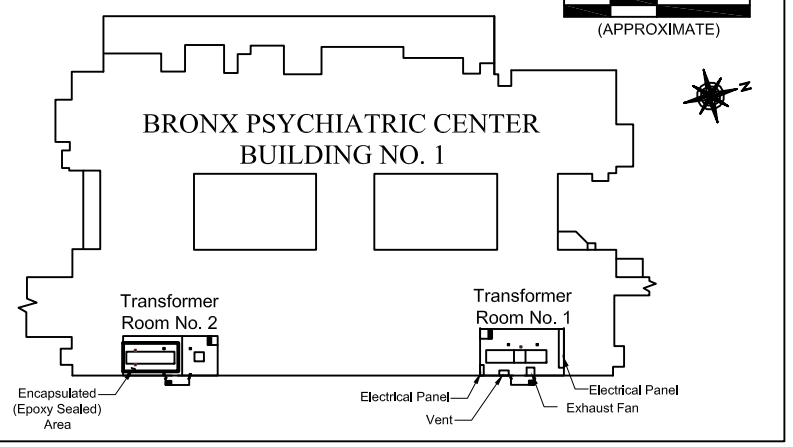
FIGURE 8

J:\11173717 DASNY\General Services\00010--Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\2014 Comprehensive RI\FIGS\PCB CONC MW Locations_rev 2015.dwg User:carrie_szczepanski Jan 16, 2015 - 9:52am



LOCATION MAP

GRAPHIC SCALE IN FEET
0 100 200
(APPROXIMATE)



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Concrete Sample Location (1993)
- Concrete Sample Location (2000)
- Concrete Sample Location (2013)

NOTES:
All locations are approximate.
Concentrations are in mg/kg.
ND Not Detected
NA Not Analyzed

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: PCB CONCENTRATIONS IN CONCRETE SAMPLES TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 9

J:\11173717 DASNY\General Services\00010--Bronx Adult\Site Investigation,Remediation\Building 1 PCB Project\2014 Comprehensive RIR\FPCB CONC in Concrete Samples 2015.dwg User: corrie_szczeponski Jan 16, 2015 - 10:15am

S40W20	
TOP	3
BOTTOM	0.47

S35W13	
TOP	45

S30W20	
TOP	650
BOTTOM	39

S20W15	
TOP	8.9

S15W10	
TOP	1.6
BOTTOM	1.2

S5W20	
TOP	0.9

T2-CC04	
0 - 1.5"	0.11
10" - 12"	ND

S5W20

S10W15	
TOP	0.4

S50W15	
TOP	0.2

S5W10	
TOP	6.5

S45W13	
TOP	43
BOTTOM	2.5

S0W5	
TOP	0.6

Transformer Block

Encapsulated (Epoxy Sealed) Area

S47W7	
TOP	2.2
BOTTOM	58,000

S40W0	
TOP	8.4
BOTTOM	0.5

S35W5	
TOP	68,000
BOTTOM	14,000

T2-CC03	
0 - 1"	0.4
13" - 15"	ND

S25W0	
TOP	2.5
BOTTOM	360

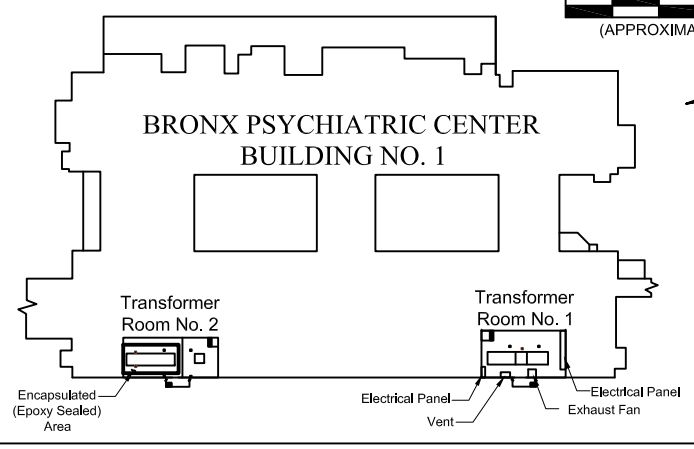
S25W7	
TOP	16

S20W5	
TOP	4.9
BOTTOM	1.8

S10W0	
TOP	0.7
BOTTOM	10

LOCATION MAP

GRAPHIC SCALE IN FEET
0 100 200
(APPROXIMATE)



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Concrete Sample Location (2000)
- Concrete Sample Location (2013)

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND Not Detected
NA Not Analyzed

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: PCB CONCENTRATIONS IN CONCRETE SAMPLES TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: CLS	Date: January 2015
Drg. Size: 11 x 17	Job No.: 38395331

FIGURE 10

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation-Remediation\Building 1 PCB Project\2014 Comprehensive RIR\PCB CONc in Concrete Samples 2015.dwg User: carrie_szczepanski Jan 16, 2015 - 10:21am

APPENDICES

APPENDIX A

HUMAN HEALTH EXPOSURE ASSESSMENT

APPENDIX A

HUMAN HEALTH EXPOSURE ASSESSMENT

The purpose of a human health exposure assessment (HHEA) is to identify pathways by which human populations may be exposed to site-related contaminants. The HHEA includes an evaluation of existing site conditions, as well as conditions of surrounding areas and uses, and potential exposure pathways by which site contaminants may impact receptor populations. The HHEA also includes projections of future uses of the site and surrounding areas and resulting potential exposure pathways.

An exposure pathway is process by which Site contaminants may potentially impact a receptor population. An exposure pathway includes these five elements:

1. **Contaminant Source:** a source or sources where contaminants are released into the environment.
2. **Environmental media and transport mechanism:** environmental media include media to which contaminants are released and/or may be transported to receptors. These media include surficial soil, subsurface soil, groundwater, air, surface water, sediment, or waste materials.
3. **Point of exposure:** an actual or potential location of human contact with Site contaminants, including businesses, residences, recreational areas, water bodies, surface water or groundwater withdrawal points, etc.
4. **Route of exposure:** the process by which the contaminant could potentially enter a human body. These routes of exposure include ingestion, inhalation and dermal contact.
5. **Receptor population:** persons at the point of exposure who could potentially be exposed to site contaminants.

A completed exposure pathway provides a connection between a contaminant source and a receptor population and must include all five elements listed above. If one of the elements is not present, the exposure pathway is not complete and there is no potential for a human exposure. An evaluation of each of these elements with respect to PCB release in Building No. 1 transformer rooms 1 and 2 is presented in the following sections:

CONTAMINANT SOURCE

The contaminants identified at the Building 1 transformer rooms are PCBs. The source of PCB contamination is the release of PCBs from transformers located in Rooms 1 and 2. In addition, there are some VOCs, SVOCs, pesticides, herbicides, and metals in the soil beneath the transformer rooms that can likely be attributed to the urban fill material.

ENVIRONMENTAL MEDIA AND TRANSPORT MECHANISM

Environmental media that people could typically be exposed to include soil, groundwater, surface water and sediment. The Remedial Investigation Report (RIR) provides a detailed description of affected environmental media and delineation of contaminants in various media. An evaluation of these media with respect to exposure pathways is presented in the following sections.

Soil

As described in the RIR, the soil beneath the concrete floors is impacted with PCBs. In addition, there are some VOCs, SVOCs, pesticides, herbicides, and metals in the soil beneath the transformer rooms that can likely be attributed to the urban fill material. The soil is overlain by 6 to 18 inches of concrete slab and all vertical migration pathways from the concrete floor to the subsurface soil have been sealed. In addition, the concrete floor received epoxy coating that would limit direct exposure to concrete floor and also limit exposure from soils also. Therefore, no exposure pathway associated with soils exists.

Groundwater

As described in Sections 2.0 and 3.0 of the RIR, groundwater at the Site is not impacted by PCBs. Groundwater monitoring from the six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5 and MW-6) have been sampled and analyzed since 1994 for PCBs. Only one exceedence for PCBs has been detected in the groundwater in 2003. However, this detection was not replicated after the well was re-developed and re-sampled.

Indoor Air Data

As described in Sections 2.0 and 3.0 of the RIR, indoor samples have been collected from Transformer Rooms Nos. 1 and 2 in Building No. 1 from 1995 until 2006. PCBs were detected in one air sample, located north of Transformer Room No. 1, at a concentration of 0.16 $\mu g/m^3$ in May 2004. This concentration was just above the detection limit and does not pose any concern to human health.

POINT OF EXPOSURE

The point of exposure is the point at which people could come into contact with a contaminated environmental medium. The point(s) of exposure will depend on the impacted media, and local land and natural resource use.

Local Land Use and Natural Resource Use

The land use at Site and surrounding areas is a mixture of industrial and commercial and can reasonably be expected to continue as such for the foreseeable future. No residential properties are located in the vicinity of the Site. The nearest residential building is 500 feet from the Site. The groundwater at the Site is not used for potable water.

Environmental Media

As described in Sections 2.0 and 3.0, the environmental media that could be part of an exposure pathway include groundwater, soils and vapor. Data indicates the concrete floors in the transformer rooms are stained and could potentially be a point of exposure. However, the interim remedial measures (IRMs) have been implemented that limit exposure or direct contact.

The soil impacted by PCBs are covered by approximately 6 to 18 inches of concrete, which forms the floor slabs.

Only one exceedence for PCBs has been detected in the groundwater of MW-3 in 2003. However, this detection was not replicated after the well was re-developed and re-sampled. There have been no other groundwater exceedences for PCBs in the samples collected from the six monitoring wells that were sampled from 1993 through 2014. This suggests that there is no migration of PCBs from impacted soils to groundwater.

Air sampling did not detect any exceedences for PCB contamination.

RECEPTOR POPULATIONS

The potential receptor populations for Site are based on current and projected future land use in and around Site. As described above, the current land use in the area is industrial/commercial.

Access to the basement of the building is currently restricted. There are limited maintenance staff that enter the transformer rooms on a periodic basis. It is anticipated that future use of the building would include access restrictions to the basement. Annual environmental monitoring includes visual inspections and wipe sampling of the epoxy floor coating.

Construction workers may come in contact with contaminants during construction activities in the future, however practices will be put into place to limit exposure.

ROUTE OF EXPOSURE

An exposure route is a means by which contaminants can enter the body. Typical potential routes of exposure include:

Water

1. Direct ingestion
2. Dermal or ocular contact

Soil and/or Sediment

1. Direct ingestion (primarily by young children)
2. Dermal or ocular contact
3. Inhalation of dust
4. Inhalation of volatilized chemicals

Air

1. Inhalation
2. Dermal or ocular contact

Biota / Food Chain

1. Ingestion of plants or products impacted by intake of contaminated water, soil/sediment or air
2. Dermal or ocular contact with contaminated plants or products.

The routes of exposure are dependent on several factors discussed in the preceding sections, including land use, environmental media, point of exposure and receptor populations. As discussed in these sections, there are currently no identified completed human exposure pathways.

SUMMARY

This section summarizes the HHEA for Building No.1, Transformer Rooms No. 1 and 2 at the Bronx P.C. PCBs that were previously released from the transformers have impacted the concrete floors and subsurface soil. In addition, there are some VOCs, SVOCs, pesticides, herbicides, and metals in the soil beneath the transformer rooms that can likely be attributed to the urban fill material. The environmental media evaluated include groundwater, indoor air, concrete floor and soils. A summary for reach of these media is presented below.

Groundwater

Only one exceedence for PCBs has been detected in the groundwater of MW-3 in 2003. However, this detection was not replicated after the well was re-developed and re-sampled. There have been no other groundwater exceedences for PCBs in the samples collected from the six monitoring wells that were sampled from 1993 through 2014. Therefore, no exposure pathway associated with groundwater exists at the Site.

Concrete Floor

The concrete floor was impacted by PCBs. However, IRMs were implemented to prevent direct contact of stained surface by coating the concrete floor with epoxy. In addition, wipe samples have been collected at random locations in both rooms on an annual basis. If there is an exceedance of the cleanup standard, the floor is cleaned and re-epoxyed as necessary. Therefore, no exposure pathway associated with concrete floor exists at the Site. Annual environmental monitoring consisting of visual inspection, wipe sampling, and as-needed cleaning and repair of the epoxy coated floor will continue.

Soil

The soil beneath the concrete floors is impacted. The soil is overlain by 6 to 18 inches of concrete floor slab and vertical migration pathways from the concrete floor to the subsurface soil have been sealed. In addition, the concrete floor received epoxy coating that would limit direct

exposure to concrete floor and also limit exposure from soils also. Therefore, no exposure pathway associated with soils exists.

Indoor Air

Indoor air samples have been collected from Transformer Rooms Nos. 1 and 2 in Building No. 1 from 1995 until 2006. PCBs were detected in one air sample, located north of Transformer Room No. 1, at a concentration of 0.16 $\mu g/m^3$ in May 2004. This concentration was just above the detection limit and does not pose any concern to human health. Therefore, no exposure pathway is associated with indoor air.

APPENDIX B

HISTORICAL TABLES AND FIGURES

HISTORICAL TABLES

TABLE 2-1
1993 GROUNDWATER SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER

Parameter	MW#1	MW#2	MW#3	MW#4	Date
PCB-1016	ND	ND	ND	ND	11/3/1993
PCB-1221	ND	ND	ND	ND	11/3/1993
PCB-1232	ND	ND	ND	ND	11/3/1993
PCB-1242	ND	ND	ND	ND	11/3/1993
PCB1248	ND	ND	ND	ND	11/3/1993
PCB-1254	ND	ND	ND	ND	11/3/1993
PCB-1260	ND	ND	ND	ND	11/3/1993

Notes:
Analyzed by Method 608
ND = Not detected above MDL
All results reported as ug/L

TABLE 2-2
BUILDING 1-TRANSFORMER ROOM NO. 1
PCB CONCENTRATIONS IN CONCRETE CORE SAMPLES
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Sample Identification	Laboratory Sample Identification	Client Sample Number	Floor Core Thickness (inches)	Date of Sample	PCBs* (ppm)
N10W5T	71401001	1CN10W5T	11	8/31/00	7.5 D
N10W15T	71389002	1CN10W15T	10	8/28/00	1,500
N10W15TBOTTOM	71671002	1CN10W15B		8/28/00	0.62
N10W25T	71389001	1CN10W25T	8	8/28/00	2.3
N10W25TBOTTOM	71671001	1CN10W25B		8/28/00	0.62
N15W0	71394002	1CN15W0T	15	8/29/00	1.40
N15W0BOTTOM	71394027	1CN15W0B		8/30/00	0.80
N15W5	71389008	1CN15W5	9	8/28/00	1,500
N15W5BOTTOM	71389012	1CN15W5B		8/28/00	0.33 P
N20W25T	71389003	1CN20W25T	9	8/28/00	170
N20W25TBOTTOM	71671003	1CN20W25B		8/28/00	0.27
N25W0	71394001	1CN25W0T	16	8/29/00	1.0
N25W0BOTTOM	71394026	1CN25W0B		8/29/00	0.54
N25W15	71389009	1CN25W15	12.5	8/28/00	18,000
N25W15BOTTOM	71389013	1CNW15B		8/28/00	1,600
N30W5	71389007	1CN30W5	7.5	8/28/00	3.5
N30W5BOTTOM	71389011	1CN30W5B		8/28/00	0.34
N30W25T	71389004	1CN30W25T	>7	8/28/00	0.82
N40W5	71389006	1CN40W5	9	8/28/00	1.8
N40W5BOTTOM	71389010	1CN40W5B		8/28/00	200
N40W15	71394003	1CN40W15T	16	8/30/00	1.5
N40W15BOTTOM	71394028	1CN40W15B		8/30/00	0.62
N40W25T	71389005	1CN40W25T	>12	8/28/00	1.5

Notes:

* Arochlor 1260

D: Result taken from diluted sample analysis

P: This flag is used for a pesticide/ Arochlor target analyte when there is greater than 25% difference for detected concentrations between two GC columns. The lower of the two values is reported.

Samples are one-inch increments of three-inch diameter core

TABLE 2-3
BUILDING 1-TRANSFORMER ROOM NO. 2
PCB CONCENTRATIONS IN CONCRETE CORE SAMPLES
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Sample Identification	Laboratory Sample Identification	Client Sample Number	Floor Core Thickness (inches)	Date of Sample	PCBs* (ppm)
S0W5	71394006	2CS10W5T	15	8/30/00	0.61
S5W10	71394005	2CS5W10T	9	8/30/00	6.5
S5W20	71394004	2CS5W20T	13	8/30/00	0.9 P
S10W0	71394007	2CS10W0T	14	8/30/00	0.66
S10W0BOTTOM	71394029	2CS10W0B		8/30/00	10
S10W15	71394008	2CS10W15T	8	8/30/00	0.36
S15W10	71394009	2CS15W10T	8.5	8/30/00	1.6
S15W10BOTTOM	71394030	2CS15W10B		8/30/00	1.2
S20W5	7139410	2CS20W5T	8	8/30/00	4.9
S20W5BOTTOM	71394031	2CS20W5B		8/30/00	1.8
S20W15	71394020	2CS20W15T	10	8/30/00	8.9 P
S25W0	71394011	2CS25W0T	13	8/30/00	2.5
S25W0BOTTOM	71394032	2CS25W0B		8/30/00	360
S25W7	71394019	2CS25W7T	9	8/30/00	16
S30W20	71394012	2CS30W20T	9	8/30/00	650
S30W20BOTTOM	71394033	2CS30W20B		8/30/00	39
S35W5	71394017	2CS35W5T	8	8/30/00	68,000 P
S35W5BOTTOM	71394035	2CS35W5B		8/30/00	14,000 P
S35W13	71394014	2CS35W13T	8	8/30/00	45
S40W0	71394018	2CS40W0T	15	8/30/00	8.4
S40W0BOTTOM	71671005	2CS40W0B		8/30/00	0.51
S40W20	71394013	2CS40W20T	11	8/30/00	3
S40W20BOTTOM	71671004	2CS40W20B		8/30/00	0.47
S45W13	71394015	2CS45W13T	7	8/30/00	43
S45W13BOTTOM	71394034	2CS45W13B		8/30/00	2.5
S47W7	71394021	2CS47W7T	6.5	8/30/00	2.2 P
S47W7BOTTOM	71671006	2CS47W7B		8/30/00	58,000
S50W15	71394016	2CS50W15T	10	8/30/00	0.19

Notes:

* Arochlor 1260

P: This flag is used for a pesticide/ Arochlor target analyte when there is greater than 25% difference for detected concentrations between two GC columns. The lower of the two values is reported.

Samples are one-inch increments of three-inch diameter core

TABLE 2-4
BUILDING 1-TRANSFORMER ROOMS
PCB FIELD RESULTS FOR SOIL SAMPLES
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Soil Identification	Depth Below Floor (feet)	Field Test Results[(1)] (ppm)
Room No. 01		
Drain	0-2	~15*
	2-4	~15*
	4-5.5	<1
	5.5-6	<1
N15W0	0-2	<1
	2-4	<1
	4-6	<1
	6-8	<1
N15W5	0-2	<1
	2-4	<1
	4-6	<1*
	6-8	<1
N25W0	0-2	<1
	2-4	<1
	4-5.5	<1
N25W15	0-2	<1
	4-5	<1
	5.5-6	<1
N30W5	0-2	<1*
	2-4	<1*
	4-6	<1*
N40W5	0-2	<1
	2-4	<1
N40W5	0-6	<1
	2-3	<1
N40W15	0-2	<1
	2-4	<1
	4-6	<1

Soil Identification	Depth Below Floor (feet)	Field Test Results[(1)] (ppm)
Room No. 02		
DRAIN-N01	0-.08	5-15*
DRAIN-N02	0-2	~1*
	2-4	<1
	4-6	<1*
S10W0	0-2.5	<1
S10W4	2-4	<1
	4-6	<1
S15W10	0-2	<1*
	2-4	<1
	4-6	<1
	6-8	<1
S20W5	0-2	<1
	2-3	<1
	3-3.5	<1
S25W0	0-2	<1*
	2-4	<1
	4-6	<1
S30W20	0-1	<1
	1-3	<1
	3-5	<1
S35W7	0-2	<1*
	2-3	5-15*
	3-5	Refusal
S45W15	0-2	~4
	2-4	<1
	4-5.5	<1
	5.5-6	<1

Note:
* Selected for laboratory analysis
[(1)]Using a field immunoassay kit; D-TECH PCB Soil Test Kit, Item #TK-1002-1

TABLE 2-5
BUILDING 1-TRANSFORMER ROOMS
PCB CONCENTRATIONS IN SOIL SAMPLES
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Sample Identification	Laboratory Sample Identification	Client Sample Number	Depth Below Floor (feet)	Date of Sample	PCBs* (ppm)	PCB Field KIT Results ** (ppm)
Room No. 01						
DRAIN	71394024	1SDRAIN02	0-2	8/29/00	23,000	<1
DRAIN	71394025	1SDRAIN24	2-4	8/29/00	16,000	<1
N15W5	71394023	1SN15W546	4-6	8/30/00	1.1	~15
N30W5	71394022	1SN30W524	2-4	8/29/00	0.87 P	~15
N30W5	71401008	1SN30W546	4-6	8/31/00	0.17 P	<1
Room No. 02						
DRAIN-N01	7141004	2DRAIN106	0-0.8	8/30/00	3.2	4-15
DRAIN-N02	71401002	2DRAIN246	4-6	8/30/00	0.73 P	<1
DRAIN-N02	71401003	2DRAIN202	0-2	8/30/00	7.0 P	~1
S15W10	71401007	2S15W1002	0-2	8/31/00	0.09 P	<1
S20W5	71401006	2SS20W502	0-2	8/31/00	0.24	4-15
S35W7	71401005	2SS35W702	0-2	8/31/00	12	<1
S35W7	71401009	2SS35W723	2-3	8/31/00	49	<1

Note:
*Arochlor 1260
**Using a field immunoassay kit; D-TECH PCB Soil Test Kit, Item #TK-1002-1
P: This flag is used for a pesticide/ Arochlor target analyte when there is greater than 25% difference for detected concentrations between two GC columns. The higher of the two values is reported.

TABLE 3-1

SUMMARY OF GROUNDWATER ELEVATIONS
2004 BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Monitoring Well ID	Measuring Point Elevation	Depth to Water (feet) 12/14/2004	Groundwater Elevation (feet) 12/14/2004
MW-1	99.37	14.48	84.89
MW-2	99.79	14.85	84.94
MW-3	99.55	14.57	84.98
MW-4	100.00	14.76	85.24
MW-5	96.23	10.92	85.31
MW-6	94.88	9.57	85.31

Note:
Measuring point elevations in feet relative to site datum from Dvirka and Bartilucci July 13, 2004.

TABLE 3-2

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
2004 BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter (µg/L)	MW-1 12/14/2004	MW-2 12/21/2004	MW-3 12/14/2004	MW-4 12/14/2004	MW-5 12/14/2004	MW-6 12/14/2004	MW-6 DUP 12/14/2004
Polychlorinated Biphenyls							
Aroclor-1016	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total PCBs	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

1: The New York State Groundwater Quality Standard from Division of Water Technical and Operational Guidance Series (NYSDEC, TOGS 1.1.1) for total PCBs in groundwater is 0.09 µg/L.

TABLE 3-3

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
2004 BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter ($ug/100\ cm^2$)	Transformer Room No. 1				Transformer Room No. 2			
	T1-1 12/14/2004	T1-2 12/14/2004	T1-3 12/14/2004	T1-4 12/14/2004	T2-1 12/14/2004	T2-2 12/21/2004	T2-3 12/14/2004	T2-4 12/14/2004
Polychlorinated Biphenyls								
Aroclor-1016	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	<1.0	<1.0	**3.3**	**2.2**	**1.8**	**1.8**	<1.0	**2.6**
Total PCBs	**ND**	**ND**	**3.3**	**2.2**	**1.8**	**1.8**	**ND**	**2.6**

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

*: Wiped area was 100 cm^2.

**: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs in a wipe sample is 10 $\mu g/100\ cm^2$.

TABLE 3-4

SUMMARY OF GROUNDWATER ELEVATIONS
2005 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Monitoring Well ID	Measuring Point Elevation	Depth to Water (feet)	Groundwater Elevation (feet)
		5/3/2005	5/3/2005
MW	99.37	14.93	84.44
MW	99.79	15.28	84.51
MW	99.55	14.98	84.57
MW	100.00	15.23	84.77
MW	96.23	11.46	84.77
MW	94.88	10.02	84.86

Note:
Measuring point elevations in feet relative to site datum from Dvirka and Bartilucci July 13, 2004.

TABLE 3-5

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
2005 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter (µg/L)	NYSDEC Groundwater Standard[1]	MW-1 5/3/2005	MW-2 5/3/2005	MW-3 5/3/2005	MW-4 5/3/2005	MW-5 5/3/2005	MW-6 5/3/2005
Polychlorinated Biphenyls							
Aroclor-1016	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1221	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1232	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1242	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1248	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1254	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1260	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total PCBs	0.09	ND	ND	ND	ND	ND	ND

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

1: The New York State Groundwater Quality Standard from Division of Water Technical and Operational Guidance Series (NYSDEC, TOGS 1.1.1) for total PCBs in groundwater is 0.09 µg/L.

TABLE 3-6

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
2005 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1]	Transformer Room No. 1				Transformer Room No. 2			
		Wipe 5	Wipe 6	Wipe 7	Wipe 8	Wipe 1	Wipe 2	Wipe 3	Wipe 4
		5/4/2005	5/4/2005	5/4/2005	5/4/2005	5/4/2005	5/4/2005	5/4/2005	5/4/2005
Polychlorinated Biphenyls									
Aroclor-1016	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	-	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	-	2.6	1.7	67	3.3	19	1.4	<1.0	2.9
Total PCBs	10	2.6	1.7	67	3.3	19	1.4	ND	2.9

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

*: Wiped area was 100 cm^2.

1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs in a wipe sample is 10 $\mu g/100\ cm^2$.

TABLE 3-7

SUMMARY OF AIR SAMPLE ANALYTICAL RESULTS
2005 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter mg/m³	OSHA Exposure Limit[1]	Transformer Room No. 1 Air T1-01 5/4/2005	Transformer Room No. 2 Air T2-01 5/4/2005
Polychlorinated Biphenyls			
Aroclor-1016	-	<0.00641	<0.00641
Aroclor-1221	-	<0.00641	<0.00641
Aroclor-1232	-	<0.00641	<0.00641
Aroclor-1242	1	<0.00641	<0.00641
Aroclor-1248	-	<0.00641	<0.00641
Aroclor-1254	0	<0.00641	<0.00641
Aroclor-1260	-	<0.00641	<0.00641
Total PCBs	-	ND	ND

Notes:
<: Indicates parameter was not detected at the reporting limit.
ND: Indicates parameter was not detected.
1.The Occupational Safety and Health Adminstration's permissible exposure limit for Aroclor 1254 is 0.5 mg/m³ and for Aroclor 1242 is 1.0 mg/m³.

TABLE 3-8

SUMMARY OF GROUNDWATER ELEVATIONS
2005 2nd BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Monitoring Well ID	Measuring Point Elevation	Depth to Water (feet)	Groundwater Elevation (feet)
		12/1/05	12/1/05
MW	99.37	13.97	85.50
MW	99.79	14.05	84.94
MW	99.55	14.57	84.98
MW	100.00	14.76	85.24
MW	96.23	10.92	85.31
MW	94.88	9.57	85.31

Note:
Measuring point elevations in feet relative to site datum from Dvirka and Bartilucci July 13, 2004.

TABLE 3-9

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
2005 2nd BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter (µg/L)	NYSDEC Groundwater Standard[1]	MW-1 5/3/2005	MW-2 5/3/2005	MW-3 5/3/2005	MW-4 5/3/2005	MW-5 5/3/2005	MW-6 5/3/2005
Polychlorinated Biphenyls							
Aroclor-1016	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1221	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1232	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1242	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1248	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1254	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1260	-	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total PCBs	0.09	ND	ND	ND	ND	ND	ND

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

1: The New York State Groundwater Quality Standard from Division of Water Technical and Operational Guidance Series (NYSDEC, TOGS 1.1.1) for total PCBs in groundwater is 0.09 µg/L.

TABLE 3-10

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
2005 2nd BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter (µg/100 cm²*)	TSCA Cleanup Standard[1]	Transformer Room No.				Transformer Room No.			
		Wipe 5	Wipe 6	Wipe 7	Wipe 8	Wipe 1	Wipe 2	Wipe 3	Wipe 4
		12/1/2005	12/1/2005	12/1/2005	12/1/2005	12/1/2005	12/1/2005	12/1/2005	12/1/2005
Polychlorinated Biphenyls									
Aroclor-1016	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1221	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1232	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1242	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1248	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1254	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1260	-	2.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total PCBs	10	2.2	ND	ND	ND	ND	ND	ND	ND

Notes:

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

*: Wiped area was 100 cm².

1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs in a wipe sample is 10 µg/100 cm².

TABLE 3-11

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
2006 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter (ug/100 cm^2*)	TSCA Cleanup Standard[1] (ug/100 cm^2*)	Transformer Room No. 1				Transformer Room No. 2			
		TR1-Wipe1	TR1-Wipe2	TR1-Wipe3	TR1-Wipe4	TR2-Wipe5	TR2-Wipe6	TR2-Wipe7	TR2-Wipe8
		5/18/2006	5/18/2006	5/18/2006	5/18/2006	5/18/2006	5/18/2006	5/18/2006	5/18/2006
Polychlorinated Biphenyls									
Aroclor-1016	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	-	**4.1**	**4.9**	**3.4**	**10**	**1.3**	**9.5**	**8.8**	**2.4**
Total PCBs	10	**4.1**	**4.9**	**3.4**	**10**	**1.3**	**9.5**	**8.8**	**2.4**

Notes:

Wipe samples analyzed by EPA Method 8082 by Mitkem Corporation.

<: Indicates parameter was not detected at the reporting limit.

ND: Indicates parameter was not detected.

PCB: Polychlorinated Biphenyl

*: Wiped area was 100 cm^2.

1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 µg/100 cm^2.

TABLE 3-12

SUMMARY OF AIR SAMPLE ANALYTICAL RESULTS
2006 1ST BIANNUAL MONITORING

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter (mg/m^3)	OSHA PEL[1] (mg/m^3)	Transformer Room No. 1 TR1-Air01 5/18/2006	Transformer Room No. 2 TR2-Air02 5/18/2006
Polychlorinated Biphenyls			
Aroclor-1016	-	<0.0125	<0.0125
Aroclor-1221	-	<0.0110	<0.0110
Aroclor-1232	-	<0.0126	<0.0126
Aroclor-1242	1.0	<0.0134	<0.0134
Aroclor-1248	-	<0.0130	<0.0130
Aroclor-1254	0.5	<0.0107	<0.0107
Aroclor-1260	-	<0.0123	<0.0123
Total PCBs	-	**ND**	**ND**

Notes:

Air samples analyzed by NIOSH Method 5503 by Mitkem Corporation.

<: Indicates parameter was not detected at the reporting limit shown.

ND: Indicates parameter was not detected.

PCB: Polychlorinated Biphenyl

1.The Occupational Safety and Health Adminstration's (OSHA) permissible exposure limit (PEL) for Aroclor 1242 is 1.0 mg/m^3 and for Aroclor 1254 is 0.5 mg/m^3.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1				Transformer Room No. 2			
		TR1-Wipe1	TR1-Wipe2	TR1-Wipe3	TR1-Wipe4	TR2-Wipe5	TR2-Wipe6	TR2-Wipe7	TR2-Wipe8
		1/23/2007	1/23/2007	1/23/2007	1/23/2007	1/23/2007	1/23/2007	1/23/2007	1/23/2007
Polychlorinated Biphenyls									
Aroclor-1016	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	-	**1.3**	**1.7**	**3.9**	**6.6**	<1.0	<1.0	**4.4**	**1.5**
Total PCBs	10	**1.3**	**1.7**	**3.9**	**6.6**	**ND**	**ND**	**4.4**	**1.5**

Notes:
Wipe samples analyzed by EPA Method 8082 by Mitkem Corporation.
<: Indicates parameter was not detected at the reporting limit.
ND: Indicates parameter was not detected.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1				Transformer Room No. 2			
		TR1-Wipe1 12/6/2007	TR1-Wipe2 12/6/2007	TR1-Wipe3 12/6/2007	TR1-Wipe4 12/6/2007	TR2-Wipe1 12/6/2007	TR2-Wipe2 12/6/2007	TR2-Wipe3 12/6/2007	TR2-Wipe4 12/6/2007
Polychlorinated Biphenyls									
Aroclor-1016	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1221	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1232	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1242	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1248	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1254	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aroclor-1260	-	**2.1**	**3.4**	**3.2**	**9.2**	<1.0	**2.3**	**1.0**	**83**
Total PCBs	10	**2.1**	**3.4**	**3.2**	**9.2**	**ND**	**2.3**	**1.0**	**83**

Notes:
Wipe samples analyzed by EPA Method 8082 by Mitkem Corporation.
<: Indicates parameter was not detected at the reporting limit.
ND: Indicates parameter was not detected.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1				Transformer Room No. 2			
		TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4	TR2-Wipe 5	TR2-Wipe 6	TR2-Wipe 7	TR2-Wipe 8
		11/13/2008	11/13/2008	11/13/2008	11/13/2008	11/13/2008	11/13/2008	11/13/2008	11/13/2008
Polychlorinated Biphenyls									
Aroclor-1016	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1221	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1232	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1242	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1248	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1254	-	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51
Aroclor-1260	-	**1.1**	**1.2**	**2.0**	**2.7**	**3.8**	**2.9**	**1.8**	**0.53J**
Total PCBs	10	**1.1**	**1.2**	**2.0**	**2.7**	**3.8**	**2.9**	**1.8**	**0.53J**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech.
<: Indicates parameter was not detected at the reporting limit.
J: Indicates value is estimated.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1				Transformer Room No. 2			
		TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4	TR2-Wipe 5	TR2-Wipe 6	TR2-Wipe 7	TR2-Wipe 8
		11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009
Polychlorinated Biphenyls									
Aroclor-1016	-	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Aroclor-1221	-	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Aroclor-1232	-	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Aroclor-1242	-	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Aroclor-1248	-	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Aroclor-1254	-	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Aroclor-1260	-	**2.2**	**2.0**	**2.4**	**1.5**	**4.5**	**0.78**	**1.2**	**1.1**
Total PCBs	10	**2.2**	**2.0**	**2.4**	**1.5**	**4.5**	**0.78**	**1.2**	**1.1**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech.
<: Indicates parameter was not detected at the reporting limit.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1				Transformer Room No. 1-Confirmation Wipe Sampling			
		TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4	TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4
		10/28/2010	10/28/2010	10/28/2010	10/28/2010	1/1//11	1/1//11	1/1//11	1/1//11
Polychlorinated Biphenyls									
Aroclor-1016	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1221	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1232	-	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Aroclor-1242	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor-1248	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aroclor-1254	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor-1260	-	**36.0 D**	**58.0 D**	**4.4**	**6.7**	<0.12	<0.12	<0.12	<0.12
Total PCBs	10	**36.0**	**58.0**	**4.4**	**6.7**	**ND**	**ND**	**ND**	**ND**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech.
<: Indicates parameter was not detected at the reporting limit.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.
Bold indicates value exceeds method detection limit.
Shading indicates value exceeds TSCA standard.
D: The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 1

SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING NO. 1

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2			
		TR2-Wipe 5	TR2-Wipe 6	TR2-Wipe 7	TR2-Wipe 8
		10/28/2010	10/28/2010	10/28/2010	10/28/2010
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.1	<0.1	<0.1	<0.1
Aroclor-1221	-	<0.1	<0.1	<0.1	<0.1
Aroclor-1232	-	<0.22	<0.22	<0.22	<0.22
Aroclor-1242	-	<0.1	<0.1	<0.1	<0.1
Aroclor-1248	-	<0.2	<0.2	<0.2	<0.2
Aroclor-1254	-	<0.05	<0.05	<0.05	<0.05
Aroclor-1260	-	**4.2**	**8.0**	**2.3**	**1.6**
Total PCBs	10	**4.2**	**8.0**	**2.3**	**1.6**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech.
<: Indicates parameter was not detected at the reporting limit.
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$.
Bold indicates value exceeds method detection limit.
Shading indicates value exceeds TSCA standard.
D: The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

TABLE 1
SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1											
		TR1-Wipe 1		TR1-Wipe 2		TR1-Wipe 3		TR1-Wipe 3DL**		TR1- Wipe 3a		TR1-Wipe 4	
		11/10/2011		11/10/2011		11/10/2011		11/10/2011		12/14/2011		11/10/2011	
Polychlorinated Biphenyls													
Aroclor-1016	-	<0.10000		<0.10000		<0.10000		<1.00000		<0.00051		<0.10000	
Aroclor-1221	-	<0.10000		<0.10000		<0.10000		<1.00000		<0.00051		<0.10000	
Aroclor-1232	-	<0.22000		<0.22000		<0.02200		<2.20000		<0.00051		<0.22000	
Aroclor-1242	-	<0.10000		<0.10000		<0.10000		<1.00000		<0.00051		<0.10000	
Aroclor-1248	-	<0.20000		<0.20000		<0.20000		<2.00000		<0.00051		<0.20000	
Aroclor-1254	-	<0.05000		<0.05000		<0.05000		<0.45000		<0.00051		<0.05000	
Aroclor-1260	-	<0.12000		**6.80000**		**30.0000**	**E**	**56.0000**		<0.00051		<0.12000	
Total PCBs	10	ND		**6.80000**		**30.0000**	**E**	**56.0000**		ND		ND	

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2											
		TR2-Wipe 5		TR2-Wipe 5DL**		TR2-Wipe 5a		TR2-Wipe 6		TR2-Wipe 7		TR2-Wipe 8	
		11/10/2011		11/10/2011		12/14/2011		11/10/2011		11/10/2011		11/10/2011	
Polychlorinated Biphenyls													
Aroclor-1016	-	<0.10000		<0.52000		<0.00051		<0.10000		<0.10000		<0.10000	
Aroclor-1221	-	<0.10000		<0.51000		<0.00051		<0.10000		<0.10000		<0.10000	
Aroclor-1232	-	<0.22000		<1.10000		<0.00051		<0.22000		<0.22000		<0.22000	
Aroclor-1242	-	<0.10000		<0.51000		<0.00051		<0.10000		<0.10000		<0.10000	
Aroclor-1248	-	<0.20000		<0.99000		<0.00051		<0.20000		<0.20000		<0.20000	
Aroclor-1254	-	<0.05000		<0.22000		<0.00051		<0.05000		<0.05000		<0.05000	
Aroclor-1260	-	**14.0000**	**E**	**28.0000**		<0.00051		**2.00000**		**4.00000**		**0.95000**	
Total PCBs	10	**14.0000**	**E**	**28.0000**		ND		**2.00000**		**4.00000**		**0.95000**	

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech
<: Indicates parameter was not detected at the reporting limit
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2
$\mu g/100\ cm^2$: micrograms per 100 square centimeters
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$
E: Value exceeded calibration range
DL**: A dilution factor is being used
ND: Not Detected
Shading indicates value exceeds TSCA standard.

TABLE 1
SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1			
		TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4
		12/5/2012	12/5/2012	12/5/2012	12/5/2012
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1221	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1232	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1242	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1248	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1254	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1260	-	**0.800**	**0.590**	**0.800**	**0.930**
Total PCBs	10	**0.800**	**0.590**	**0.800**	**0.930**

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2			
		TR2-Wipe 5	TR2-Wipe 6	TR2-Wipe 7	TR2-Wipe 8
		12/5/2012	12/5/2012	12/5/2012	12/5/2012
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1221	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1232	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1242	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1248	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1254	-	<0.255	<0.255	<0.255	<0.255
Aroclor-1260	-	**0.860**	<0.255	**1.30**	**0.410J**
Total PCBs	10	**0.860**	ND	**1.30**	**0.410J**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech
<: Indicates parameter was not detected at the reporting limit
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2
$\mu g/100\ cm^2$: micrograms per 100 square centimeters
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$
J: Value is approximated. The value is between the Method Detection Limit and the Limit of Quantitation.
ND: Not Detected

TABLE 1
SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1			
		TR1-Wipe 1 12/10/2013	TR1-Wipe 2 12/10/2013	TR1-Wipe 3 12/10/2013	TR1-Wipe 4 12/10/2013
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1260	-	**0.820**	**2.00**	**4.10**	**2.00**
Total PCBs	10	**0.820**	**2.00**	**4.10**	**2.00**

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2			
		TR2-Wipe 5 12/10/2013	TR2-Wipe 6 12/10/2013	TR2-Wipe 7 12/10/2013	TR2-Wipe 8 12/10/2013
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1260	-	**0.600**	**0.580**	**0.610**	**0.570**
Total PCBs	10	**0.600**	**0.580**	**0.610**	**0.570**

Notes:
Wipe samples analyzed by EPA Method 8082 by Chemtech
<: Indicates parameter was not detected above the limit of quantitation
PCB: Polychlorinated Biphenyl
*: Wiped area was 100 cm^2
$\mu g/100\ cm^2$: micrograms per 100 square centimeters
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$

TABLE 1

SOIL SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (mg/kg)	NYSDEC 375-6.8(a) Unrestricted SCO* (mg/kg)	T1-SS01 (0-8 inches below concrete) 6/11/2013	T1-SS02 (0-6 inches below concrete) 6/12/2013	T2-SS03 (0-8 inches below concrete) 6/11/2013	T2-SS04 (12-14 inches below concrete) 6/12/2013	T1-SB01 (0-4 feet bgs) 6/12/2013	T1-SB01 (5-10 feet bgs) 6/12/2013	T2-SB02 (0-4 feet bgs) 6/12/2013	T3-SB03 (0-4 feet bgs) Duplicate T2-SB02 (0-4 feet bgs) 6/12/2013	T2-SB02 (5-10 feet bgs) 6/12/2013
Volatile Organic Compounds										
Acetone	0.05	**0.46 J**	**1.2 J**	**1.1 J**	**1.3 J**	**0.25 J**	**1.9 J**	**2 J**	**0.31 J**	**0.51 J**
Acrylonitrile	NS	<0.0069 R	<0.0063 R	<0.0071 R	<0.0064 R	<0.0059 R	<0.0073 R	<0.0067 R	<0.0070 R	<0.0060 R
tert-Amyl Methyl Ether (TAME)	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Benzene	0.06	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Bromobenzene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Bromochloromethane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Bromodichloromethane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Bromoform	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Bromomethane	NS	<0.011	<0.010	<0.012 UJ	<0.011	<0.0099	<0.012	<0.011	<0.012	<0.010
2-Butanone (MEK)	0.12	<0.046 UJ	<0.042 UJ	<0.047	<0.043 UJ	<0.039 UJ	<0.049 UJ	<0.045 UJ	<0.047 UJ	<0.040 UJ
tert-Butyl Alcohol (TBA)	NS	<0.046 R	<0.042 R	<0.047 R	<0.043 R	<0.039 R	<0.049 R	<0.045 R	<0.047 R	<0.040 R
n-Butylbenzene	12	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
sec-Butylbenzene	11	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
tert-Butylbenzene	5.9	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
tert-Butyl Ethyl Ether (TBEE)	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
Carbon Disulfide	NS	<0.023 UJ	<0.021 UJ	<0.024 UJ	<0.021 UJ	<0.020 UJ	<0.024 UJ	<0.022 UJ	<0.023 UJ	<0.020 UJ
Carbon Tetrachloride	0.76	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Chlorobenzene	1.1	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Chlorodibromomethane	NS	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
Chloroethane	NS	<0.023 UJ	<0.021 UJ	<0.024 UJ	<0.021	<0.020 UJ	<0.024 UJ	<0.022 UJ	<0.023 UJ	<0.020 UJ
Chloroform	0.37	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
Chloromethane	NS	<0.011 UJ	<0.010 UJ	<0.012 UJ	<0.011 UJ	<0.0099 UJ	<0.012 UJ	<0.011 UJ	<0.012 UJ	<0.010 UJ
2-Chlorotoluene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
4-Chlorotoluene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2-Dibromo-3-chloropropane (DBCP)	NS	<0.0023 R	<0.0021 R	<0.0024 R	<0.0021 R	<0.0020 R	<0.0024 R	<0.0022 R	<0.0023 R	<0.0020 R
1,2-Dibromoethane (EDB)	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
Dibromomethane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2-Dichlorobenzene	1.1	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,3-Dichlorobenzene	2.4	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,4-Dichlorobenzene	1.8	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
trans-1,4-Dichloro-2-butene	NS	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
Dichlorodifluoromethane (Freon 12)	NS	<0.023 UJ	<0.021 UJ	<0.024 UJ	<0.021	<0.020 UJ	<0.024 UJ	<0.022 UJ	<0.023 UJ	<0.020 UJ
1,1-Dichloroethane	0.27	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2-Dichloroethane	0.02	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1-Dichloroethylene	0.33	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
cis-1,2-Dichloroethylene	0.25	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020

TABLE 1

SOIL SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

	NYSDEC 375-6.8(a) Unrestricted	T1-SS01 (0-8 inches below concrete)	T1-SS02 (0-6 inches below concrete)	T2-SS03 (0-8 inches below concrete)	T2-SS04 (12-14 inches below concrete)	T1-SB01 (0-4 feet bgs)	T1-SB01 (5-10 feet bgs)	T2-SB02 (0-4 feet bgs)	T3-SB03 (0-4 feet bgs) Duplicate T2-SB02 (0-4 feet bgs)	T2-SB02 (5-10 feet bgs)
trans-1,2-Dichloroethylene	0.19	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2-Dichloropropane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,3-Dichloropropane	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
2,2-Dichloropropane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1-Dichloropropene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
cis-1,3-Dichloropropene	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
trans-1,3-Dichloropropene	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
Diethyl Ether	NS	<0.023 UJ	<0.021 UJ	<0.024	<0.021	<0.020 UJ	<0.024 UJ	<0.022 UJ	<0.023 UJ	<0.020 UJ
Diisopropyl Ether (DIPE)	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
1,4-Dioxane	0.1	<0.11 R	<0.10 R	<0.12 R	<0.11 R	<0.099 R	<0.12 R	<0.11 R	<0.12 R	<0.10 R
Ethylbenzene	1	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Hexachlorobutadiene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
2-Hexanone (MBK)	NS	<0.046 UJ	<0.042 UJ	<0.047 UJ	<0.043	<0.039 UJ	<0.049 UJ	<0.045 UJ	<0.047 UJ	<0.040 UJ
Isopropylbenzene (Cumene)	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
p-Isopropyltoluene (p-Cymene)	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Methyl tert-Butyl Ether (MTBE)	0.93	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
Methylene Chloride	0.05	**0.012 J**	**0.016 J**	<0.024	**0.012 J**	**0.01 J**	**0.02 J**	**0.021 J**	**0.021 J**	**0.013 J**
4-Methyl-2-pentanone (MIBK)	NS	<0.046	<0.042	<0.047	<0.043	<0.039	<0.049	<0.045	<0.047	<0.040
Naphthalene	12	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	**0.01**	<0.0045	**0.0056**	**0.026**
n-Propylbenzene	3.9	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Styrene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	**0.0049**	<0.0022	<0.0023	<0.0020
1,1,1,2-Tetrachloroethane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1,2,2-Tetrachloroethane	NS	<0.0011	<0.0010	<0.0012	<0.0011	<0.00099	<0.0012	<0.0011	<0.0012	<0.0010
Tetrachloroethylene	1.3	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Tetrahydrofuran	NS	<0.011 R	<0.010 R	<0.012 R	<0.011 R	<0.0099 R	<0.012 R	<0.011 R	<0.012 R	<0.010 R
Toluene	0.7	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2,3-Trichlorobenzene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,2,4-Trichlorobenzene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,3,5-Trichlorobenzene	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1,1-Trichloroethane	0.68	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1,2-Trichloroethane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Trichloroethylene	0.47	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Trichlorofluoromethane (Freon 11)	NS	<0.011	<0.010	<0.012	<0.011	<0.0099	<0.012	<0.011	<0.012	<0.010
1,2,3-Trichloropropane	NS	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	NS	<0.011	<0.010	<0.012	<0.011	<0.0099	<0.012	<0.011	<0.012	<0.010
1,2,4-Trimethylbenzene	3.6	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	**0.0016 J**	<0.0022	<0.0023	<0.0020
1,3,5-Trimethylbenzene	8.4	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
Vinyl Chloride	0.02	<0.011	<0.010	<0.012	<0.011	<0.0099	<0.012	<0.011	<0.012	<0.010

TABLE 1

SOIL SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

	NYSDEC 375-6.8(a) Unrestricted	T1-SS01 (0-8 inches below concrete)	T1-SS02 (0-6 inches below concrete)	T2-SS03 (0-8 inches below concrete)	T2-SS04 (12-14 inches below concrete)	T1-SB01 (0-4 feet bgs)	T1-SB01 (5-10 feet bgs)	T2-SB02 (0-4 feet bgs)	T3-SB03 (0-4 feet bgs) Duplicate T2-SB02 (0-4 feet bgs)	T2-SB02 (5-10 feet bgs)
m+p Xylene	0.26	<0.0046	<0.0042	<0.0047	<0.0043	<0.0039	<0.0049	<0.0045	<0.0047	<0.0040
o-Xylene	0.26	<0.0023	<0.0021	<0.0024	<0.0021	<0.0020	<0.0024	<0.0022	<0.0023	<0.0020
SemiVolatile Organic Compounds										
Acenaphthene	20	<0.20	**0.14 J**	**0.15 J**	<0.20	<0.19	**21**	**0.67**	**1.7**	**0.39**
Acenaphthylene	100	**0.099 J**	<0.21	<0.21	**0.14 J**	<0.19	**1.4 J**	**0.21 J**	**0.16 J**	**0.13 J**
Acetophenone	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Aniline	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Anthracene	100	**0.19 J**	**0.4**	**0.31**	**0.23**	<0.19	**29**	**1.3**	**3.8**	**1**
Benzidine	NS	<0.40 UJ	<0.41	<0.41	<0.39	<0.39 UJ	<7.9	<0.81 R	<0.79 UJ	<0.76
Benzo(a)anthracene	1	**1**	**1.2**	**0.99**	**0.94**	**0.37**	**70**	**3.8**	**7.9**	**3.1**
Benzo(a)pyrene	1	**1**	**0.96**	**0.97**	**1**	**0.45**	**70**	**3.7**	**7**	**2.9**
Benzo(b)fluoranthene	1	**1.4**	**1.2**	**1.2**	**1.2**	**0.58**	**77**	**4.2**	**8.3**	**3.3**
Benzo(g,h,i)perylene	100	**0.37**	**0.67**	**0.71**	**0.99**	**0.21**	**25**	**2.3**	**2.2**	**1.9**
Benzo(k)fluoranthene	0.8	**0.49**	**0.49**	**0.49**	**0.49**	**0.21**	**23**	**1.6**	**3.3**	**1.3**
Benzoic Acid	NS	<1.2	<1.2	<1.2	<1.2	<1.1	<12	<2.4	<1.2	<1.2
Bis(2-chloroethoxy)methane	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Bis(2-chloroethyl)ether	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Bis(2-chloroisopropyl)ether	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Bis(2-Ethylhexyl)phthalate	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	**0.46 J**	<0.41	<0.39
4-Bromophenylphenylether	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Butylbenzylphthalate	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<4.0	<1.6	<0.41	<0.39
Carbazole	NS	**0.1 J**	**0.19 J**	**0.16 J**	**0.15 J**	<0.19	**10**	**0.58**	**1.3**	**0.38**
4-Chloroaniline	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<7.9	<1.6	<0.79	<0.76
4-Chloro-3-methylphenol	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<7.9	<1.6	<0.79	<0.76
2-Chloronaphthalene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2-Chlorophenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
4-Chlorophenylphenylether	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Chrysene	1	**1**	**1.3**	**0.99**	**0.98**	**0.38**	**62**	**3.6**	**7.2**	**2.8**
Dibenz(a,h)anthracene	0.33	**0.11 J**	**0.21**	**0.19 J**	**0.23**	<0.19	**8.1**	**0.61**	**0.74**	**0.5**
Dibenzofuran	NS	<0.40	**0.16 J**	**0.12 J**	<0.39	<0.39	**8.5**	**0.41 J**	**1.1**	**0.2 J**
Di-n-butylphthalate	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1,2-Dichlorobenzene	1.1	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1,3-Dichlorobenzene	2.4	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1,4-Dichlorobenzene	1.8	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
3,3-Dichlorobenzidine	NS	<0.20	<0.21	<0.21	<0.20	<0.19	<2.0	<0.40	<0.20	<0.20
2,4-Dichlorophenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Diethylphthalate	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2,4-Dimethylphenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39

TABLE 1

SOIL SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

	NYSDEC 375-6.8(a) Unrestricted	T1-SS01 (0-8 inches below concrete)	T1-SS02 (0-6 inches below concrete)	T2-SS03 (0-8 inches below concrete)	T2-SS04 (12-14 inches below concrete)	T1-SB01 (0-4 feet bgs)	T1-SB01 (5-10 feet bgs)	T2-SB02 (0-4 feet bgs)	T3-SB03 (0-4 feet bgs) Duplicate T2-SB02 (0-4 feet bgs)	T2-SB02 (5-10 feet bgs)
Dimethylphthalate	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<4.0	<1.6	<0.41	<0.39
4,6-Dinitro-2-methylphenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2,4-Dinitrophenol	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<7.9	<1.6	<0.79	<0.76
2,4-Dinitrotoluene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2,6-Dinitrotoluene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Di-n-octylphthalate	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<8.0	<1.6	<0.80	<0.77
1,2-Diphenylhydrazine (as Azobenzene)	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Fluoranthene	100	**1.5**	**2.4**	**1.8**	**1.6**	**0.58**	**130**	**6.1**	**15**	**5.2**
Fluorene	30	<0.20	<0.21	**0.13 J**	<0.20	<0.19	**18**	**0.61**	**1.7**	**0.35**
Hexachlorobenzene	0.33	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Hexachlorobutadiene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Hexachlorocyclopentadiene	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<4.0	<1.6 R	<0.41	<0.39
Hexachloroethane	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Indeno(1,2,3-cd)pyrene	0.5	**0.45**	**0.81**	**0.79**	**0.97**	**0.24**	**32**	**2.5**	**2.8**	**2.2**
Isophorone	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1-Methylnaphthalene	NS	<0.20	**0.17 J**	**0.14 J**	<0.20	<0.19	**14**	<0.40	**0.28**	**0.1 J**
2-Methylnaphthalene	NS	<0.20	**0.18 J**	**0.16 J**	<0.20	<0.19	**13**	**0.28 J**	**0.38**	**0.12 J**
2-Methylphenol	0.33	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
3/4-Methylphenol	0.33	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Naphthalene	12	**0.088**	**0.2 J**	**0.2 J**	**0.22**	<0.19	**16**	**0.85**	**0.76**	**0.39**
2-Nitroaniline	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
3-Nitroaniline	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
4-Nitroaniline	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Nitrobenzene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2-Nitrophenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
4-Nitrophenol	NS	<0.78	<0.80	<0.80	<0.76	<0.75	<7.9	<1.6	<0.79	<0.76
N-Nitrosodimethylamine	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
N-Nitrosodiphenylamine	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
N-Nitrosodi-n-propylamine	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Pentachloronitrobenzene	NS	<0.40 R	<0.41 R	<0.41 R	<0.39 R	<0.39 R	<4.0 R	<0.81 R	<0.41 R	<0.39 R
Pentachlorophenol	0.8	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Phenanthrene	100	**0.96**	**2.3**	**1.4**	**1.3**	**0.38**	**130**	**5.5**	**14**	**3.5**
Phenol	0.33	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Pyrene	100	**1.6**	**2.8**	**2.2**	**2**	**0.65**	**130**	**8.4**	**16**	**6.7**
Pyridine	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1,2,4,5-Tetrachlorobenzene	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
1,2,4-Trichlorobenzene	NS	<0.40	**1.8**	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
2,4,5-Trichlorophenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39

TABLE 1

SOIL SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

	NYSDEC 375-6.8(a) Unrestricted	T1-SS01 (0-8 inches below concrete)	T1-SS02 (0-6 inches below concrete)	T2-SS03 (0-8 inches below concrete)	T2-SS04 (12-14 inches below concrete)	T1-SB01 (0-4 feet bgs)	T1-SB01 (5-10 feet bgs)	T2-SB02 (0-4 feet bgs)	T3-SB03 (0-4 feet bgs) Duplicate T2-SB02 (0-4 feet bgs)	T2-SB02 (5-10 feet bgs)
2,4,6-Trichlorophenol	NS	<0.40	<0.41	<0.41	<0.39	<0.39	<4.0	<0.81	<0.41	<0.39
Polychlorinated Biphenyls										
Aroclor 1016	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1221	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1232	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1242	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1248	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1254	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1260	NS	**0.041**	**0.055**	**0.11 J**	**0.045 J**	NA	NA	NA	NA	NA
Aroclor 1262	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Aroclor 1268	NS	<0.023	<0.024	<0.024	<0.023	NA	NA	NA	NA	NA
Total PCBs	0.1	**0.041**	**0.055**	**0.11 J**	**0.045 J**	NA	NA	NA	NA	NA

Notes:

Soil samples analyzed by ConTest Analytical Laboratory in East Longmeadow, Massachusetts.

mg/kg: milligrams per kilogram

*: New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objective (SCO), 6 NYCRR Part 375-6.8(a), December 14, 2006.

NS: SCO not established in 6 NYCRR Part 375-6.8(a).

NA: Not Analyzed

< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ: The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R: The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria.

Bold indicates that the compound was detected. Shaded means compound exceeded NYSDEC criteria.

TABLE 2

GROUNDWATER SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (µg/L)	TOGS GWQS (µg/L)	T1-MW1 6/11/2013	T1-MW3 Duplicate (T1-MW1) 6/11/2013	T2-MW2 6/11/2013
Volatile Organic Compounds				
Acetone	[50]	<50	<50	<50
Acrylonitrile	5	<5.0	<5.0	<5.0
tert-Amyl Methyl Ether (TAME)	NS	<0.50	<0.50	<0.50
Benzene	1	<1.0	<1.0	<1.0
Bromobenzene	5	<1.0	<1.0	<1.0
Bromochloromethane	5	<1.0	<1.0	<1.0
Bromodichloromethane	[50]	<0.50	<0.50	<0.50
Bromoform	[50]	<1.0	<1.0	<1.0
Bromomethane	5	<2.0 UJ	<2.0 UJ	<2.0 UJ
2-Butanone (MEK)	[50]	<20	<20	<20
tert-Butyl Alcohol (TBA)	NS	<20 R	<20 R	<20 R
n-Butylbenzene	5	<1.0	<1.0	<1.0
sec-Butylbenzene	5	<1.0	<1.0	<1.0
tert-Butylbenzene	5	<1.0	<1.0	<1.0
tert-Butyl Ethyl Ether (TBEE)	NS	<0.50	<0.50	<0.50
Carbon Disulfide	[60]	<2.0	<2.0	<2.0
Carbon Tetrachloride	5	<5.0	<5.0	<5.0
Chlorobenzene	5	<1.0	<1.0	<1.0
Chlorodibromomethane	[50]	<0.50	<0.50	<0.50
Chloroethane	5	<2.0	<2.0	<2.0
Chloroform	7	<2.0	<2.0	<2.0
Chloromethane	5	<2.0 UJ	<2.0 UJ	<2.0 UJ
2-Chlorotoluene	5	<1.0	<1.0	<1.0
4-Chlorotoluene	5	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane (DBCP)	0.04	<5.0 R	<5.0 R	<5.0 R
1,2-Dibromoethane (EDB)	0.0006	<0.50	<0.50	<0.50
Dibromomethane	5	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	3	<1.0	<1.0	<1.0
1,3-Dichlorobenzene	3	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	3	<1.0	<1.0	<1.0
trans-1,4-Dichloro-2-butene	5	<2.0	<2.0	<2.0
Dichlorodifluoromethane (Freon 12)	5	<2.0	<2.0	<2.0
1,1-Dichloroethane	5	<1.0	<1.0	<1.0
1,2-Dichloroethane	0.6	<1.0	<1.0	<1.0
1,1-Dichloroethylene	5	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene	5	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	5	<1.0	<1.0	<1.0
1,2-Dichloropropane	1	<1.0	<1.0	<1.0
1,3-Dichloropropane	5	<0.50	<0.50	<0.50
2,2-Dichloropropane	5	<1.0	<1.0	<1.0
1,1-Dichloropropene	5	<2.0	<2.0	<2.0
cis-1,3-Dichloropropene	0.4	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	<0.50	<0.50	<0.50
Diethyl Ether	NS	<2.0	<2.0	<2.0
Diisopropyl Ether (DIPE)	NS	<0.50	<0.50	<0.50
1,4-Dioxane	NS	<50 R	<50 R	<50 R
Ethylbenzene	5	<1.0	<1.0	<1.0
Hexachlorobutadiene	0.5	<0.50	<0.50	<0.50
2-Hexanone (MBK)	[50]	<10	<10	<10
Isopropylbenzene (Cumene)	5	<1.0	<1.0	<1.0

TABLE 2

GROUNDWATER SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (µg/L)	TOGS GWQS (µg/L)	T1-MW1 6/11/2013	T1-MW3 Duplicate (T1-MW1) 6/11/2013	T2-MW2 6/11/2013
p-Isopropyltoluene (p-Cymene)	5	<1.0	<1.0	<1.0
Methyl tert-Butyl Ether (MTBE)	[10]	<1.0	<1.0	<1.0
Methylene Chloride	5	<5.0	<5.0	<5.0
4-Methyl-2-pentanone (MIBK)	NS	<10	<10	<10
Naphthalene	[10]	<2.0 UJ	<2.0 UJ	<2.0 UJ
n-Propylbenzene	5	<1.0	<1.0	<1.0
Styrene	5	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane	5	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	5	<0.50	<0.50	<0.50
Tetrachloroethylene	5	<1.0	<1.0	<1.0
Tetrahydrofuran	[50]	<10	<10	<10
Toluene	5	<1.0	<1.0	<1.0
1,2,3-Trichlorobenzene	5	<5.0	<5.0	<5.0
1,2,4-Trichlorobenzene	5	<1.0	<1.0	<1.0
1,3,5-Trichlorobenzene	5	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	5	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	1	<1.0	<1.0	<1.0
Trichloroethylene	5	<1.0	<1.0	<1.0
Trichlorofluoromethane (Freon 11)	5	<2.0	<2.0	<2.0
1,2,3-Trichloropropane	0.04	<2.0	<2.0	<2.0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene	5	<1.0	<1.0	<1.0
1,3,5-Trimethylbenzene	5	<1.0	<1.0	<1.0
Vinyl Chloride	2	<2.0	<2.0	<2.0
m+p Xylene	5	<2.0	<2.0	<2.0
o-Xylene	5	<1.0	<1.0	<1.0
Semivolatile Organic Compounds				
Acenaphthene	[20]	<5.2	<5.2	<5.1
Acenaphthylene	NS	<5.2	<5.2	<5.1
Acetophenone	NS	<10	<10	<10
Aniline	5	<5.2	<5.2	<5.1
Anthracene	[50]	<5.2	<5.2	<5.1
Benzidine	5	<10 UJ	<10 UJ	<10 UJ
Benzo(a)anthracene	[0.002]	<5.2	<5.2	<5.1
Benzo(a)pyrene	ND	<5.2	<5.2	<5.1
Benzo(b)fluoranthene	[0.002]	**3.6 J**	**3.6 J**	**3.5 J**
Benzo(g,h,i)perylene	NS	<5.2 UJ	<5.2 UJ	<5.1 UJ
Benzo(k)fluoranthene	[0.002]	<5.2	<5.2	<5.1
Benzoic Acid	NS	<10	<10	<10
Bis(2-chloroethoxy)methane	5	<10	<10	<10
Bis(2-chloroethyl)ether	1	<10	<10	<10
Bis(2-chloroisopropyl)ether	5	<10	<10	<10
Bis(2-Ethylhexyl)phthalate	5	<10	<10	<10
4-Bromophenylphenylether	NS	<10	<10	<10
Butylbenzylphthalate	[50]	<10	<10	<10
Carbazole	NS	<10	<10	<10
4-Chloroaniline	5	<10	<10	<10
4-Chloro-3-methylphenol	1	<10	<10	<10
2-Chloronaphthalene	[10]	<10	<10	<10
2-Chlorophenol	1	<10	<10	<10
4-Chlorophenylphenylether	NS	<10	<10	<10

TABLE 2

GROUNDWATER SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (µg/L)	TOGS GWQS (µg/L)	T1-MW1 6/11/2013	T1-MW3 Duplicate (T1-MW1) 6/11/2013	T2-MW2 6/11/2013
Chrysene	[0.002]	<5.2	<5.2	<5.1
Dibenz(a,h)anthracene	NS	<5.2	<5.2	<5.1
Dibenzofuran	NS	<5.2	<5.2	<5.1
Di-n-butylphthalate	50	<10	<10	<10
1,2-Dichlorobenzene	3	<5.2	<5.2	<5.1
1,3-Dichlorobenzene	3	<5.2	<5.2	<5.1
1,4-Dichlorobenzene	3	<5.2	<5.2	<5.1
3,3-Dichlorobenzidine	5	<10	<10	<10
2,4-Dichlorophenol	5	<10	<10	<10
Diethylphthalate	[50]	<10	<10	<10
2,4-Dimethylphenol	1	<10	<10	<10
Dimethylphthalate	[50]	<10	<10	<10
4,6-Dinitro-2-methylphenol	1	<10	<10	<10
2,4-Dinitrophenol	1	<10	<10	<10
2,4-Dinitrotoluene	5	<10	<10	<10
2,6-Dinitrotoluene	5	<10	<10	<10
Di-n-octylphthalate	[50]	<10	<10	<10
1,2-Diphenylhydrazine (as Azobenzene)	NS	<10	<10	<10
Fluoranthene	[50]	<5.2	<5.2	<5.1
Fluorene	[50]	<5.2	<5.2	<5.1
Hexachlorobenzene	0.04	<10	<10	<10
Hexachlorobutadiene	0.5	<10	<10	<10
Hexachlorocyclopentadiene	5	<10 UJ	<10 UJ	<10 UJ
Hexachloroethane	5	<10	<10	<10
Indeno(1,2,3-cd)pyrene	[0.002]	<5.2	<5.2	<5.1
Isophorone	[50]	<10	<10	<10
1-Methylnaphthalene	NS	<5.2	<5.2	<5.1
2-Methylnaphthalene	NS	<5.2	<5.2	<5.1
2-Methylphenol	1	<10	<10	<10
3/4-Methylphenol	1	<10	<10	<10
Naphthalene	[10]	<5.2	<5.2	<5.1
2-Nitroaniline	5	<10	<10	<10
3-Nitroaniline	5	<10	<10	<10
4-Nitroaniline	5	<10	<10	<10
Nitrobenzene	0.4	<10	<10	<10
2-Nitrophenol	1	<10	<10	<10
4-Nitrophenol	1	<10 UJ	<10 UJ	<10 UJ
N-Nitrosodimethylamine	NS	<5.2	<5.2	<5.1
N-Nitrosodiphenylamine	[50]	<10	<10	<10
N-Nitrosodi-n-propylamine	NS	<10	<10	<10
Pentachloronitrobenzene	ND	<10 R	<10 R	<10 R
Pentachlorophenol	1	<10 UJ	<10 UJ	<10 UJ
Phenanthrene	[50]	<5.2	<5.2	<5.1
Phenol	1	<10	<10	<10
Pyrene	[50]	<5.2	<5.2	<5.1
Pyridine	[50]	<5.2	<5.2	<5.1

TABLE 2

GROUNDWATER SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (µg/L)	TOGS GWQS (µg/L)	T1-MW1 6/11/2013	T1-MW3 Duplicate (T1-MW1) 6/11/2013	T2-MW2 6/11/2013
1,2,4,5-Tetrachlorobenzene	5	<10	<10	<10
1,2,4-Trichlorobenzene	5	<5.2	<5.2	<5.1
2,4,5-Trichlorophenol	1	<10	<10	<10
2,4,6-Trichlorophenol	1	<10	<10	<10

Notes:

Groundwater samples analyzed by ConTest Analytical Laboratory in East Longmeadow, Massachusetts.

µg/l: Micrograms per liter

GWQS: Groundwater Quality Standard

TOGS GWQS: New York State Department of Environmental Conservation (NYSDEC) Groundwater (GW) Standard, Technical and Operational Guidance Series (TOGS) 1.1.1, 2004

[#]: Denotes a Guidance value

NS: No Standard

< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ: The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R: The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria.

Bold indicates that the compound was detected. Shaded means compound exceeded NYSDEC criteria.

TABLE 3

CONCRETE CHIP SAMPLING RESULTS

BRONX PSYCHIATRIC CENTER
BUILDING 1
BRONX, NEW YORK

Compound (mg/kg)	T1-CC-01 (0-1 in) 7/9/2013	T1-CC-01 (6.5-8 in) 7/9/2013	T1-CC-02 (0-1.5 in) 7/9/2013	T1-CC-02 (11-12 in) 7/9/2013	T2-CC-03 (0-1 in) 7/9/2013	T2-CC-03 (13-15 in) 7/9/2013	T2-CC-04 (0-1.5 in) 7/9/2013	T2-CC-04 (10-12 in) 7/9/2013
Polychlorinated Biphenyls								
Aroclor-1016	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1221	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1232	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1242	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1248	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1254	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1260	**2.2**	<0.087	**0.5**	<0.083	**0.4**	<0.088	**0.11**	<0.093
Aroclor-1262	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Aroclor-1268	<0.33	<0.087	<0.086	<0.083	<0.081	<0.088	<0.091	<0.093
Total PCBs	**2.2**	ND	**0.5**	ND	**0.4**	ND	**0.11**	ND

Notes:

Concrete chip samples analyzed by ConTest Analytical Laboratory in East Longmeadow, Massachusetts.

mg/kg: milligrams per kilogram

< - The compound was not detected at the indicated concentration.

Bold indicates that the compound was detected.

ND: Not Detected

TABLE 2
GROUNDWATER SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER
TRANSFORMER ROOM 1

Compound (µg/L)	NYSDEC GW Effluent Limitations (Class GA) (µg/L)	MW-2		MW-3D	
		F3308-01		F3308-02	
		F3308-05		F3308-06	
		7/23/2014		7/23/2014	
Volatile Organic Compounds					
Vinyl Chloride	2	5	U	5	U
1,1-Dichloroethene	5	5	U	5	U
Acetone	50	25	U	25	U
Methyl tert-butyl Ether	10	5	U	5	U
Methylene Chloride	5	5	U	5	U
trans-1,2-Dichloroethene	5	5	U	5	U
1,1-Dichloroethane	5	5	U	5	U
2-Butanone	--	25	U	25	U
Carbon Tetrachloride	5	5	U	5	U
cis-1,2-Dichloroethene	5	5	U	5	U
Chloroform	7	5	U	5	U
1,1,1-Trichloroethane	5	5	U	5	U
Benzene	1	5	U	5	U
1,2-Dichloroethane	0.6	5	U	5	U
Trichloroethene	5	5	U	5	U
Toluene	5	5	U	5	U
Tetrachloroethene	5	5	U	5	U
Chlorobenzene	5	5	U	5	U
Ethyl Benzene	5	5	U	5	U
Total Xylenes	5	15	U	15	U
n-propylbenzene	5	5	U	5	U
1,3,5-Trimethylbenzene	5	5	U	5	U
tert-Butylbenzene	5	5	U	5	U
1,2,4-Trimethylbenzene	5	5	U	5	U
sec-Butylbenzene	5	5	U	5	U
1,3-Dichlorobenzene	3	5	U	5	U
1,4-Dichlorobenzene	3	5	U	5	U
n-Butylbenzene	5	5	U	5	U
1,2-Dichlorobenzene	3	5	U	5	U
1,4-Dioxane	--	R		R	
Semivolatile Organic Compounds					
Phenol	1	10	U	10	U
2-Methylphenol	1	10	U	10	U
3+4-Methylphenols	1	10	U	10	U
Naphthalene	10	10	U	10	U
Acenaphthylene	--	10	U	10	U
Acenaphthene	20	10	U	10	U
Dibenzofuran	--	10	U	10	U
Fluorene	50	10	U	10	U
Hexachlorobenzene	0.04	10	U	10	U
Pentachlorophenol	1	10	U	10	U

TABLE 2
GROUNDWATER SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER
TRANSFORMER ROOM 1

Compound (µg/L)	NYSDEC GW Effluent Limitations (Class GA) (µg/L)	MW-2		MW-3D	
		F3308-01		F3308-02	
		F3308-05		F3308-06	
		7/23/2014		7/23/2014	
Phenanthrene	50	10	U	10	U
Anthracene	50	10	U	10	U
Fluoranthene	50	10	U	10	U
Pyrene	50	10	U	10	U
Benzo(a)anthracene	0.002	10	U	10	U
Chrysene	0.002	10	U	10	U
Benzo(b)fluoranthene	0.002	10	U	10	U
Benzo(k)fluoranthene	0.002	10	U	10	U
Benzo(a)pyrene	ND	10	U	10	U
Indeno(1,2,3-cd)pyrene	0.002	10	U	10	U
Dibenzo(a,h)anthracene	--	10	U	10	U
Benzo(g,h,i)perylene	--	10	U	10	U
Pesticides					
alpha-BHC	0.01	0.05	U	0.05	U
beta-BHC	0.04	0.05	U	0.05	U
delta-BHC	0.04	0.05	U	0.05	U
gamma-BHC (Lindane)	0.05	0.05	U	0.05	U
Heptachlor	0.04	0.05	U	0.05	U
Aldrin	ND	0.05	U	0.05	U
Endosulfan I	--	0.05	U	0.05	U
Dieldrin	0.004	0.05	U	0.05	U
4,4-DDE	0.2	0.05	U	0.05	U
Endrin	ND	0.05	U	0.05	U
Endosulfan II	--	0.05	U	0.05	U
4,4-DDD	0.3	0.05	U	0.05	U
Endosulfan Sulfate	--	0.05	U	0.05	U
4,4-DDT	0.2	0.05	U	0.05	U
alpha-Chlordane	0.05	0.05	U	0.05	U
Polychlorinated Biphenyls					
Aroclor-1016	0.09	0.5	U	0.5	U
Aroclor-1221	0.09	0.5	U	0.5	U
Aroclor-1232	0.09	0.5	U	0.5	U
Aroclor-1242	0.09	0.5	U	0.5	U
Aroclor-1248	0.09	0.5	U	0.5	U
Aroclor-1254	0.09	0.5	U	0.5	U
Aroclor-1260	0.09	0.5	U	0.5	U
Herbicides					
2,4,5-TP (Silvex)	0.26	2	U	2	U
Metals					
Arsenic	25	8.11	J	7.59	J
Barium	1,000	269		278	
Beryllium	3	3	U	3	U
Cadmium	5	3	U	3	U

TABLE 2
GROUNDWATER SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER
TRANSFORMER ROOM 1

Compound (µg/L)	NYSDEC GW Effluent Limitations (Class GA) (µg/L)	MW-2		MW-3D	
		F3308-01		F3308-02	
		F3308-05		F3308-06	
		7/23/2014		7/23/2014	
Chromium	50	1.67	J	5	U
Copper	200	10	U	10	U
Lead	25	2.83	J	3.77	J
Manganese	300	166		153	
Mercury	0.7	0.2	U	0	U
Nickel	100	20	U	20	U
Selenium	10	10	U	10	U
Silver	50	5	U	5	U
Zinc	2,000	69.4		64.3	
Metals (Dissolved)					
Arsenic	25	8.32	J	10	U
Barium	1,000	269		249	
Beryllium	3	3	U	3	U
Cadmium	5	3	U	3	U
Chromium	50	5	U	5	U
Copper	200	2.62	J	10	U
Lead	25	6.00	U	6	U
Manganese	300	171		135	
Mercury	0.7	0.2	U	0.2	U
Nickel	100	20	U	20	U
Selenium	10	10	U	10	U
Silver	50	5	U	5	U
Zinc	2,000	7.59	J	20	U

Notes:

Groundwater samples analyzed by Chemtech Analytical Laboratory in Mountainside, New Jersey.

µg/L: Micrograms per liter

NYSDEC, Division of Water Technical and Operational Guidance Series (TOGS 1.1.1)

Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998, Class GA.

An ND means a non-detectable concentration by the approved analytical methods referenced in section 700.3.

Qualifiers:

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

J - Data indicates the presence of a compound that meets the identification criteria.
The result is less than the quantitation limit but greater than MDL.
The concentration given is an approximate value.

R - Data rejected.

TABLE 1
SOIL SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER
TRANSFORMER ROOM 1

Compound (mg/kg)	NYSDEC 375-6.8(a) Unrestricted SCO* (mg/kg)	TI-SB02 (0-2) 7/23/2014		TI-SB02 (5-10) 7/23/2014		TI-SB02 (10-WT) 7/23/2014		TI-SB03 (0-2) 7/23/2014		TI-SB03 (5-10) 7/23/2014		TI-SB03 (10-WT) 7/23/2014		TI-SB04 (0-2) 7/23/2014		TI-SB04 (5-10) 7/23/2014		TI-SB04 (10-WT) 7/23/2014		TI-SB05 (0-2) 7/23/2014		TI-SB05 (5-10) 7/23/2014		TI-SB06DRE/T1-SB06D ** 7/23/2014	
Volatile Organic Compounds																									
Vinyl Chloride	0.02	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
1,1-Dichloroethene	0.33	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Acetone	0.05	0.0273	U	0.0303	U	0.0311	U	0.0266	U	0.0276	U	0.032	U	0.0276	U	0.0119	J	0.0102	J	3.3	U	0.017	J	0.0271	U
Methyl tert-butyl Ether	0.93	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Methylene Chloride	0.05	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
trans-1,2-Dichloroethene	0.19	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
1,1-Dichloroethane	0.27	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
2-Butanone	0.12	0.0273	U	0.0303	U	0.0311	U	0.0266	U	0.0276	U	0.032	U	0.0276	U	0.0279	U	0.0291	U	3.3	U	0.031	UJ	0.0271	U
Carbon Tetrachloride	0.76	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
cis-1,2-Dichloroethene	0.25	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Chloroform	0.37	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
1,1,1-Trichloroethane	0.68	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Benzene	0.06	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
1,2-Dichloroethane	0.02	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Trichloroethene	0.47	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Toluene	0.7	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Tetrachloroethene	1.3	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Chlorobenzene	1.1	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Ethyl Benzene	1	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	U	0.0058	U	0.66	U	0.0062	UJ	0.0054	U
Total Xylenes	0.26	0.0164	U	0.0182	U	0.0186	U	0.0159	U	0.0166	U	0.0192	U	0.0165	U	0.0168	U	0.0174	U	1.96	U	0.0186	UJ	0.0162	U
n-Propylbenzene	3.9	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,3,5-Trimethylbenzene	8.4	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
tert-Butylbenzene	5.9	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,2,4-Trimethylbenzene	3.6	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
sec-Butylbenzene	11	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,3-Dichlorobenzene	2.4	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,4-Dichlorobenzene	1.8	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
n-Butylbenzene	12	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,2-Dichlorobenzene	1.1	0.0055	U	0.0061	U	0.0062	U	0.0053	U	0.0055	U	0.0064	U	0.0055	U	0.0056	UJ	0.0058	U	0.66	U	R		0.0054	UJ
1,4-Dioxane	0.1	R		R		R		R		R		R		R		R		R		R		R		R	
Semivolatile Organic Compounds																									
Phenol	0.33	0.36	U	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	0.73	U	R		0.44	U	0.81	U	0.36	U
2-Methylphenol	0.33	0.36	U	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	0.73	U	R		0.44	U	0.81	U	0.36	U
3+4-Methylphenols	0.33	0.36	U	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	0.73	U	R		0.44	U	0.81	U	0.36	U
Naphthalene	12	0.19	J	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	1.1		0.76	U	0.44	U	0.50	J	0.36	U
Acenaphthylene	100	0.36	U	0.40	U	0.41	J	0.70	U	0.49	J	0.36	J	0.36	U	0.64	J	1.1		0.44	U	0.63	J	0.0933	J
Acenaphthene	20	0.44		0.40	U	0.19	J	0.70	U	0.30	J	0.84	U	0.36	U	1.4		0.76	U	0.44	U	0.62	J	0.0922	J
Dibenzofuran	7	0.33	J	0.40	U	0.20	J	0.70	U	0.18	J	0.84	U	0.36	U	0.54	J	0.76	U	0.44	U	0.24	J	0.36	U

TABLE 1
SOIL SAMPLING RESULTS
BRONX PSYCHIATRIC CENTER
TRANSFORMER ROOM 1

Compound (mg/kg)	NYSDEC 375-6.8(a) Unrestricted SCO* (mg/kg)	TI-SB02 (0-2) 7/23/2014		TI-SB02 (5-10) 7/23/2014		TI-SB02 (10-WT) 7/23/2014		TI-SB03 (0-2) 7/23/2014		TI-SB03 (5-10) 7/23/2014		TI-SB03 (10-WT) 7/23/2014		TI-SB04 (0-2) 7/23/2014		TI-SB04 (5-10) 7/23/2014		TI-SB04 (10-WT) 7/23/2014		TI-SB05 (0-2) 7/23/2014		TI-SB05 (5-10) 7/23/2014		TI-SB06DRE/T1-SB06D ** 7/23/2014	
Fluorene	30	0.50		0.40	U	0.29	J	0.70	U	0.38	J	0.84	U	0.36	U	1.2		0.16	J	0.44	U	0.53	J	0.11	J
Hexachlorobenzene	0.33	0.36	U	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	0.73	U	0.76	U	0.44	U	0.81	U	0.36	U
Pentachlorophenol	0.8	0.36	U	0.40	U	0.82	U	0.70	U	0.73	U	0.84	U	0.36	U	0.73	U	R		0.44	U	0.81	U	0.36	U
Phenanthrene	100	4.0	D	0.13	J	3.3		0.62	J	4.3		1.1		0.41		8.4	D	0.79		0.14	J	3.4		1.1	
Anthracene	100	1.0		0.40	U	0.68	J	0.16	J	1.2		0.33	J	0.0845	J	2.1		0.36	J	0.44	U	0.97		0.26	J
Fluoranthene	100	4.4	D	0.12	J	4.1		1.0		7.3	D	1.9		0.53		10	D	3.2		0.23	J	4.0		1.4	
Pyrene	100	3.0	D	0.0981	J	3.3		0.80		5.6		2.4		0.40		8.5	D	8.1	D	0.19	J	4.9		1.3	
Benzo(a)anthracene	1	**1.7**		0.40	U	**1.8**		0.51	J	**3.5**		**1.3**		0.23	J	**5.3**		**3.1**		0.11	J	**3.1**		0.73	
Chrysene	1	**1.6**		0.40	U	**2.0**		0.42	J	**3.1**		**1.2**		0.21	J	**4.4**		**2.4**		0.10	J	**2.3**		0.73	
Benzo(b)fluoranthene	1	**1.6**		0.40	U	**2.6**		0.61	J	**3.6**		**1.9**		0.24	J	**6.3**	D	**4.0**		0.13	J	**3.7**		0.77	
Benzo(k)fluoranthene	0.8	0.69		0.40	U	0.53	J	0.18	J	**1.2**		0.51	J	0.0893	J	**1.1**		**1.7**		0.44	U	**1.0**		0.37	
Benzo(a)pyrene	1	**1.5**		0.40	U	**1.7**		0.48	J	**2.9**		**1.6**		0.18	J	**4.8**		**4.8**		0.0946	J	**3.3**		0.69	
Indeno(1,2,3-cd)pyrene	0.5	**0.83**		0.40	U	**1.0**		0.25	J	**1.6**		**0.93**		0.0977	J	**2.8**		**2.5**		0.44	U	**1.9**		0.40	
Dibenzo(a,h)anthracene	0.33	0.17	J	0.40	U	0.26	J	0.70	U	**0.41**	J	0.20	J	0.36	U	**0.71**	J	**0.54**	J	0.44	U	**0.41**	J	0.0929	J
Benzo(g,h,i)perylene	100	0.81		0.40	U	1.1		0.30	J	1.7		1.5		0.0977	J	3.5		4.3		0.44	U	2.7		0.45	
Pesticides																									
alpha-BHC	0.02	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
beta-BHC	0.036	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
delta-BHC	0.04	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
gamma-BHC (Lindane)	0.1	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Heptachlor	0.042	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Aldrin	0.005	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Endosulfan I	2.4	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Dieldrin	0.005	**0.0059**	J	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
4,4-DDE	0.0033	**0.13**	D	**0.0025**		**0.0077**		**0.0348**	D	**0.0115**		0.0016	J	0.0014	J	0.0021		0.0020	U	**0.0246**		0.0021	U	**0.0212**	
Endrin	0.014	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Endosulfan II	2.4	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
4,4-DDD	0.0033	**0.0062**	J	0.0021	U	0.0016	J	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Endosulfan Sulfate	2.4	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
4,4-DDT	0.0033	**0.12**	D	**0.0053**	J	**0.0173**		**0.0374**	D	**0.0165**		0.0026		0.0019	U	**0.004**		0.0020	U	**0.0262**		0.0021	U	**0.0222**	
alpha-Chlordane	0.094	0.0019	U	0.0021	U	0.0021	U	0.0018	U	0.0019	U	0.0022	U	0.0019	U	0.0019	U	0.0020	U	0.0023	U	0.0021	U	0.0018	U
Polychlorinated Biphenyls																									
Aroclor-1016	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1221	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1232	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1242	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1248	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1254	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	0.0224	U	0.021	U	0.0184	U
Aroclor-1260	0.1	0.0186	U	0.0206	U	0.0210	U	0.0181	U	0.0188	U	0.0217	U	0.0187	U	0.0188	U	0.0197	U	**0.12**		0.021	U	0.0184	U

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TRANSFORMER ROOM 1

Compound (mg/kg)	NYSDEC 375-6.8(a) Unrestricted SCO* (mg/kg)	TI-SB02 (0-2) 7/23/2014		TI-SB02 (5-10) 7/23/2014		TI-SB02 (10-WT) 7/23/2014		TI-SB03 (0-2) 7/23/2014		TI-SB03 (5-10) 7/23/2014		TI-SB03 (10-WT) 7/23/2014		TI-SB04 (0-2) 7/23/2014		TI-SB04 (5-10) 7/23/2014		TI-SB04 (10-WT) 7/23/2014		TI-SB05 (0-2) 7/23/2014		TI-SB05 (5-10) 7/23/2014		TI-SB06DRE/T1-SB06D ** 7/23/2014	
Herbicides																									
2,4,5-TP (Silvex)	3.8	0.0731	U	0.0811	U	0.0831	U	0.0713	U	0.074	U	0.0858	U	0.0738	U	0.0739	U	0.0776	U	0.0885	U	0.0826	U	0.0724	U
Metals																									
Arsenic	13	6.96		4.29		9.39		**15.6**	**J**	12.3		**22.9**		6.28		6.11		5.11		**20.4**		**18.8**		7.49	**J**
Barium	350	233		172		**472**		216	J	328		341		180		290		**390**		181		**455**		306	**J**
Beryllium	7.2	0.635		0.542		0.659		0.611		0.601		0.741		0.545		0.711		0.733		0.5		1.04		0.531	
Cadmium	2.5	0.272	U	0.309	U	1.53		0.277	U	0.079	J	2.06		0.281	U	0.26	J	0.174	**J**	0.34	U	1.69		0.278	U
Chromium	30	21.9		19.9		**36.2**		22.5	J	21.6		29.1		20.3		25		23.9		19.1		21.9		**33.1**	**J**
Copper	50	47.2		**57.2**		**77.3**		39.1	J	36.9		**65**		35.2		**54.6**		47.1		28.3		**80.2**		48.4	**J**
Lead	63	62.4		**125**		**488**		**197**	**J**	**276**		**326**		**134**		**273**		**267**		**155**		**580**		**285**	**J**
Manganese	1,600	309		238		277		273	J	266		269		281		288		310		252		314		259	J
Mercury	0.18	0.078		**0.342**		**0.278**		0.161		**0.208**		**0.195**		0.109		**0.388**		0.179		0.123		**0.468**		**0.226**	
Nickel	30	**42.7**		**39.7**		**38.1**		**34.6**		**32.7**		**38.3**		**31.9**		**55**		**40.7**		22.8		**44.6**		**37**	
Selenium	3.9	1.46	N	1.03		1.06		1.54	J	1.1		1.3		1.11		1.28		1.24		0.895	J	1.25		1.02	J
Silver	2	0.461	U	0.514	U	0.267	J	0.461	U	0.467	U	0.550	U	0.468	U	0.485	U	0.481	U	0.566	U	0.310	J	0.463	U
Zinc	109	**152**		**144**		**429**		**218**		**302**		**372**		**186**		**289**		**274**		**120**		**769**		**387**	

Notes:

Soil samples analyzed by Chemtech Analytical Laboratory in Mountainside, New Jersey.

mg/kg: milligrams per kilogram

*: New York State Department of Environmental Conservation (NYSDEC) Unrestricted Use Soil Cleanup Objective (SCO), 6 NYCRR Part 375-6.8(a), December 14, 2006.

** T1-SB06D is a duplicate sample collected from T1-SBO3 (0-2). A duplicate VOC analysis was performed only for T1-SB06D and is identified as T1-SBO6DRE.

Qualifiers:

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

UJ - The compound was not detected, quantitation is an estimated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL. The concentration given is an approximate value.

D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

R - Data rejected.

TABLE 1
SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1					
		TR1-Wipe 1 12/17/2014	TR1-Wipe 2 12/17/2014	TR1-Wipe 2 - 2** 1/23/2015	TR1-Wipe 3 12/17/2014	TR1-Wipe 3 - 2** 1/23/2015	TR1-Wipe 4 12/17/2014
Polychlorinated Biphenyls							
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	**0.29 J**	<0.510	**1.00**	<0.510
Aroclor-1260	-	**1.70**	**21.1**	<0.510	**22.0**	<0.510	**3.00**
Total PCBs	10	**1.70**	**21.1**	**0.29 J**	**22.0**	**1.00**	**3.00**

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2			
		TR2-Wipe 5 12/17/2014	TR2-Wipe 6 12/17/2014	TR2-Wipe 7 12/17/2014	TR2-Wipe 8 12/17/2014
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1260	-	**3.20**	**0.780**	**3.90**	**1.30**
Total PCBs	10	**3.20**	**0.780**	**3.90**	**1.30**

Notes:
Wipe samples analyzed by EPA Method 8082 at Chemtech in Mountainside, New Jersey.
<: Indicates parameter was not detected above the limit of quantitation shown.
PCB: Polychlorinated Biphenyl.
*: Wiped area was 100 cm^2
$\mu g/100\ cm^2$: micrograms per 100 square centimeters.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$
Shading indicates an exceedance of the TSCA Cleanup Standard.
**: Confirmation wipe sample collected after the floor was cleaned on 1/23/15.
J: Indicates an estimated value.

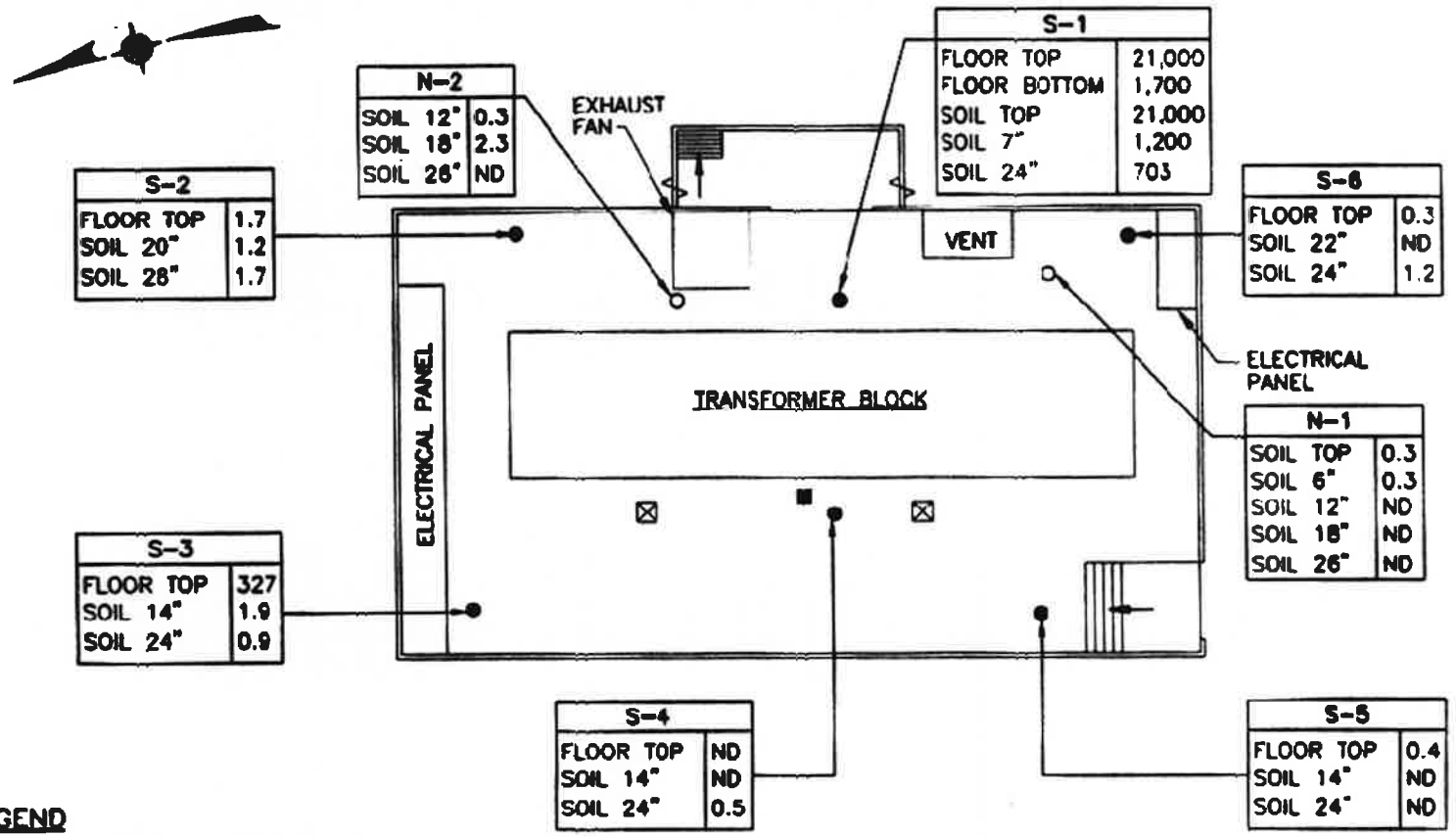
TABLE 1
SUMMARY OF WIPE SAMPLE ANALYTICAL RESULTS
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1-PCB MONITORING

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 1			
		TR1-Wipe 1	TR1-Wipe 2	TR1-Wipe 3	TR1-Wipe 4
		12/15/2015	12/15/2015	12/15/2015	12/15/2015
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1262	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1268	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1260	-	**0.880**	**2.10**	**2.90**	**1.50**
Total PCBs	10	**0.880**	**2.10**	**2.90**	**1.50**

Parameter ($\mu g/100\ cm^2$*)	TSCA Cleanup Standard[1] ($\mu g/100\ cm^2$*)	Transformer Room No. 2			
		TR2-Wipe 5	TR2-Wipe 6	TR2-Wipe 7	TR2-Wipe 8
		12/15/2015	12/15/2015	12/15/2015	12/15/2015
Polychlorinated Biphenyls					
Aroclor-1016	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1221	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1232	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1242	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1248	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1254	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1262	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1268	-	<0.510	<0.510	<0.510	<0.510
Aroclor-1260	-	**1.20**	**0.380 J**	**2.50**	**0.750**
Total PCBs	10	**1.20**	**0.380 J**	**2.50**	**0.750**

Notes:
Wipe samples analyzed by EPA Method 8082 at Chemtech in Mountainside, New Jersey.
<: Indicates parameter was not detected above the limit of quantitation shown.
PCB: Polychlorinated Biphenyl.
*: Wiped area was 100 cm^2
$\mu g/100\ cm^2$: micrograms per 100 square centimeters.
1: The Toxic Substance Control Act (TSCA) Cleanup Standard (40CFR Part 761) for total PCBs is 10 $\mu g/100\ cm^2$
J: Indicates an estimated value.

HISTORICAL FIGURES



LEGEND

- ● CONCRETE/SOIL SAMPLE CORE CONDUCTED 3/93 (LOCATION APPROXIMATE)
- ○ CONCRETE/SOIL SAMPLE CORE CONDUCTED 5/93 (LOCATION APPROXIMATE)
- ■ FORMER DRAIN
- ⊠ STRUCTURAL COLUMN

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

NOTES:

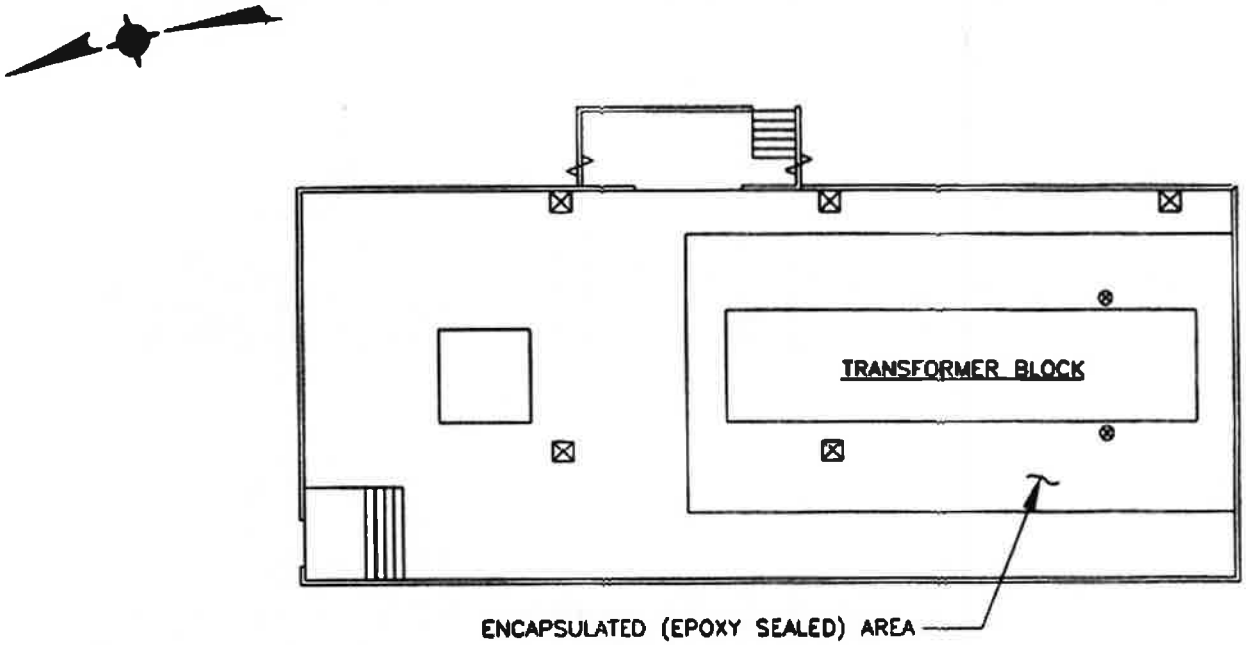
CONCENTRATIONS IN PPM
ND: NOT DETECTED

0 5 10
APPROXIMATE SCALE (FEET)

1993 INVESTIGATION PCB SAMPLING RESULTS
TRANSFORMER ROOM No. 1
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-02	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-1



LEGEND

⊠ STRUCTURAL COLUMN

⊗ PLUGGED FLOOR DRAIN

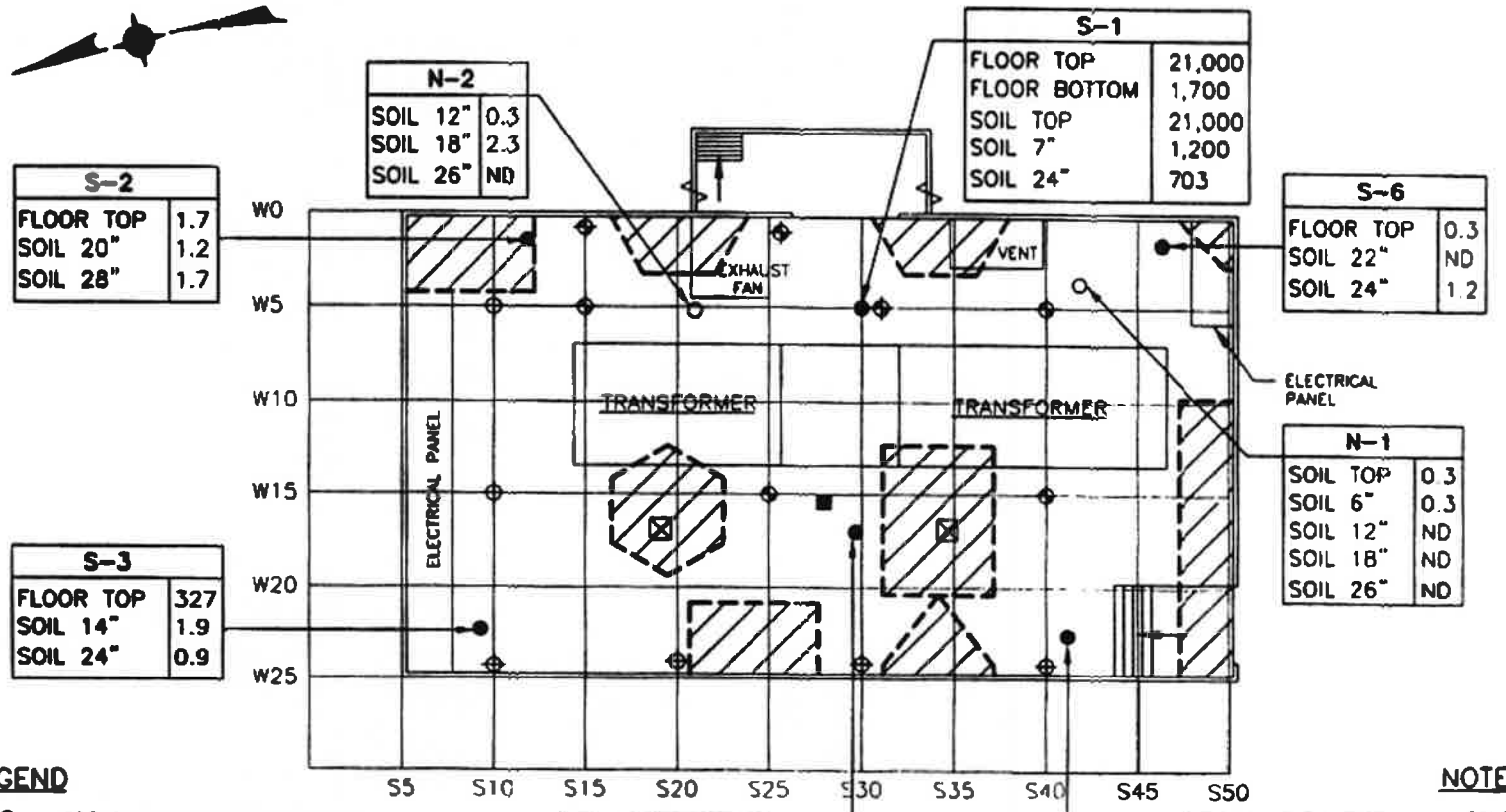
0 5 10
APPROXIMATE SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

EXTENT OF ENCAPSULATION
TRANSFORMER ROOM No. 2
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-03	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-2



LEGEND

- PREVIOUS CONCRETE FLOOR CORE
- PREVIOUS CONCRETE FLOOR/SOIL SAMPLE CORE
- PROPOSED CONCRETE FLOOR CORE
- PROPOSED CONCRETE FLOOR/SOIL SAMPLE CORE
- FORMER DRAIN
- STRUCTURAL COLUMN
- SUBFLOOR PILE CAP
- W0 W5 / S0 S5 GRID SCALE AND REFERENCE

NOTES

CONCENTRATIONS IN PPM
ND NOT DETECTED
DEPTHS ARE BELOW FLOOR

0 5 10
APPROXIMATE SCALE (FEET)

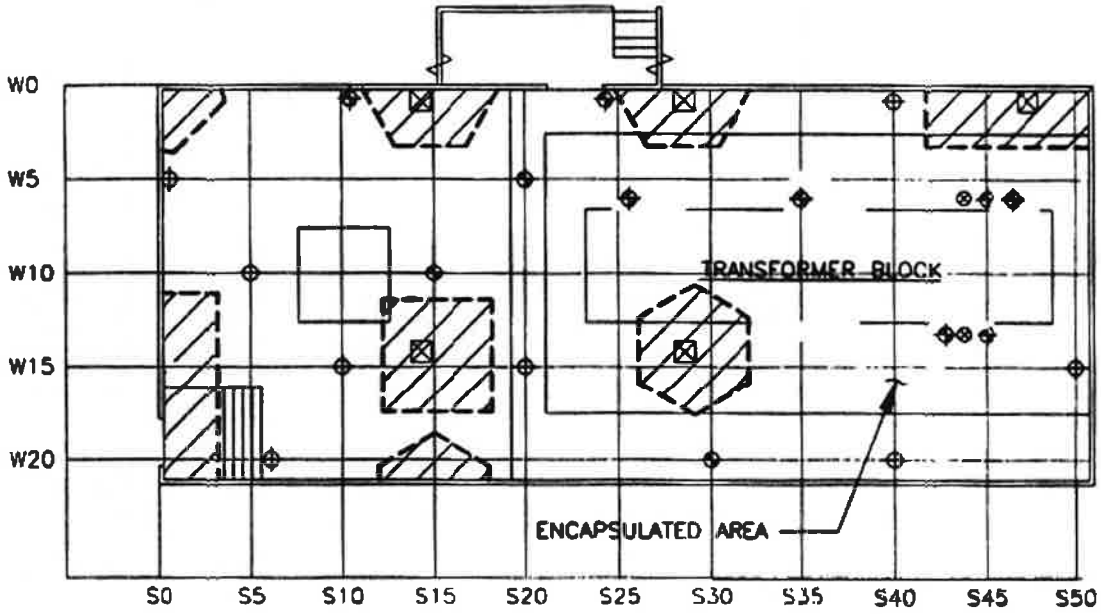
MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PAST AND CURRENT SAMPLING LOCATIONS
TRANSFORMER ROOM No. 1
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-04	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-3





LEGEND

- PROPOSED CONCRETE FLOOR CORE
- PROPOSED CONCRETE FLOOR/SOIL SAMPLE CORE
- STRUCTURAL COLUMN
- SUBFLOOR PILE CAP
- W10 / W5 / S0 S5 — GRID SCALE AND REFERENCE
- PLUGGED FLOOR DRAIN
- REPORTED APPROXIMATE STAIN 5/9/94 (ATS. 1995)

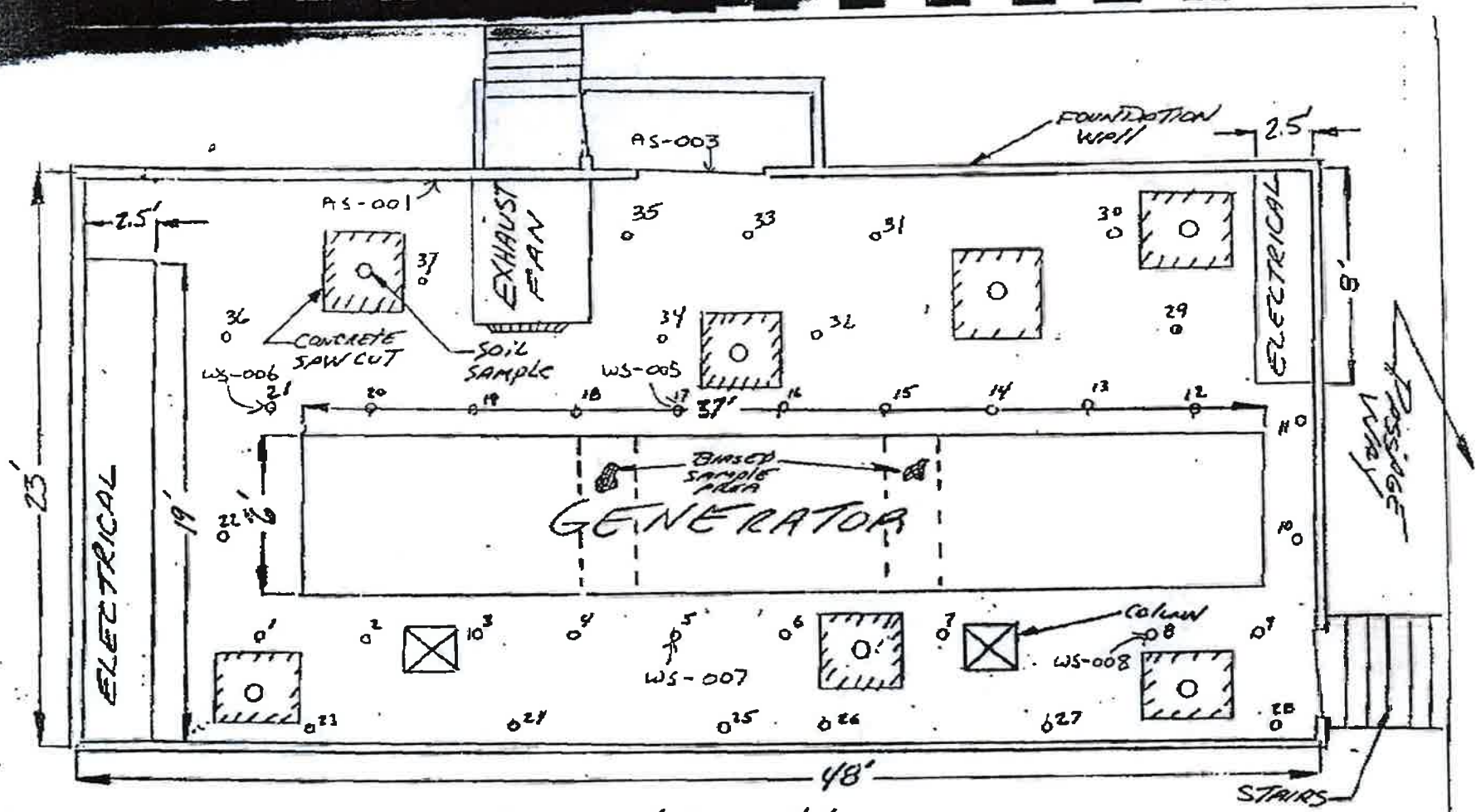
0 5 10
APPROXIMATE SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

SAMPLING LOCATIONS
TRANSFORMER ROOM No. 2
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-05	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-4



ELECTRICAL ROOM #1

1" = 6'

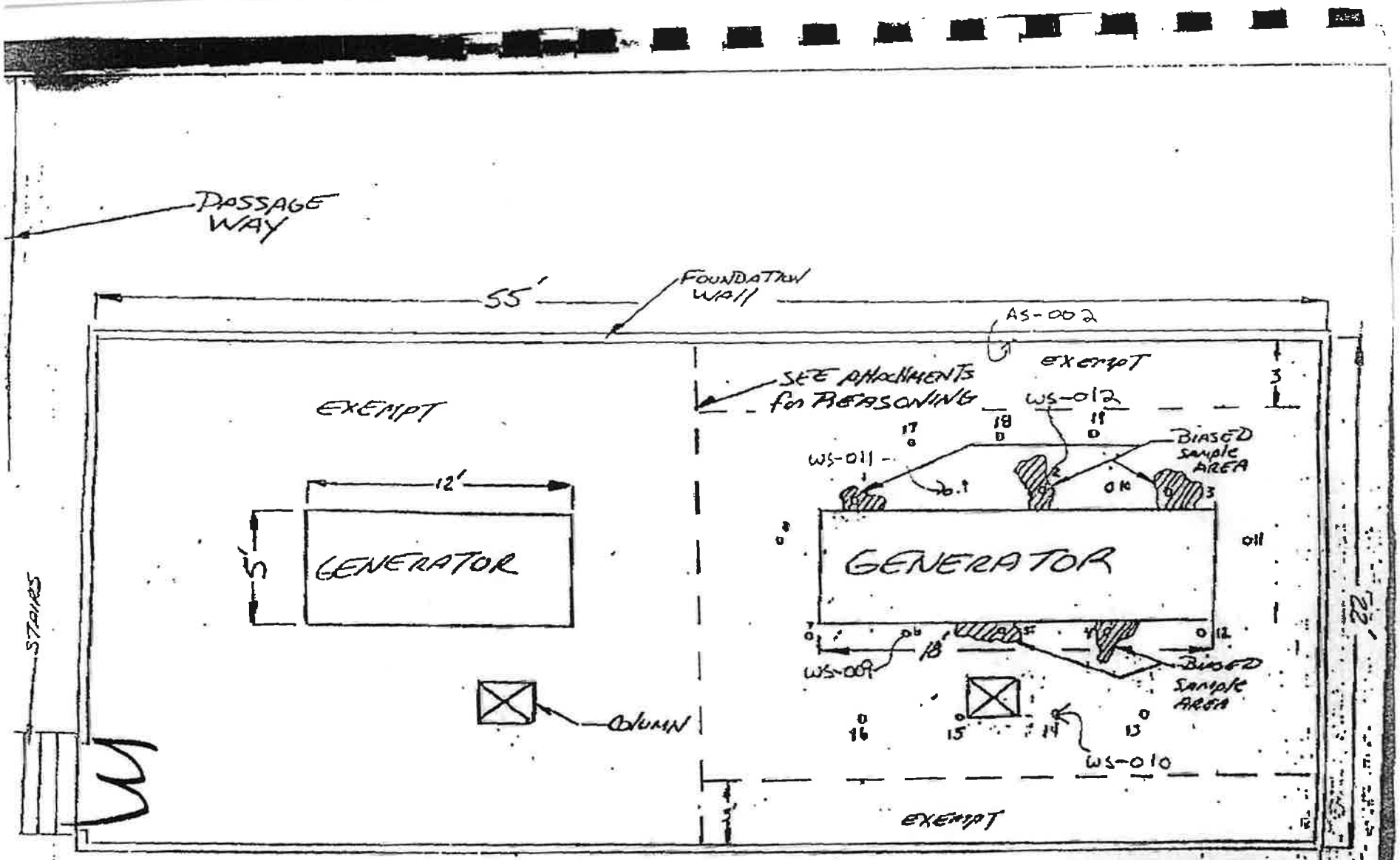
KEY

= Air Sample
= Wipe Sample

Samples are prefixed with 36-051295-

BRONX PSYC. HOSPITAL	
WILLOW CONTRACTING 3-9-94 JPR	
NY STATE OGS	1 OF 4

May 1995



KEY

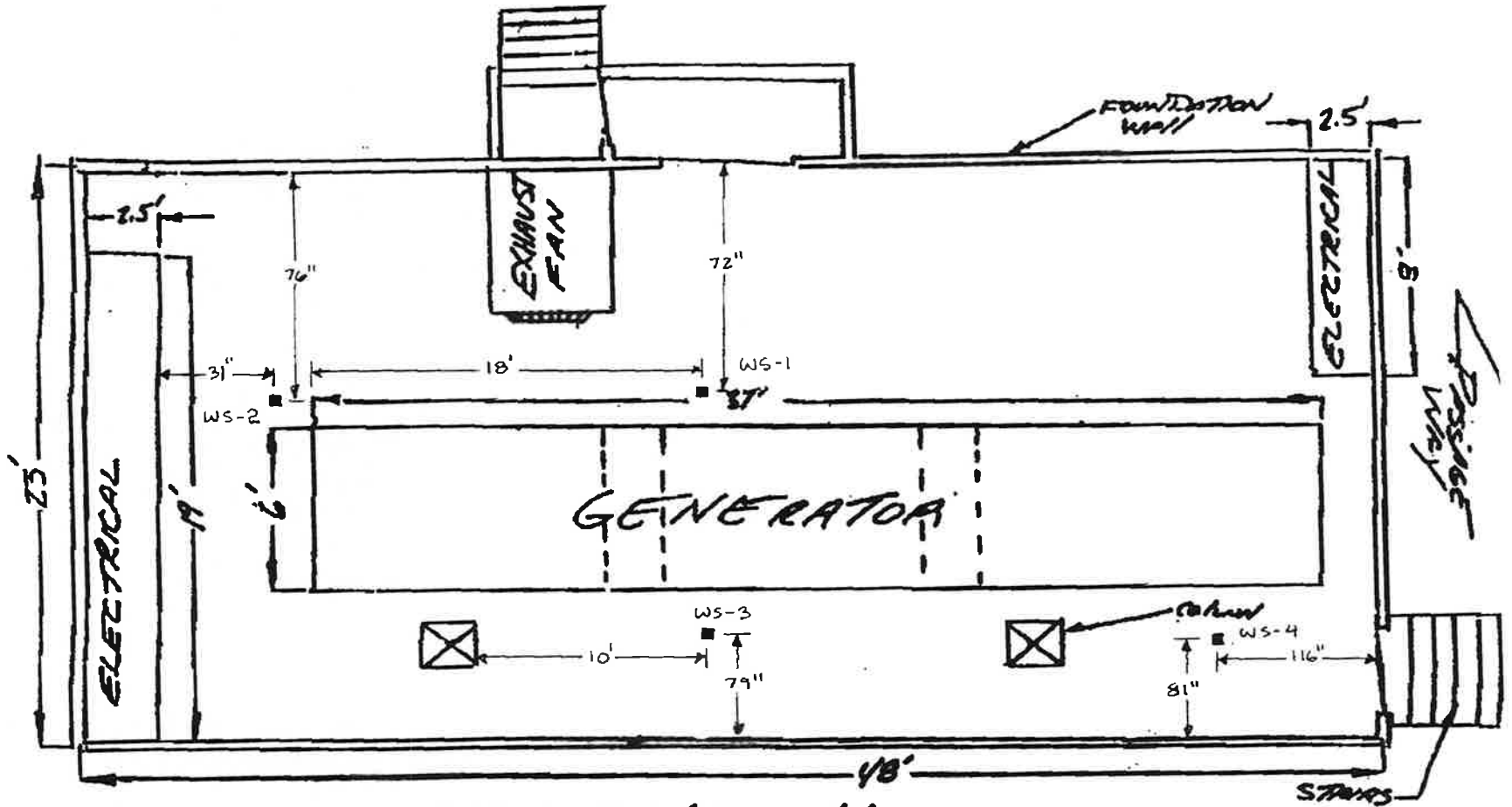
AS = Air Sample
WS = Wipe Sample

All Samples are prefixed with 36-051295-

ELECTRICAL ROOM #2
1" = 6'

May 1995

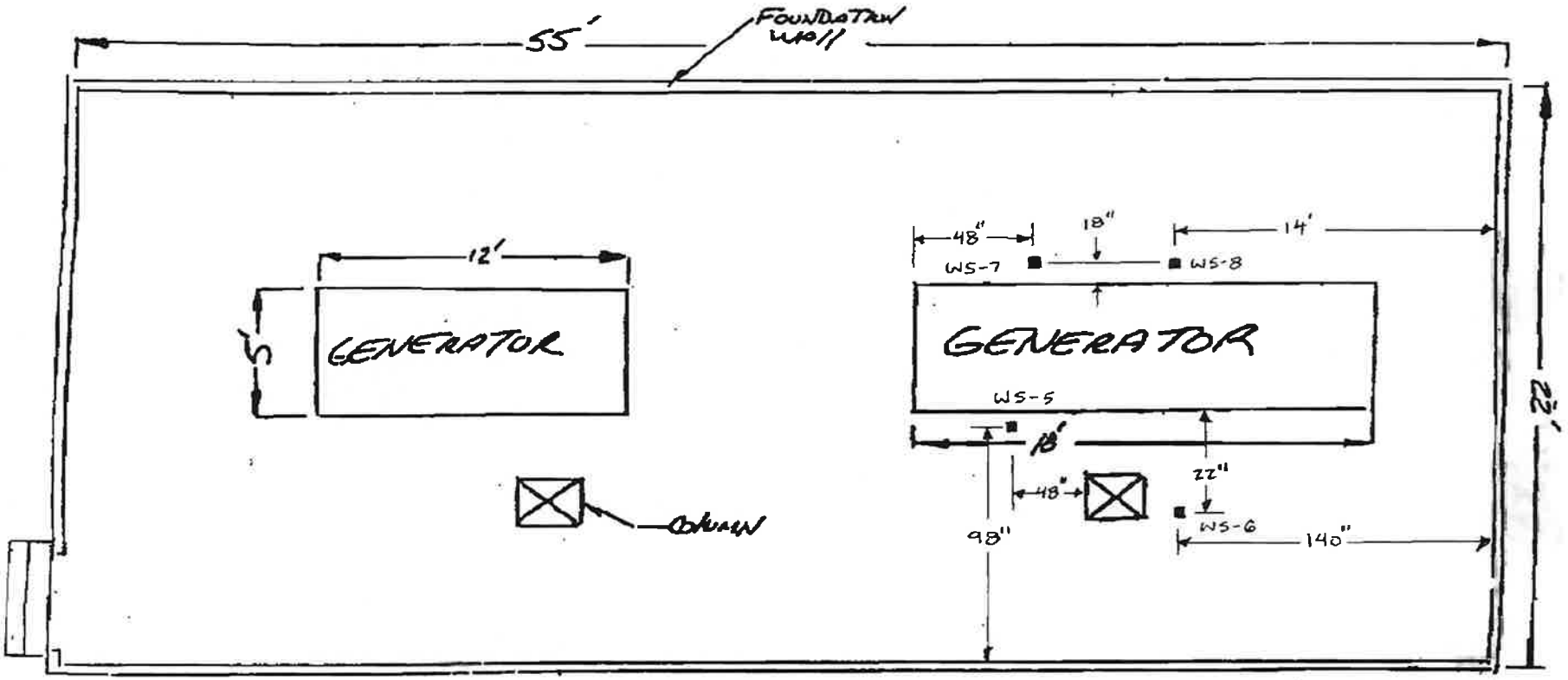
BRONX PSYC. HOSPITAL
Without Contractor
3-9-95 JPB
NY STATE OGS
Sheet 3 of 5



ELECTRICAL ROOM #1

BRONX PSYC HOSPITAL	
NY STATE OGS	

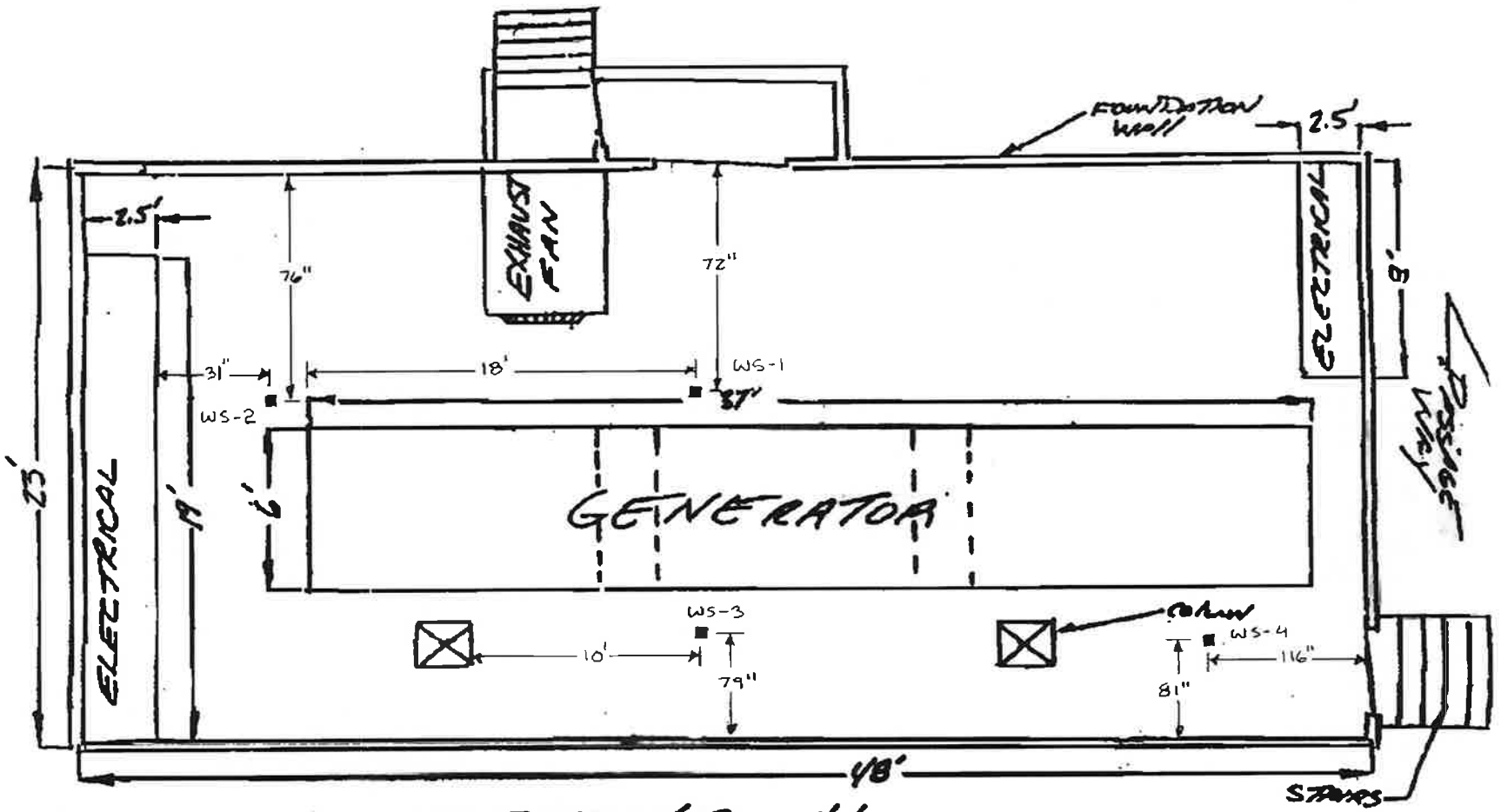
Jan/Feb 1996



ELECTRICAL ROOM #2

BRONX PSYC. HOSPITAL
Wilbur Contractors 5-9-94 JPB
NY STATE OGS

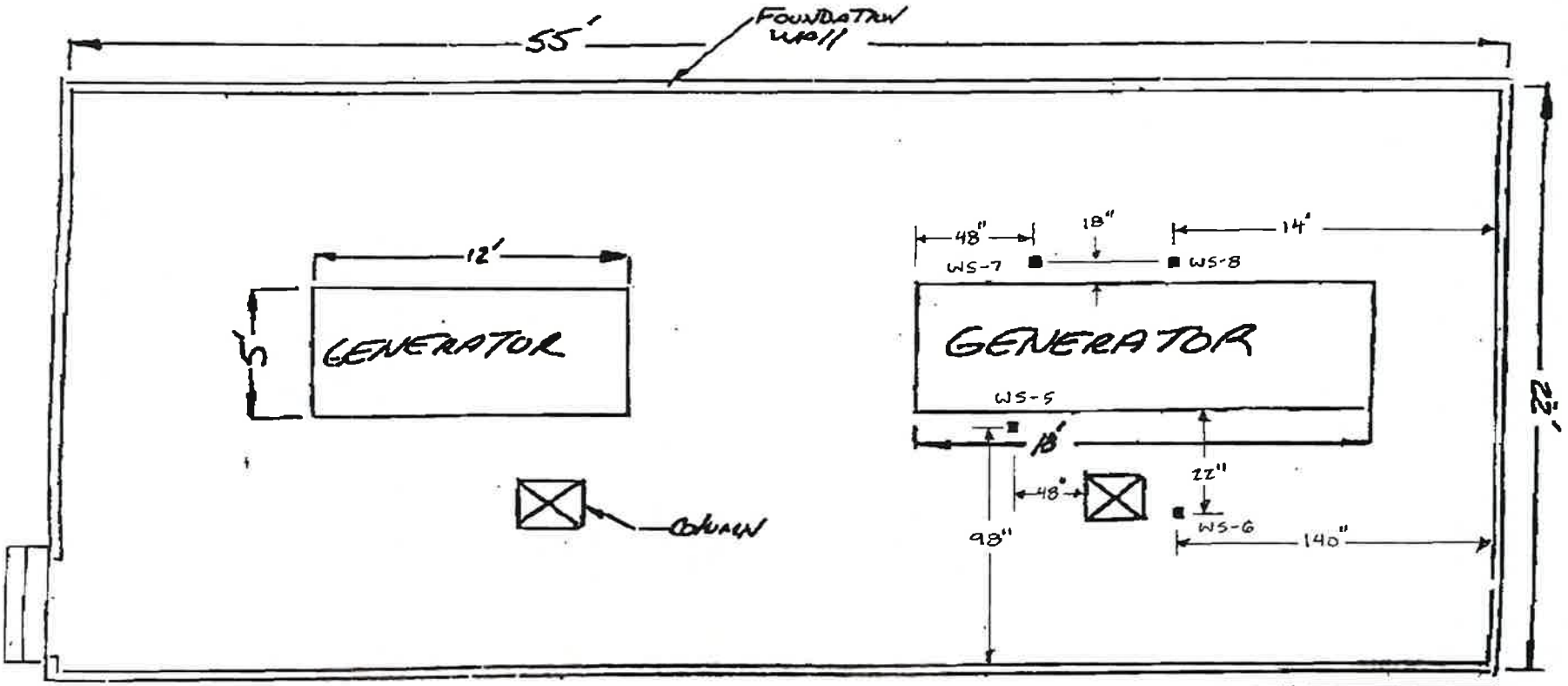
Jan/Feb 1996



1/30/96, 2/21/96

BRONX PSYC HOSPITAL
NY STATE OGS

Jan/Feb 1996

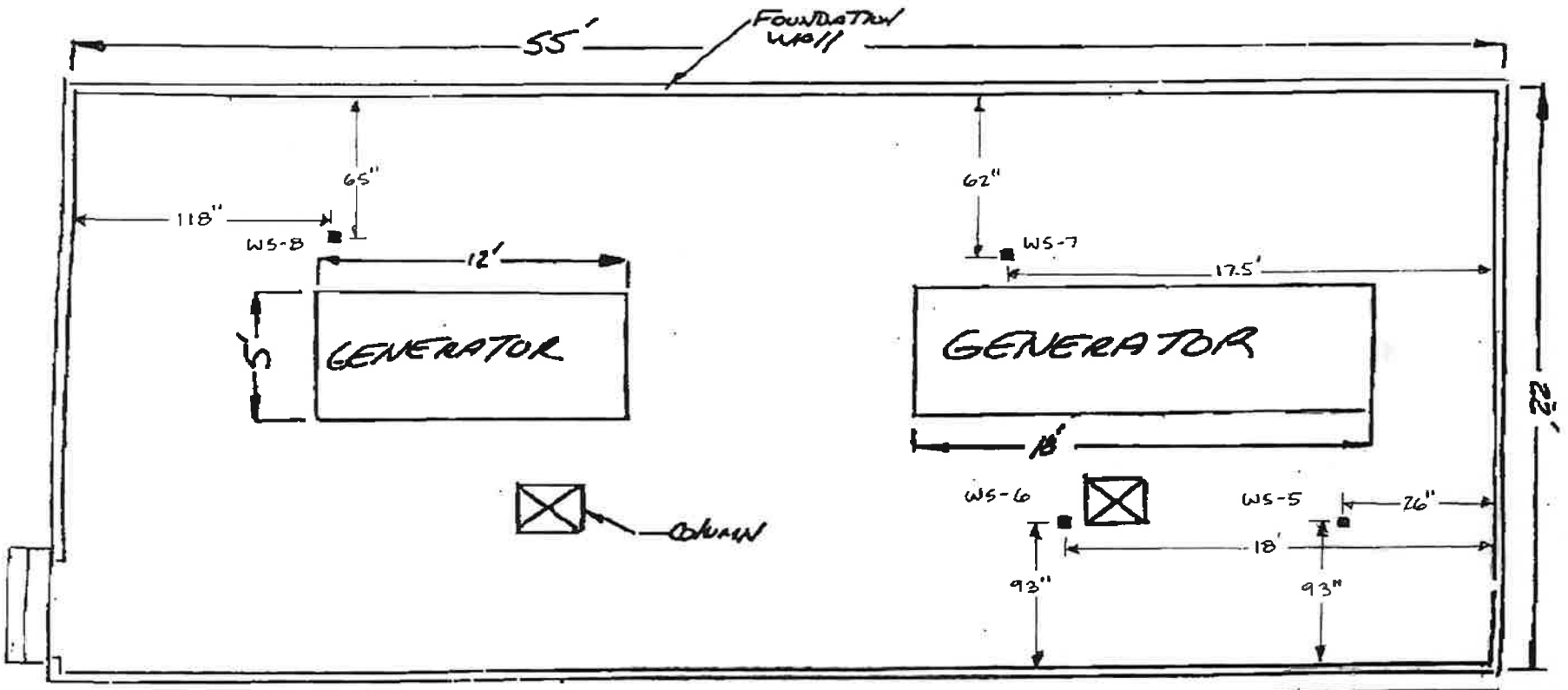


ELECTRICAL ROOM #2

1/30/96

BRONX PSYC. HOSPITAL
Wilbur Contracting 5-9-96 JPB
NY STATE OGS

Jan/Feb 1996

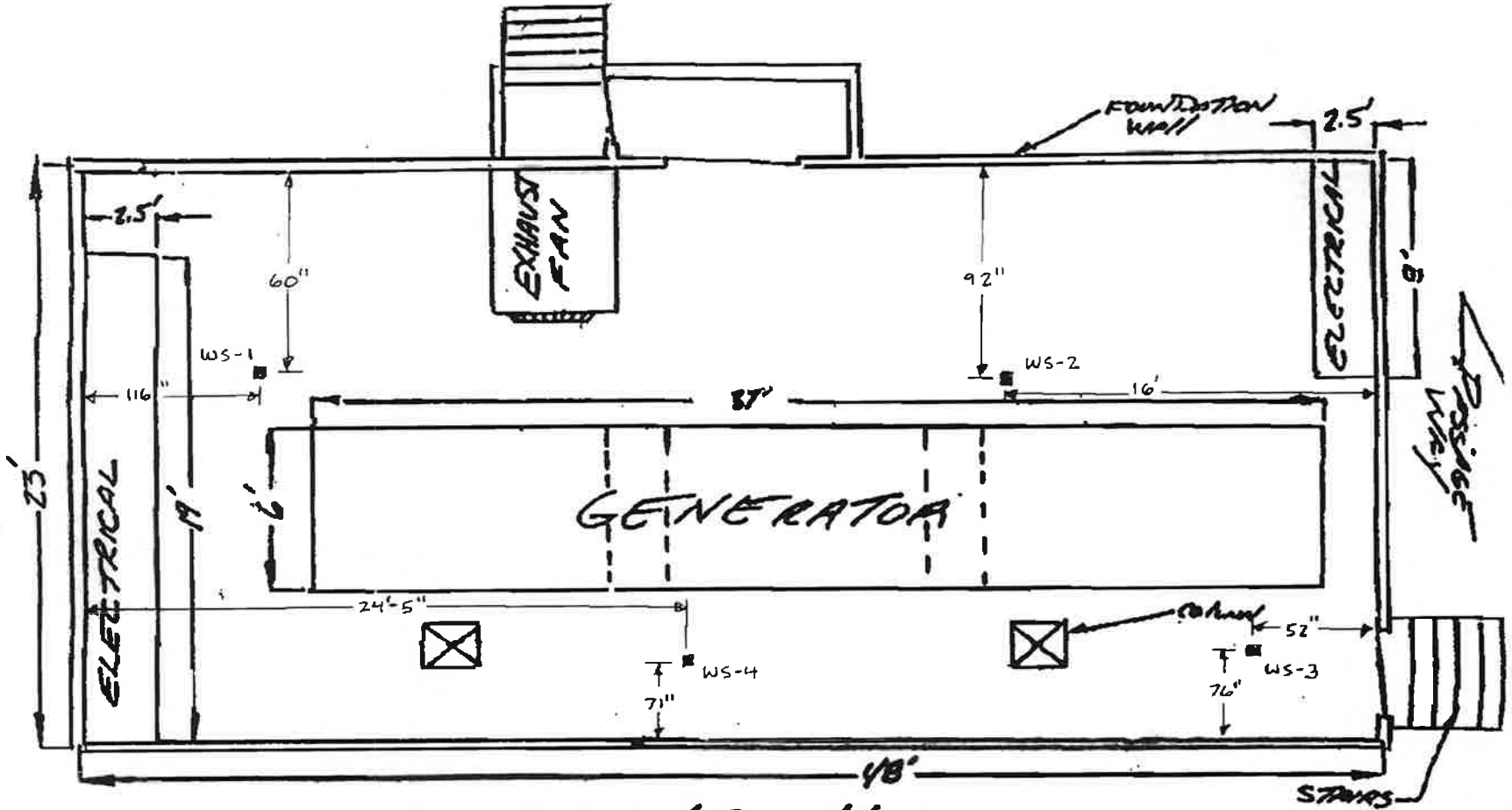


ELECTRICAL ROOM #2

1/30/97

BRONX PSYC. HOSPITAL
Wilbur Contractors 5-9-96 JPB
NY STATE OGS

Jan/Feb 1996



ELECTRICAL ROOM #1

1/30/97

BRONX PSYC HOSPITAL
NY STATE OGS

Jan/Feb 1996

M:\CADD\FDCE\9301\CI_CNTMP 3-7-97 9:30:08 am

WELL #	ASSUMED SURVEY ELEVATION	DEPTH TO WATER	ASSUMED WATER TABLE ELEVATION
MW-1	30.00	14.23	15.77
MW-2	30.43	14.42	16.01
MW-3	29.46	14.78	14.68
MW-4	29.52	14.58	14.94

Assumed datum uses MW-1 at 30 feet elevation, estimated from topographic map of Flushing Quad.

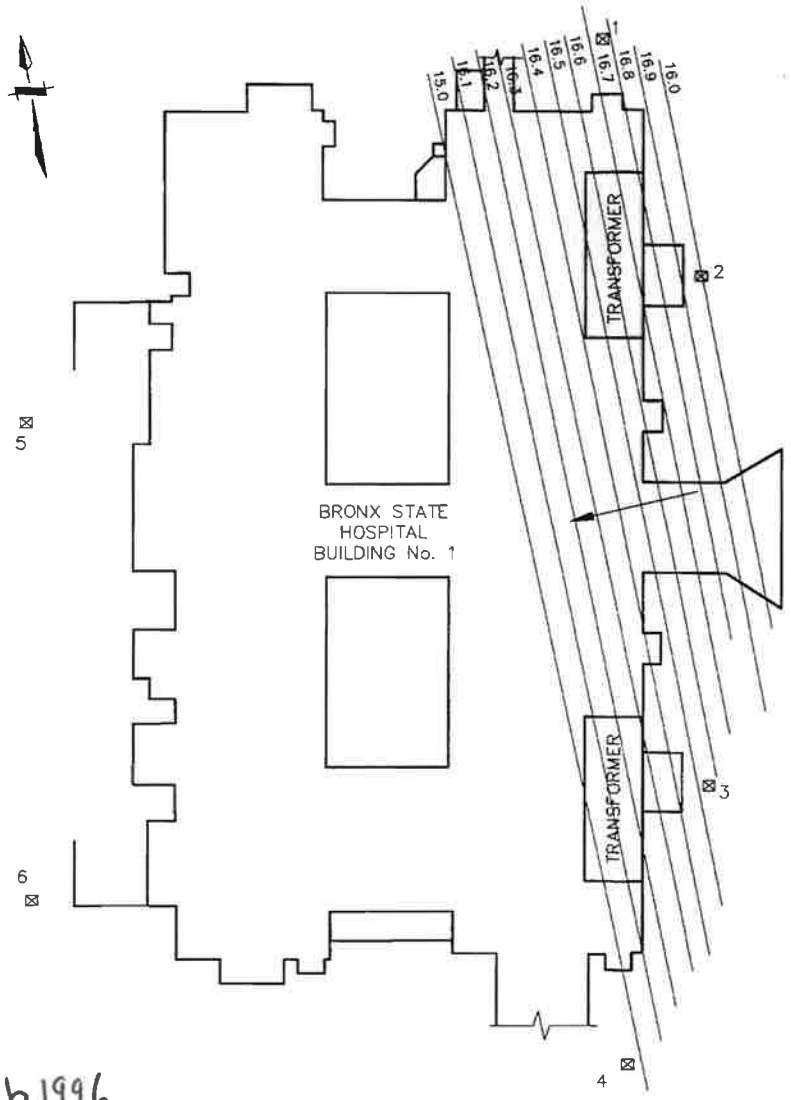


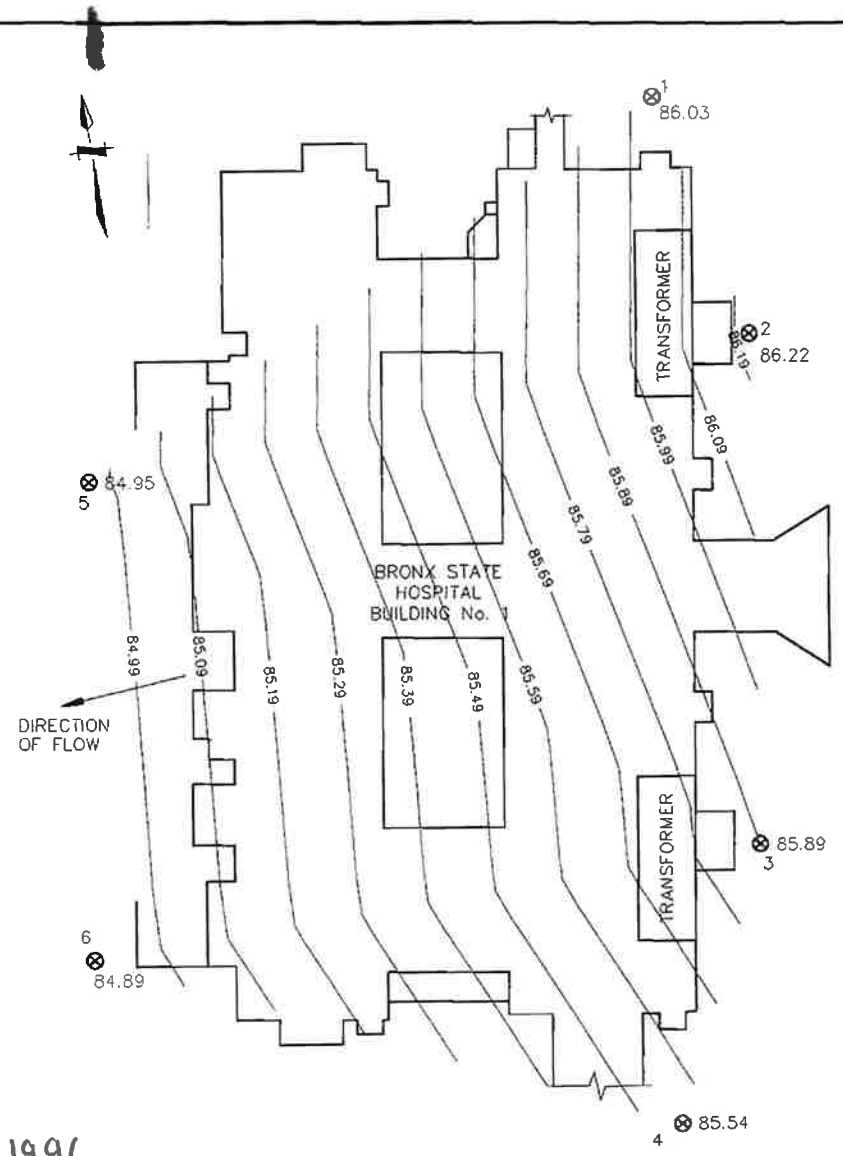
FIGURE 1.0
BRONX PSYCHIATRIC HOSPITAL
GROUNDWATER ELEVATION CONTOUR MAP
WITH EXIST. & PROPOSED WELL LOCATIONS

ASSUMED SCALE: 1" = 40 ft.

Jan/Feb 1996

H2MGROUP ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y. TOTOWA, N.J.

M:\CADD\FOCE\9605\CI_CNTMP 11-12-96 12:38:12 pm



LEGEND

⊗ MONITORING WELL

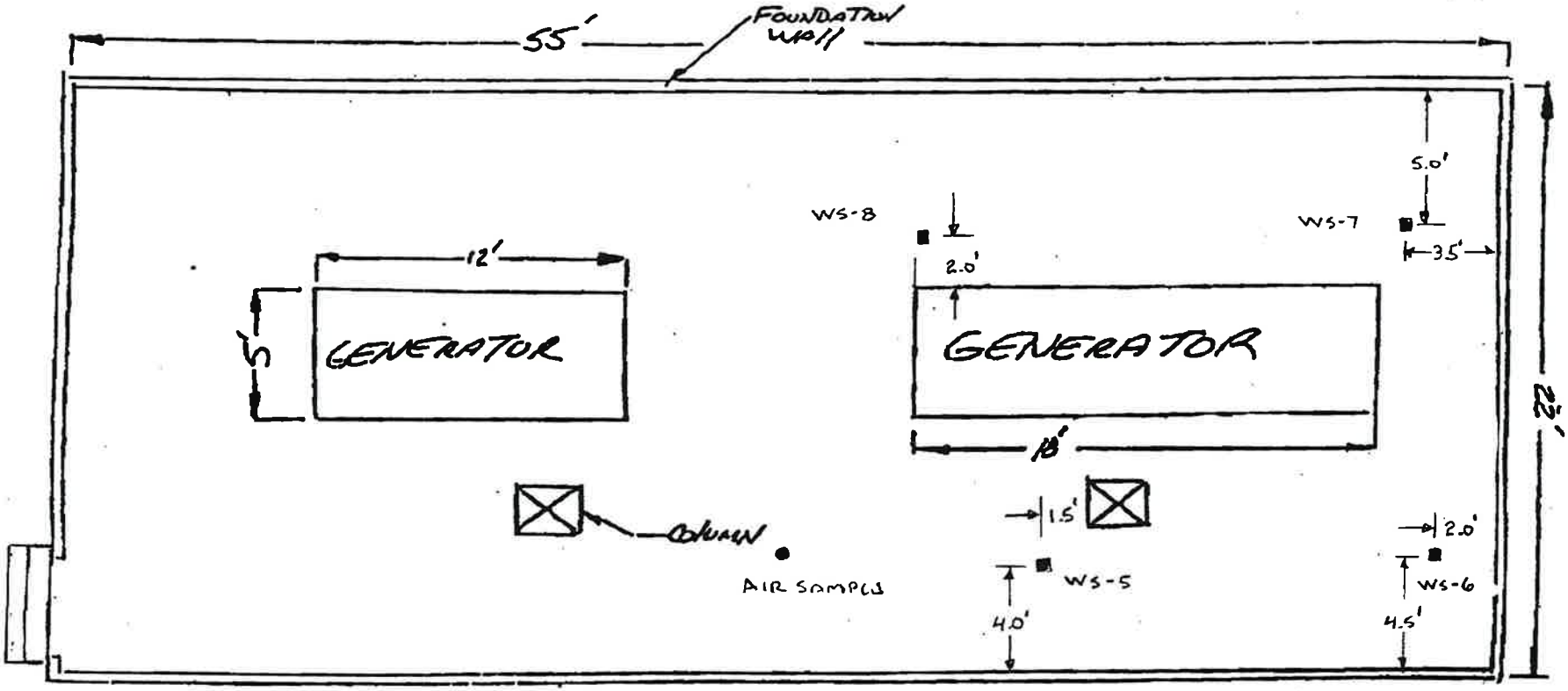
—— 84.99 —— CONTOUR

FIGURE 1.0
BRONX PSYCHIATRIC HOSPITAL
GROUNDWATER ELEVATION CONTOUR MAP
WITH EXIST. & PROPOSED WELL LOCATIONS

ASSUMED SCALE: 1" = 40 ft.

October 1996

H2MGROUP ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y TOTOWA, N.J.

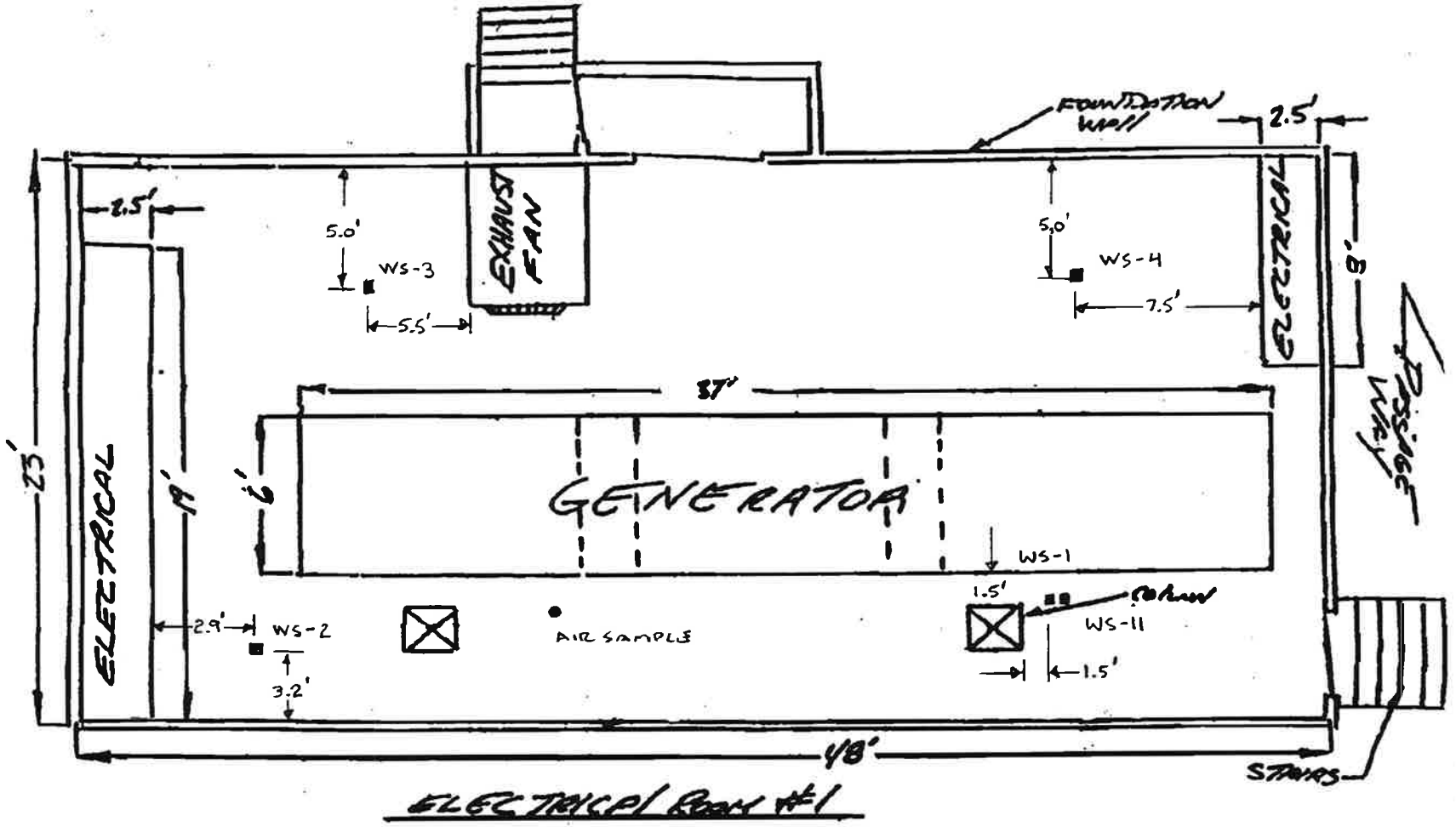


ELECTRICAL ROOM #2

4/29/97

BRONX PSYC. HOSPITAL
Wilbur Contracting 5-9-94 JPB
NY STATE OGS

April 1997



ELECTRICAL ROOM #1

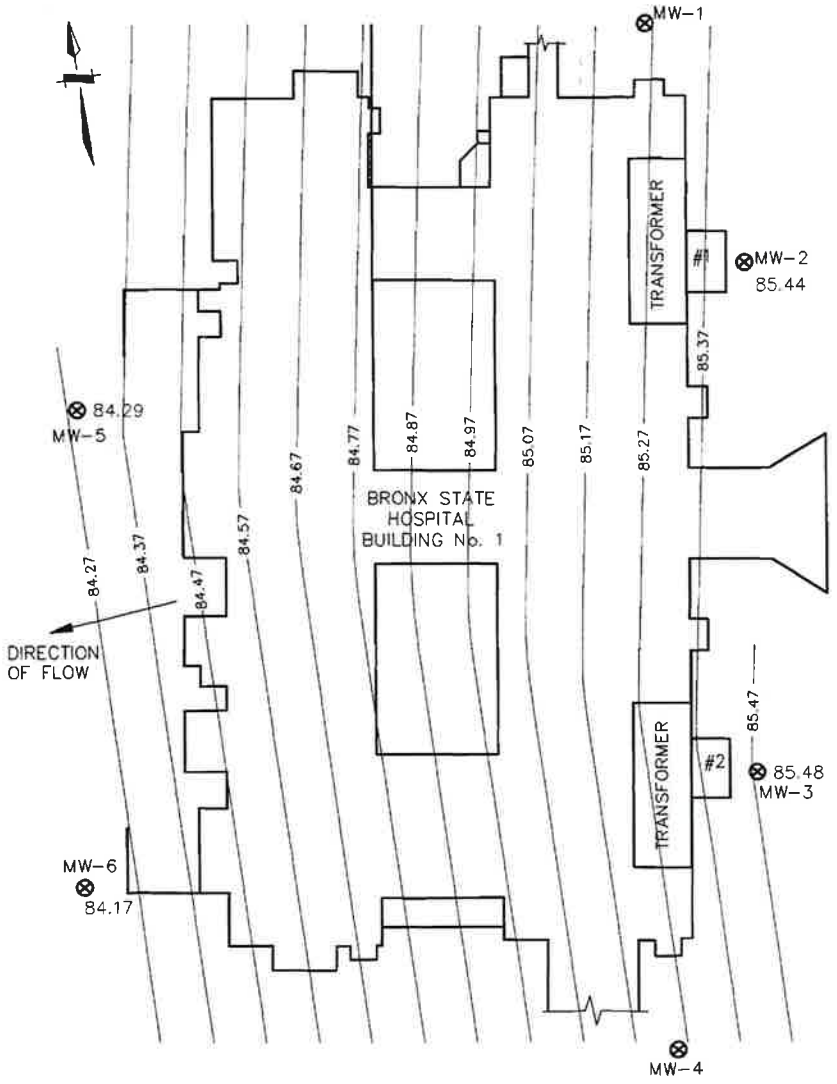
4/29/97

BRONX PSYC HOSPITAL	
NY STATE OGS	

April 1997

M:\CADD\FDCE\9605\5-9GNMAP 5-12-97 12:41:09 pm

WELL #	WATER TABLE ELEVATION
MW-1	-
MW-2	85.44
MW-3	85.48
MW-4	-
MW-5	84.29
MW-6	84.17



LEGEND

⊗ MONITORING WELL

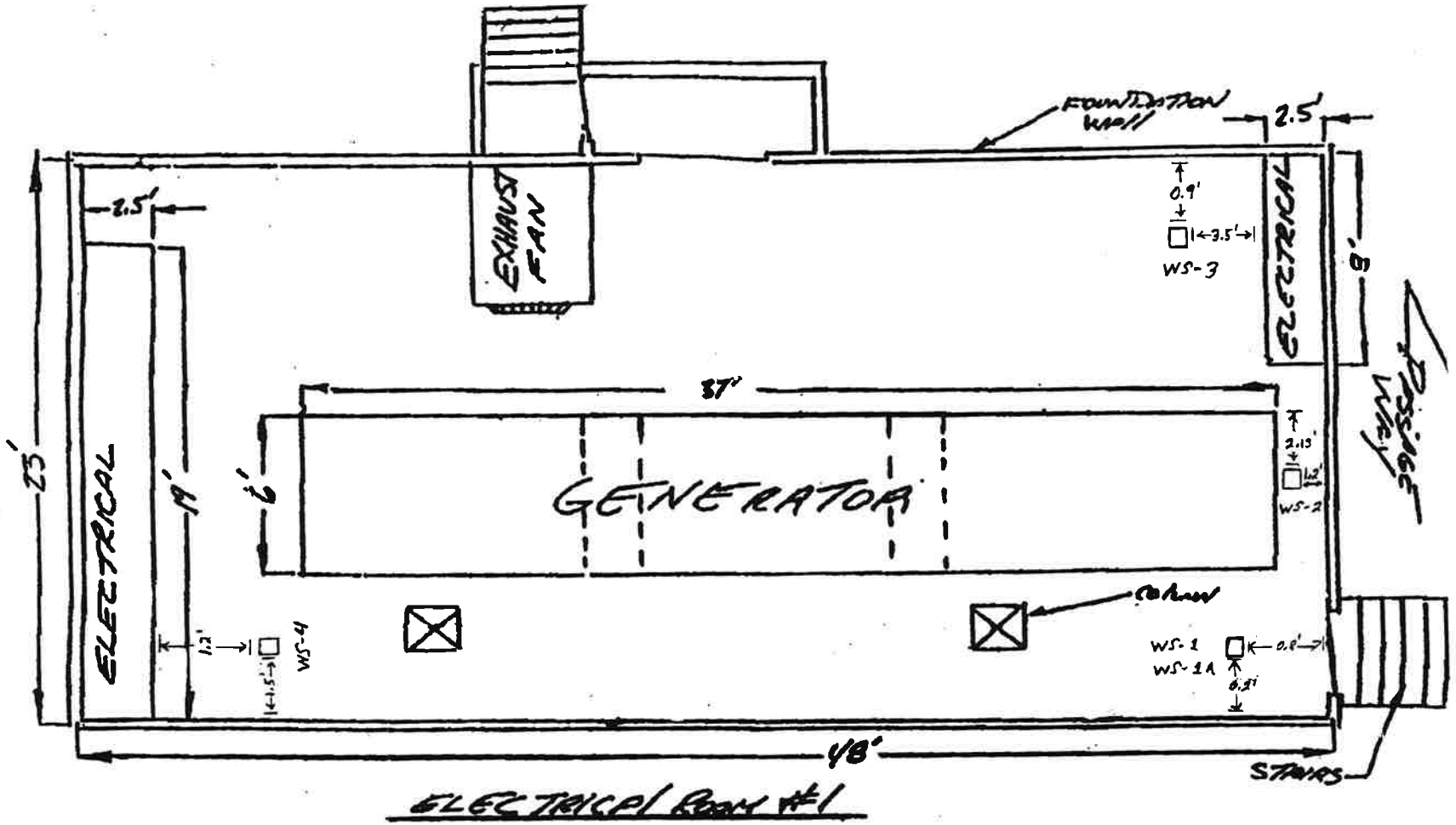
—85.44— CONTOUR

FIGURE 1.0
BRONX PSYCHIATRIC HOSPITAL
GROUNDWATER ELEVATION CONTOUR MAP

ASSUMED SCALE: 1" = 40 ft.

April/May 1997

H2MGROUP ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y. TOTOWA, N.J.

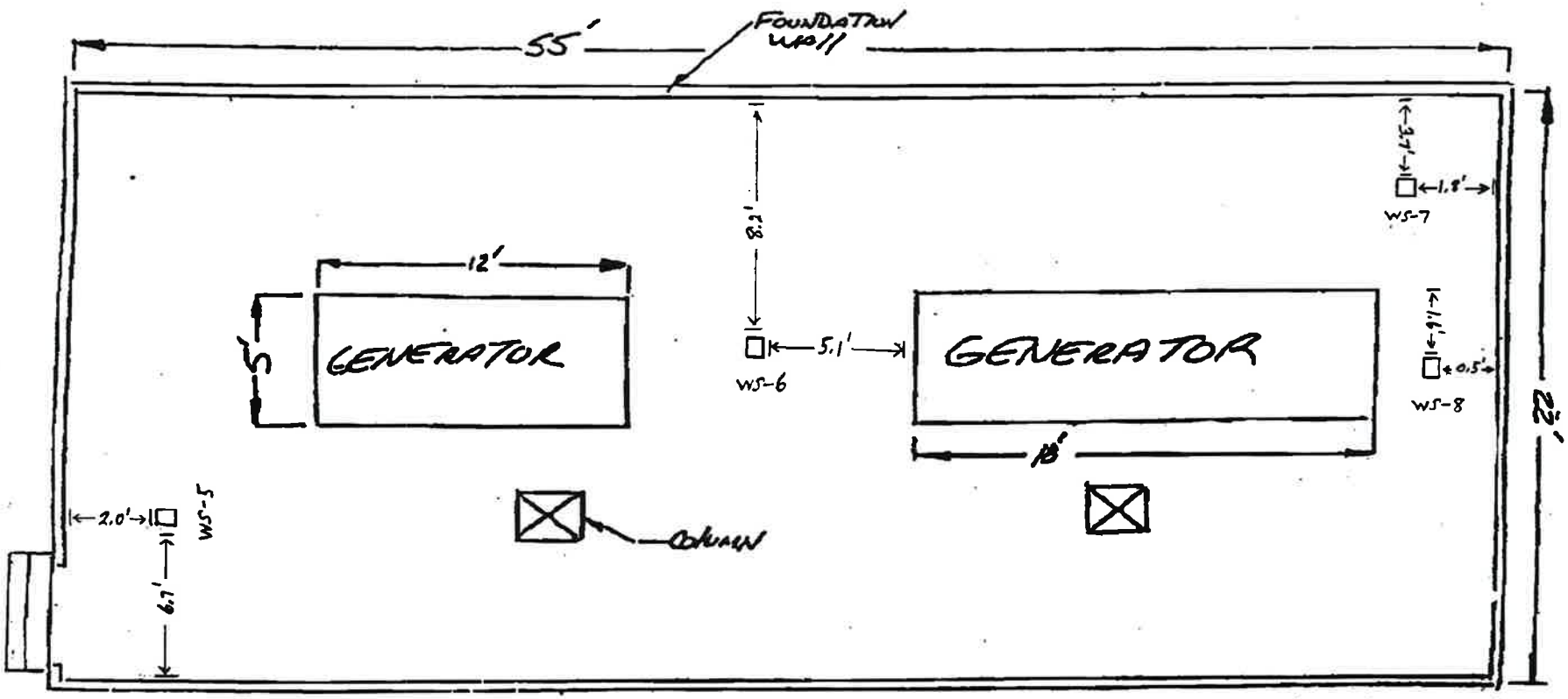


ELECTRICAL ROOM #1

8/19/97

BRONX PSYC HOSPITAL
NY STATE OGS

August 1997



ELECTRICAL ROOM #2

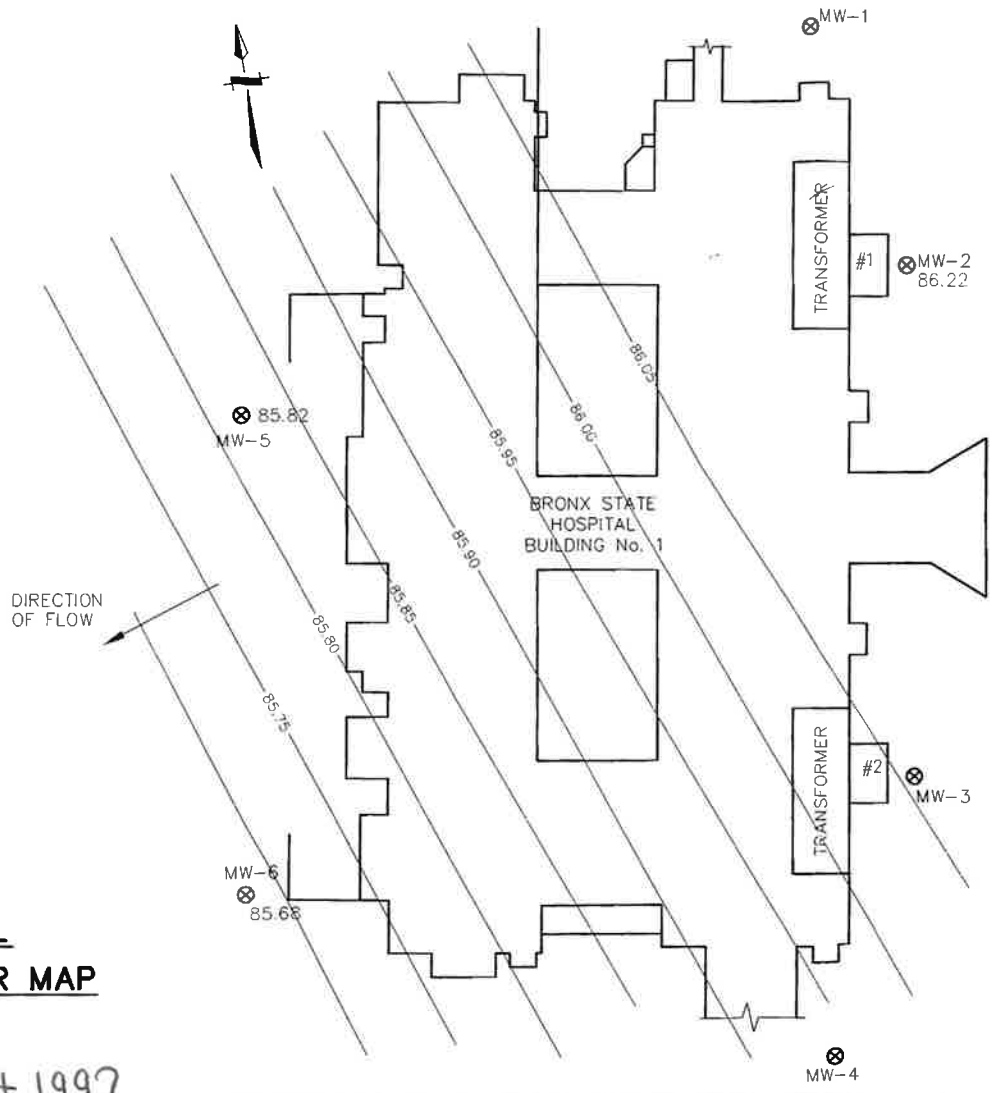
8/19/97

BRONX PSYC. HOSPITAL
Other Contractors 5-9-98 JPB
NY STATE OGS

August 1997

M:\CADD\FDCE\9605\5-9CNMAP 9-29-97 6:09:19 pm

WELL #	WATER TABLE ELEVATION
MW-1	
MW-2	86.22
MW-3	
MW-4	
MW-5	85.52
MW-6	85.68



LEGEND

⊗ MONITORING WELL

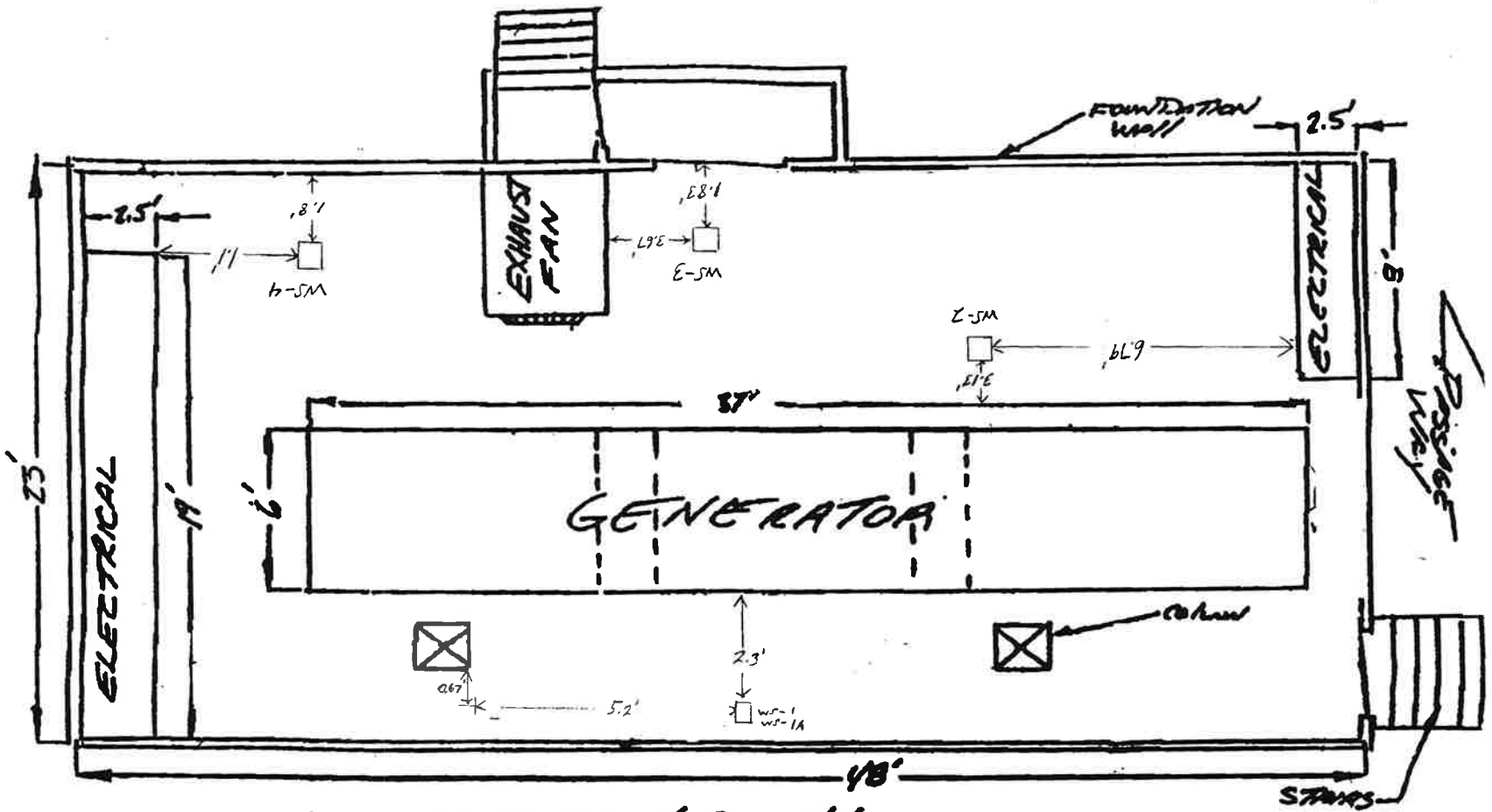
85.44 CONTOUR

FIGURE 1.0
BRONX PSYCHIATRIC HOSPITAL
GROUNDWATER ELEVATION CONTOUR MAP

ASSUMED SCALE: 1" = 40 ft.

August 1997

H2MGROUP ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y. TOTOWA, N.J.

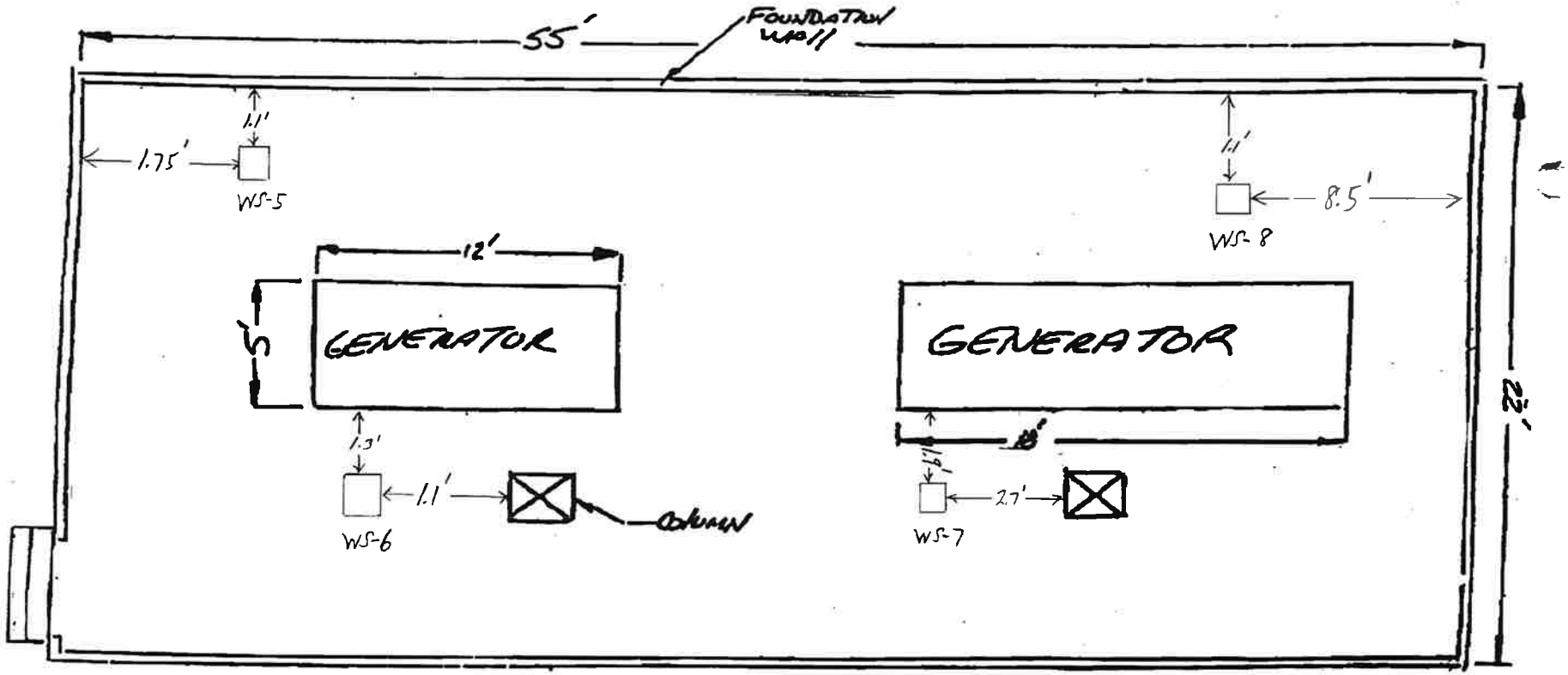


ELECTRICAL ROOM #1

12/31/97

BRONX PSYC HOSPITAL	
NY STATE OGS	

December 1997



ELECTRICAL ROOM #2

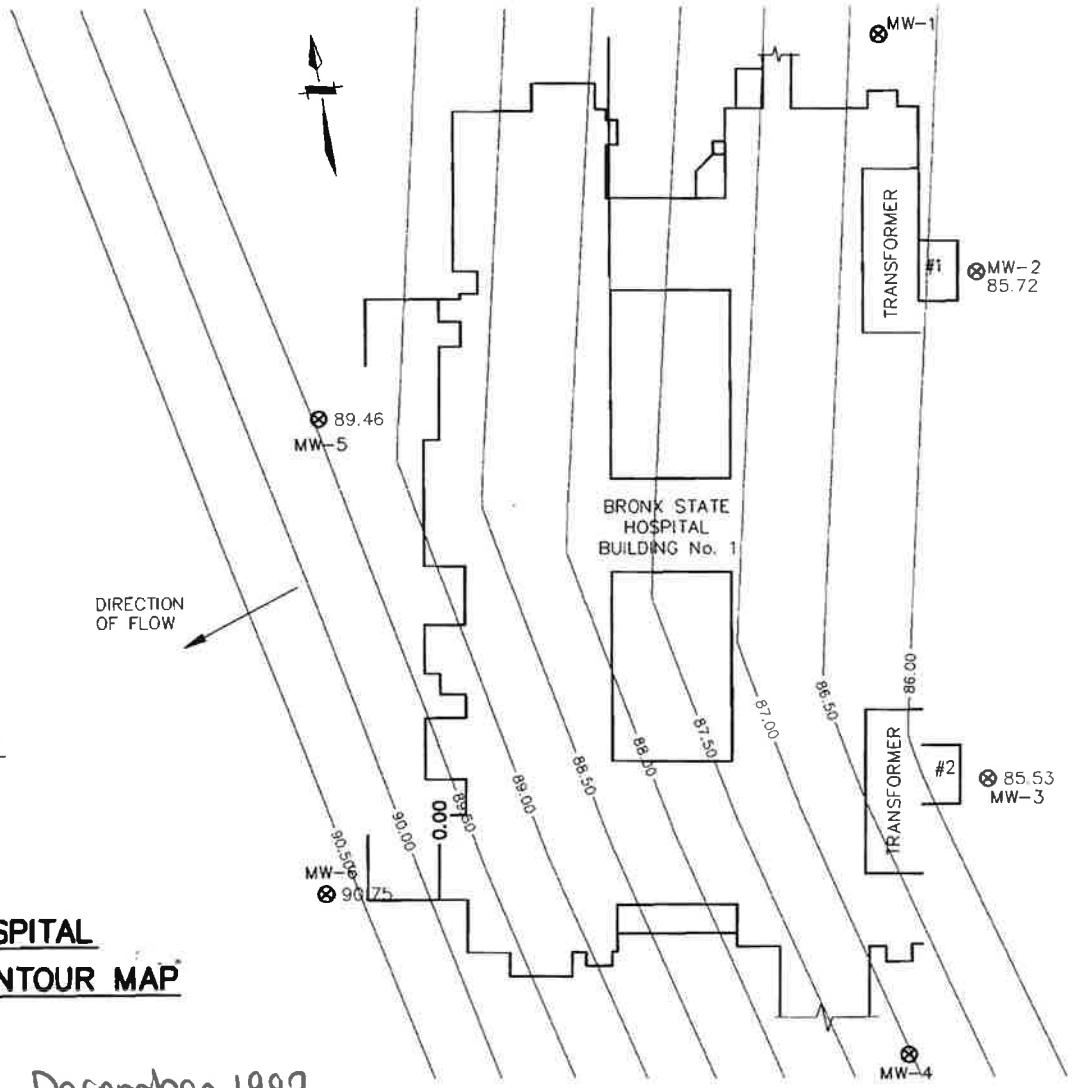
12/31/97

BRONX PSYC. HOSPITAL
By Other Contractors 5-9-98 TPB
NY STATE OGS

December 1997

M:\CADD\FDCE\9605\5-9CNMAP 9-29-97 6:09:19 pm

WELL #	WATER TABLE ELEVATION
MW-1	
MW-2	85.72'
MW-3	85.53'
MW-4	
MW-5	89.46'
MW-6	90.75'



LEGEND

⊗ MONITORING WELL

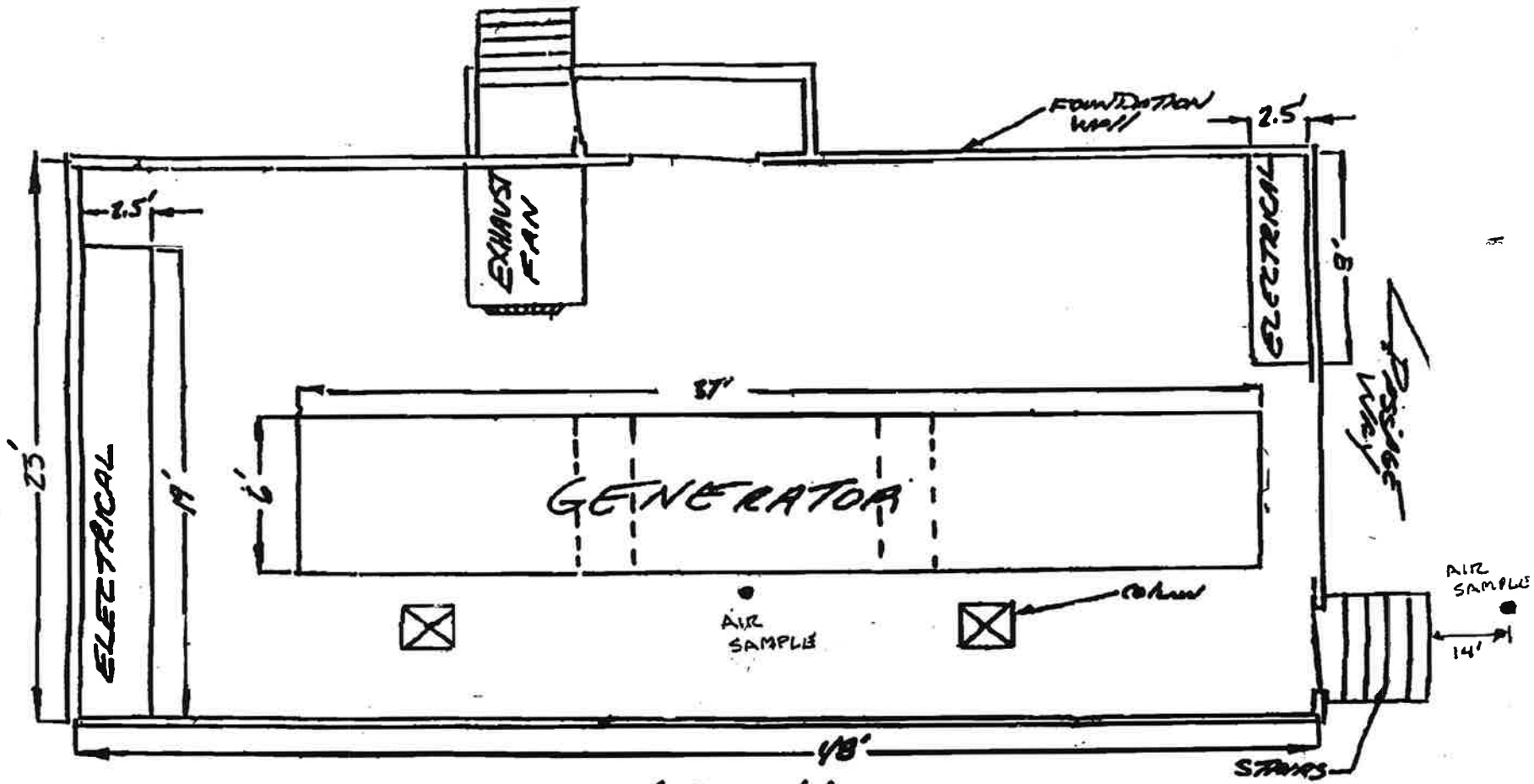
85.44 CONTOUR

FIGURE 1.0
BRONX PSYCHIATRIC HOSPITAL
GROUNDWATER ELEVATION CONTOUR MAP

ASSUMED SCALE: 1" = 40 ft.

December 1997

H2MGROUP ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y TOTOWA, N.J.

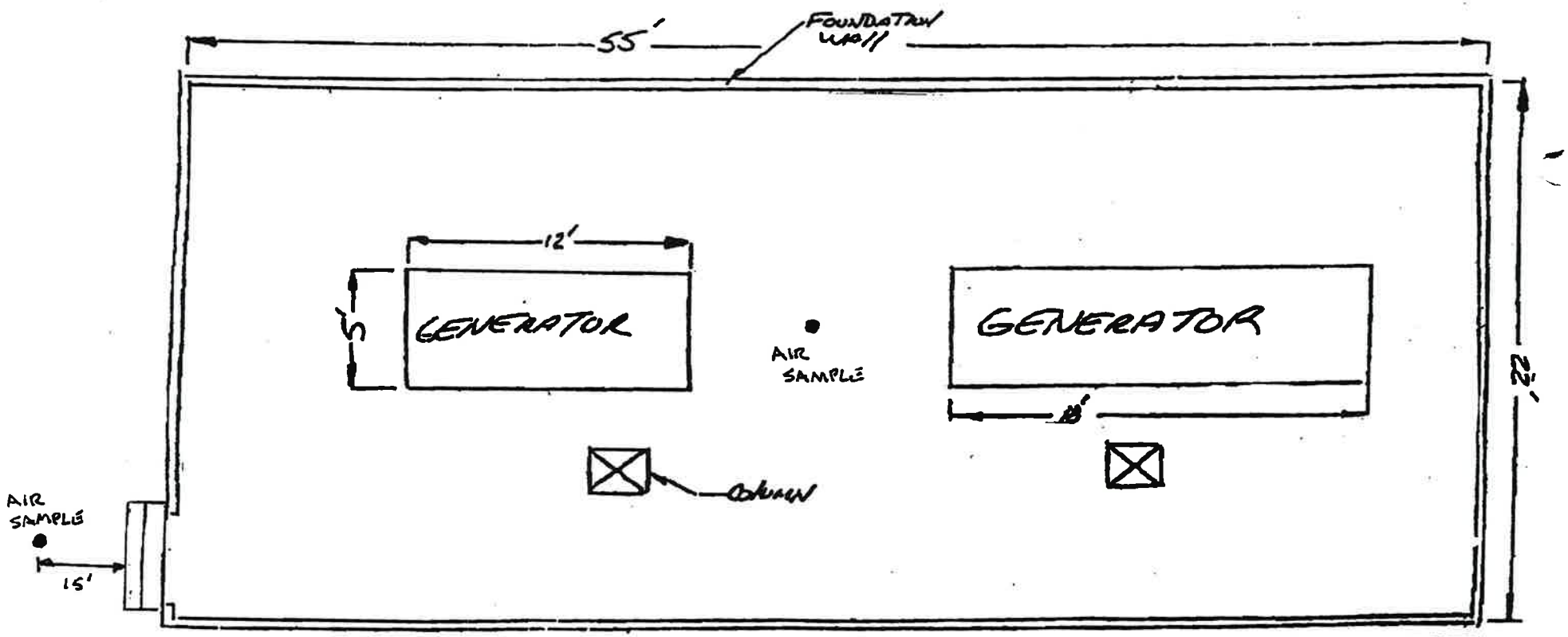


ELECTRICAL ROOM #1

4/16/98

BRONX PSYC HOSPITAL	
NY STATE OGS	

April 1998

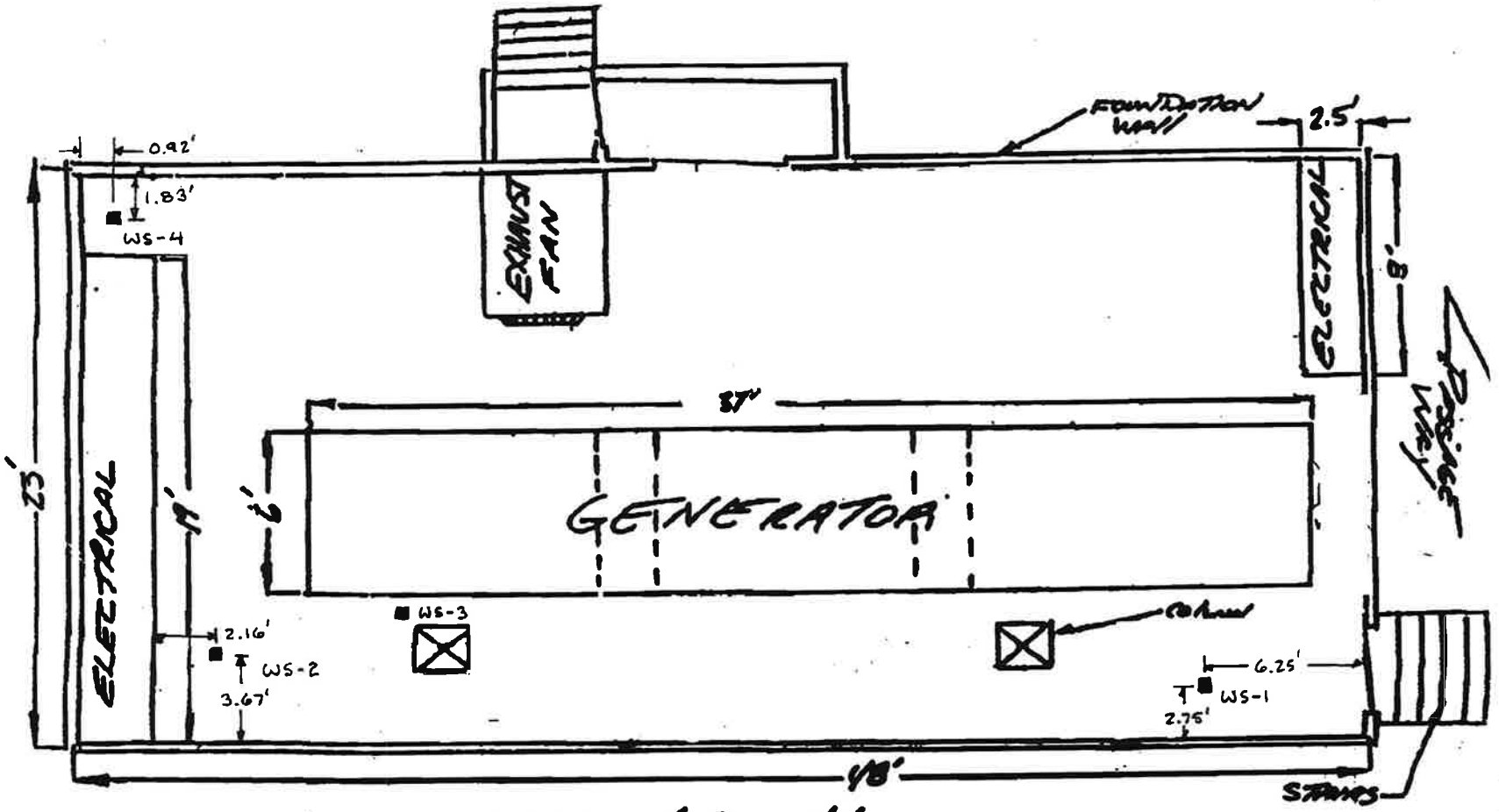


ELECTRICAL ROOM #2

4/16/98

BRONX PSYC. HOSPITAL
~~Weather Contractor~~ 5-9-98 TPB
NY STATE OGS

April 1998

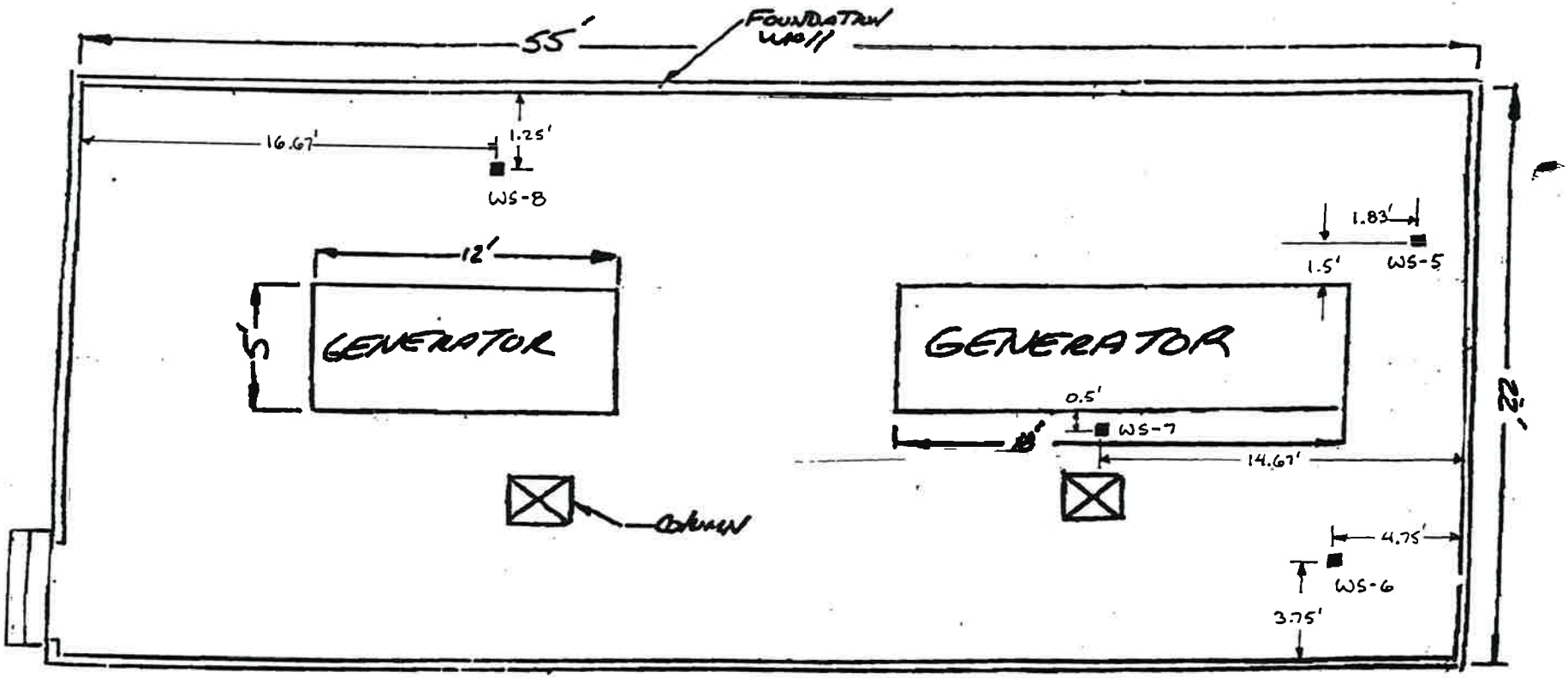


ELECTRICAL ROOM #1

7-20-98

[illegible] PSYC HOSPITAL	
NYSTATE OGS	

July/August 1998

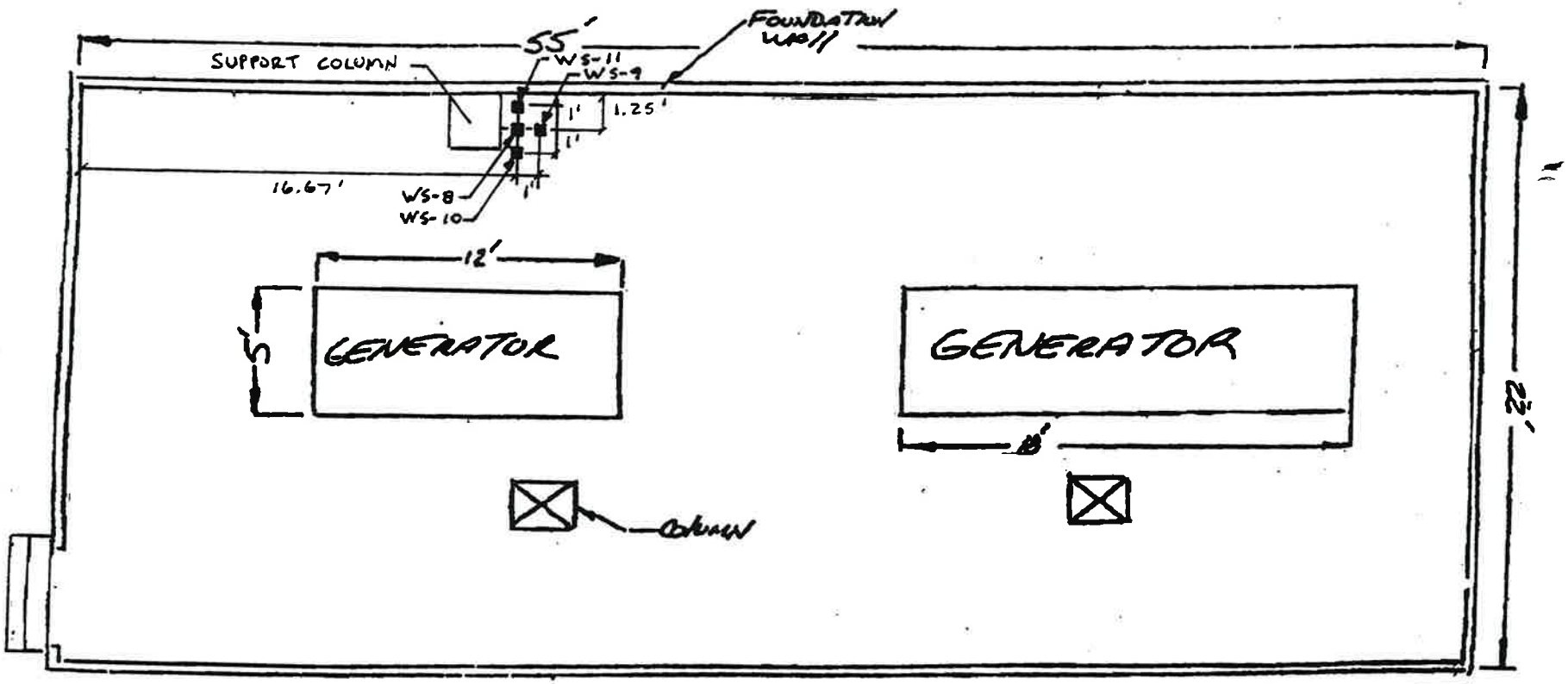


ELECTRICAL ROOM #2

7-20-98

BRONX PSYC. HOSPITAL

July/ August 1998



ELECTRICAL ROOM #2

8-28-98

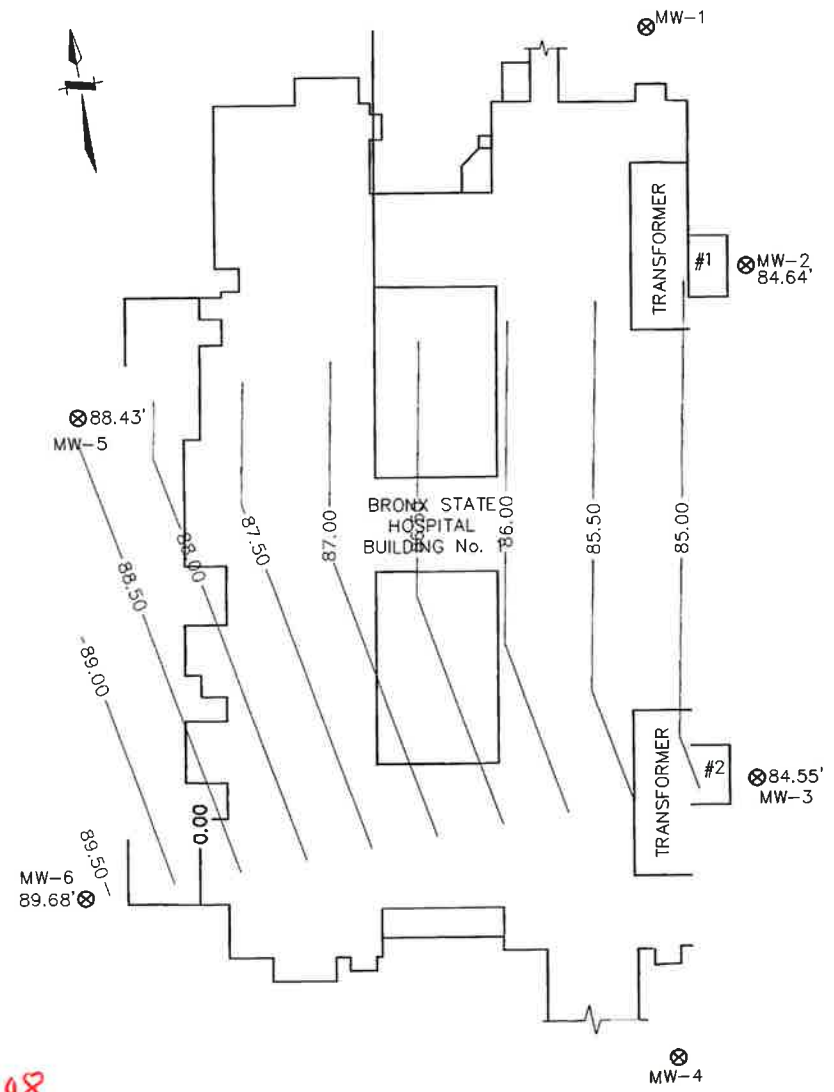
BRONX PSYC. HOSPITAL

NY STATE OGS

July/August 1998

M:\CADD\FDCE\9605\5-9GNMAP 9-29-97 6:09:19 pm

WELL #	WATER TABLE ELEVATION
MW-1	
MW-2	84.64'
MW-3	84.55'
MW-4	
MW-5	88.43'
MW-6	89.68'



DIRECTION OF FLOW

LEGEND

⊗ MONITORING WELL

85.44 CONTOUR

FIGURE 1.0

BRONX PSYCHIATRIC HOSPITAL

GROUNDWATER ELEVATION CONTOUR MAP

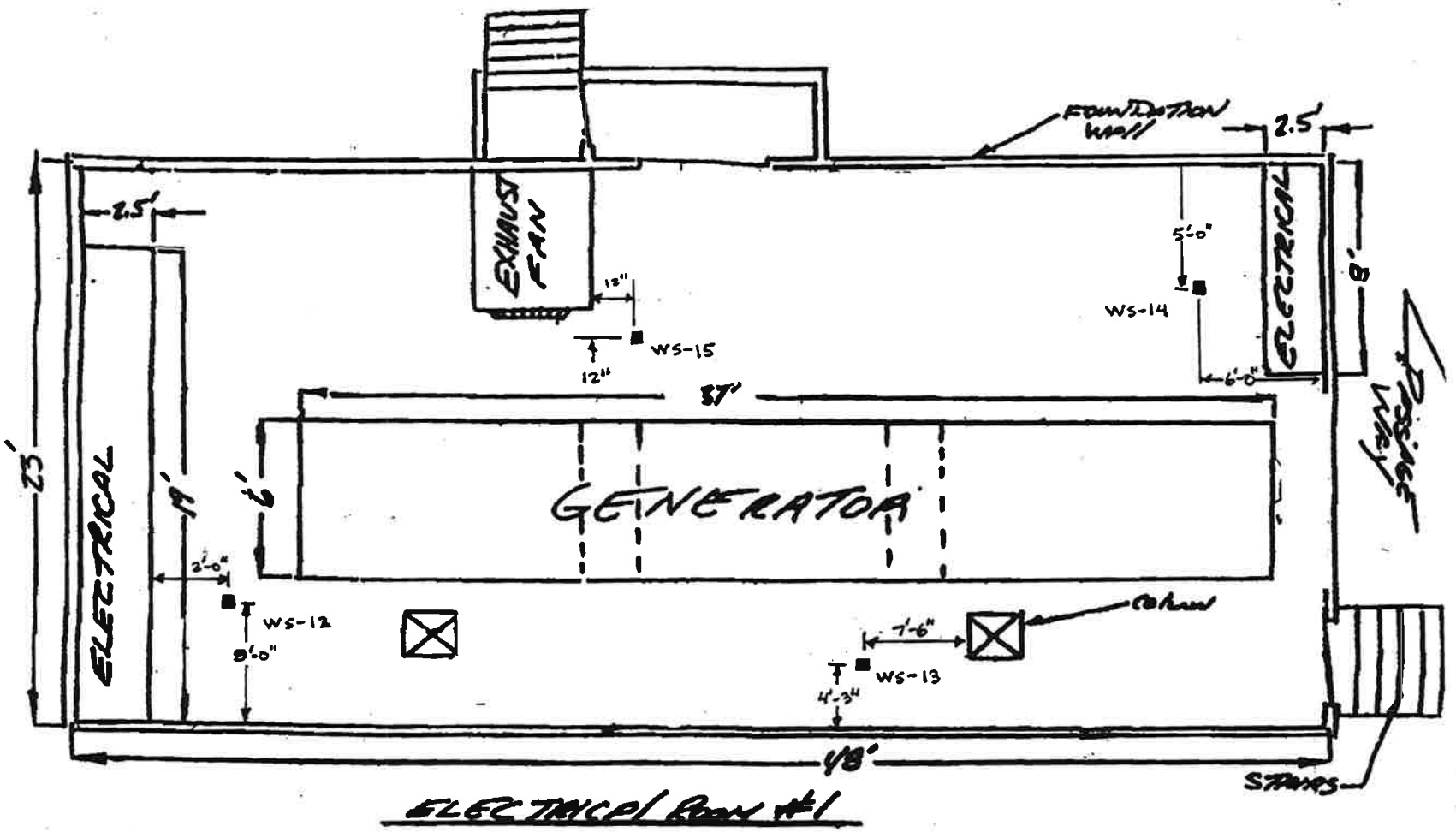
JULY, 1998

ASSUMED SCALE: 1" = 40 ft.

July/August 1998

H2MGROUP ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS

MELVILLE, N.Y. TOTOWA, N.J.

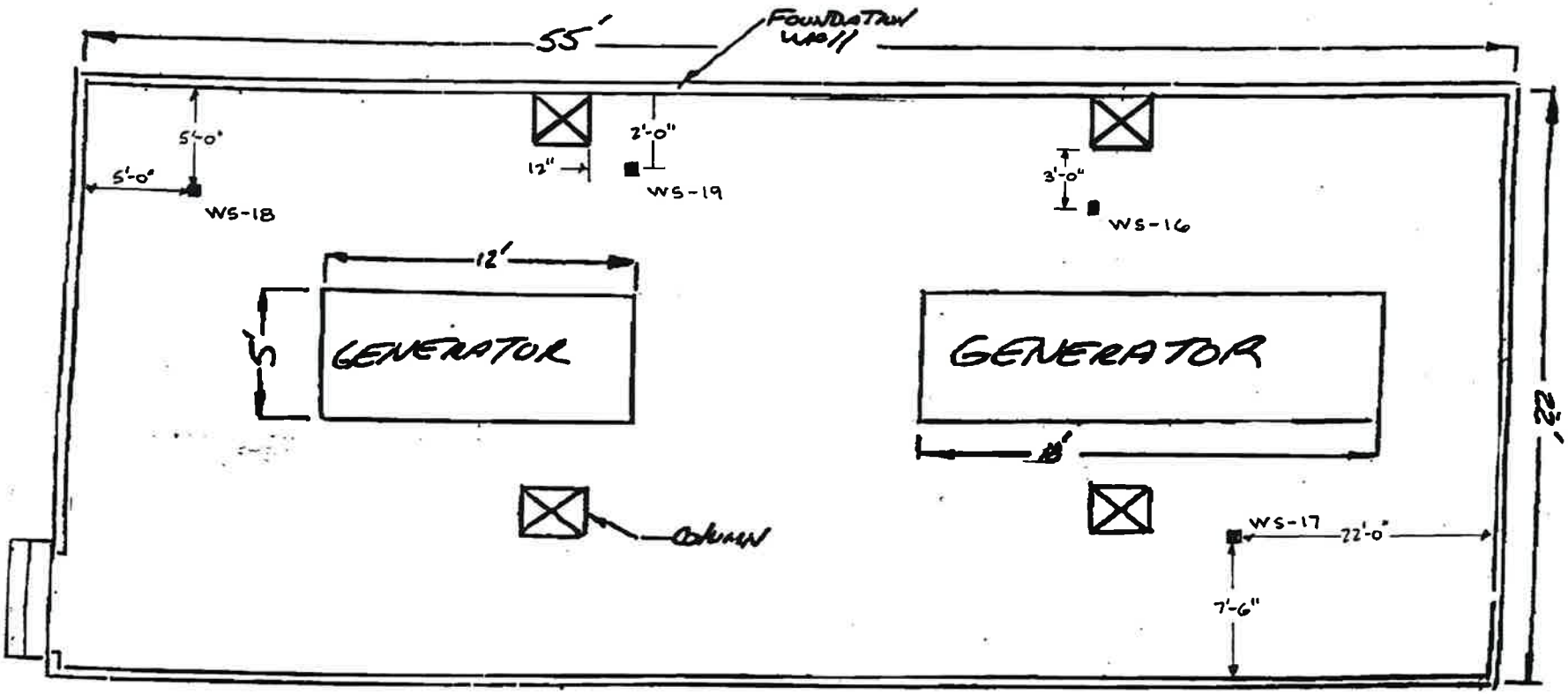


ELECTRICAL ROOM #1

12/1/98

BRONX PSYC HOSPITAL	
NYSTATE OGS	

December 1998



ELECTRICAL ROOM #2

12/1/98

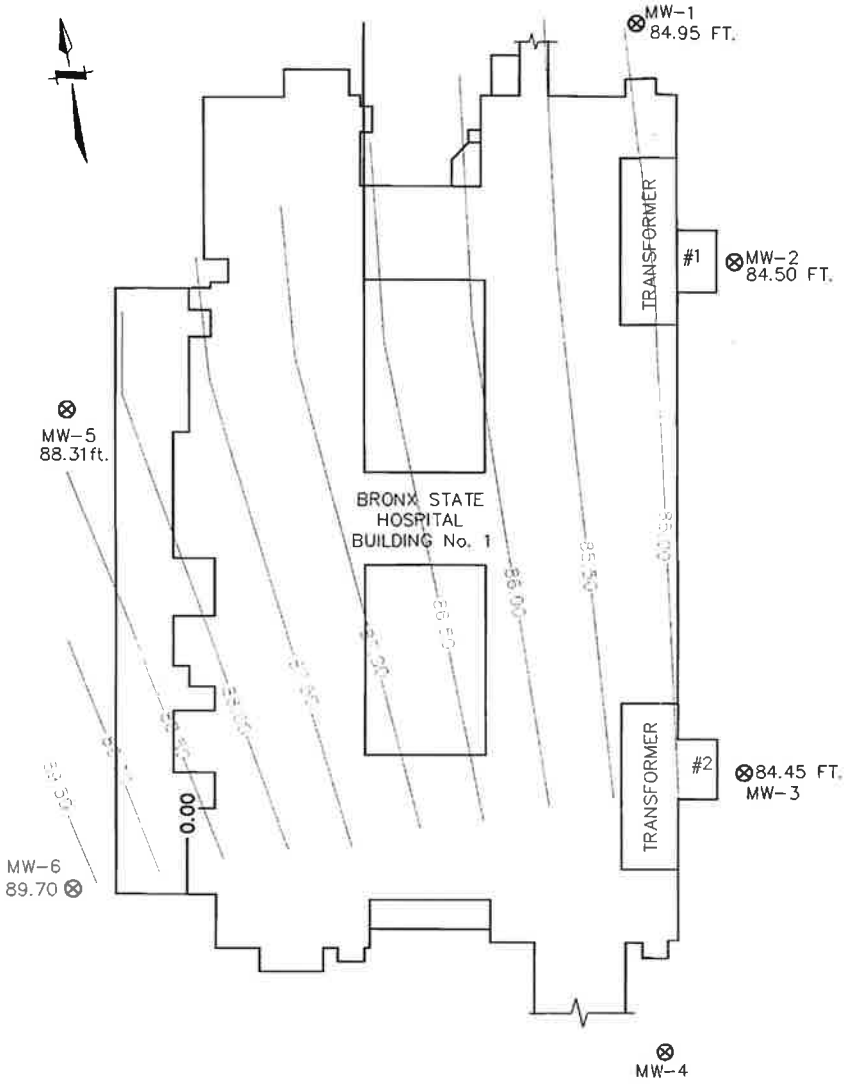
BRONX PSYC. HOSPITAL
[illegible] CONTRACTOR 5-9-99 TPB
NY STATE OGS

December 1998

M:\CADD\FDCE\9605\BPHMAP.DWG February 04 1999 10:22am By:cadd2

WELL #	WATER TABLE ELEVATION
MW-1	84.95'
MW-2	84.50'
MW-3	84.45'
MW-4	NM
MW-5	88.31'
MW-6	89.70'

* NM – NOT MEASURED



LEGEND

⊗ MONITORING WELL

85.44 CONTOUR (FT)

FIGURE 1.0

BRONX PSYCHIATRIC HOSPITAL

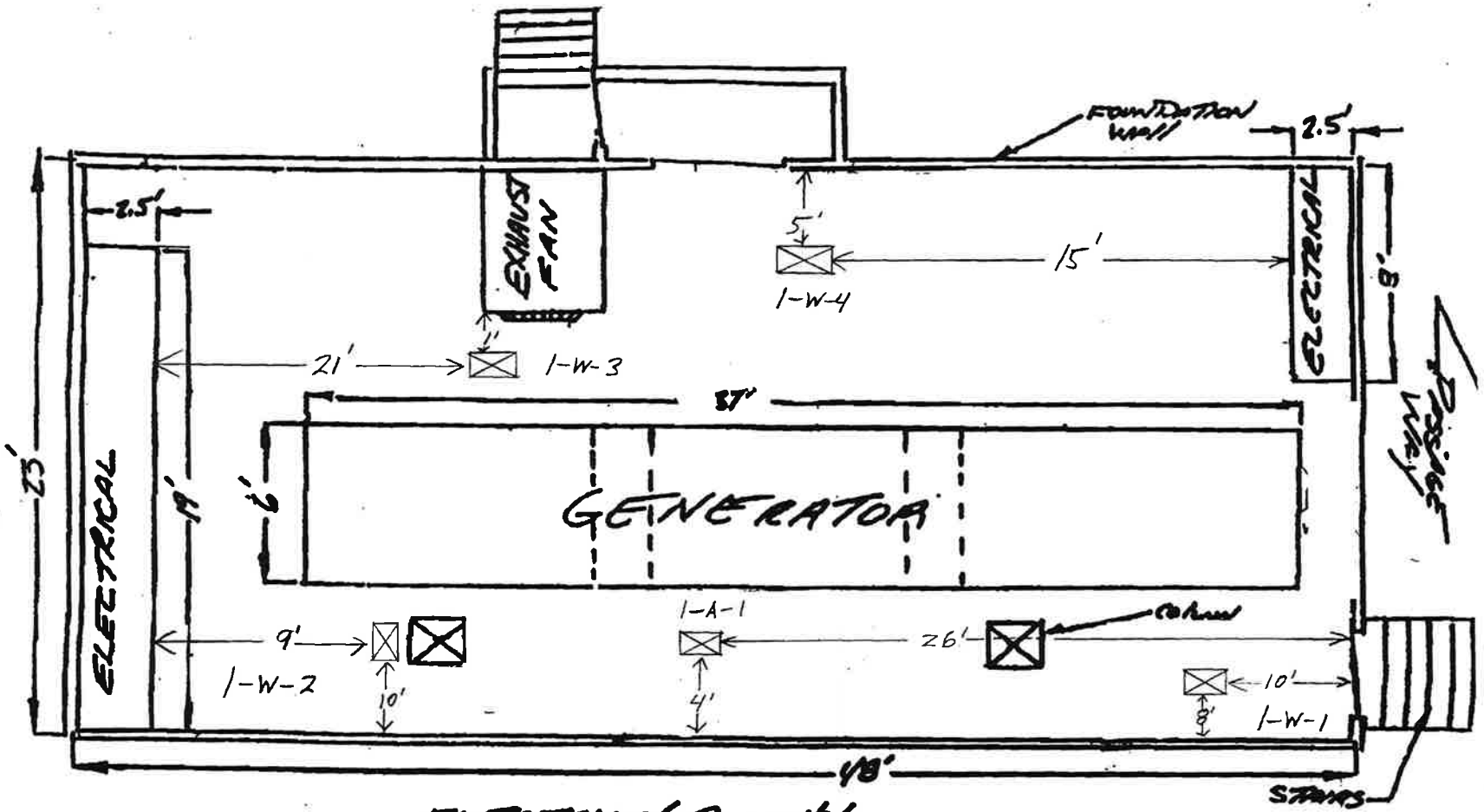
GROUNDWATER ELEVATION CONTOUR MAP

JANUARY 8, 1999

ASSUMED SCALE: 1" = 40 ft.

January 1999

H2MGROUP ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS
MELVILLE, N.Y. TOTOWA, N.J



ELECTRICAL ROOM #1

PCB Air and Wipe Sample Locations

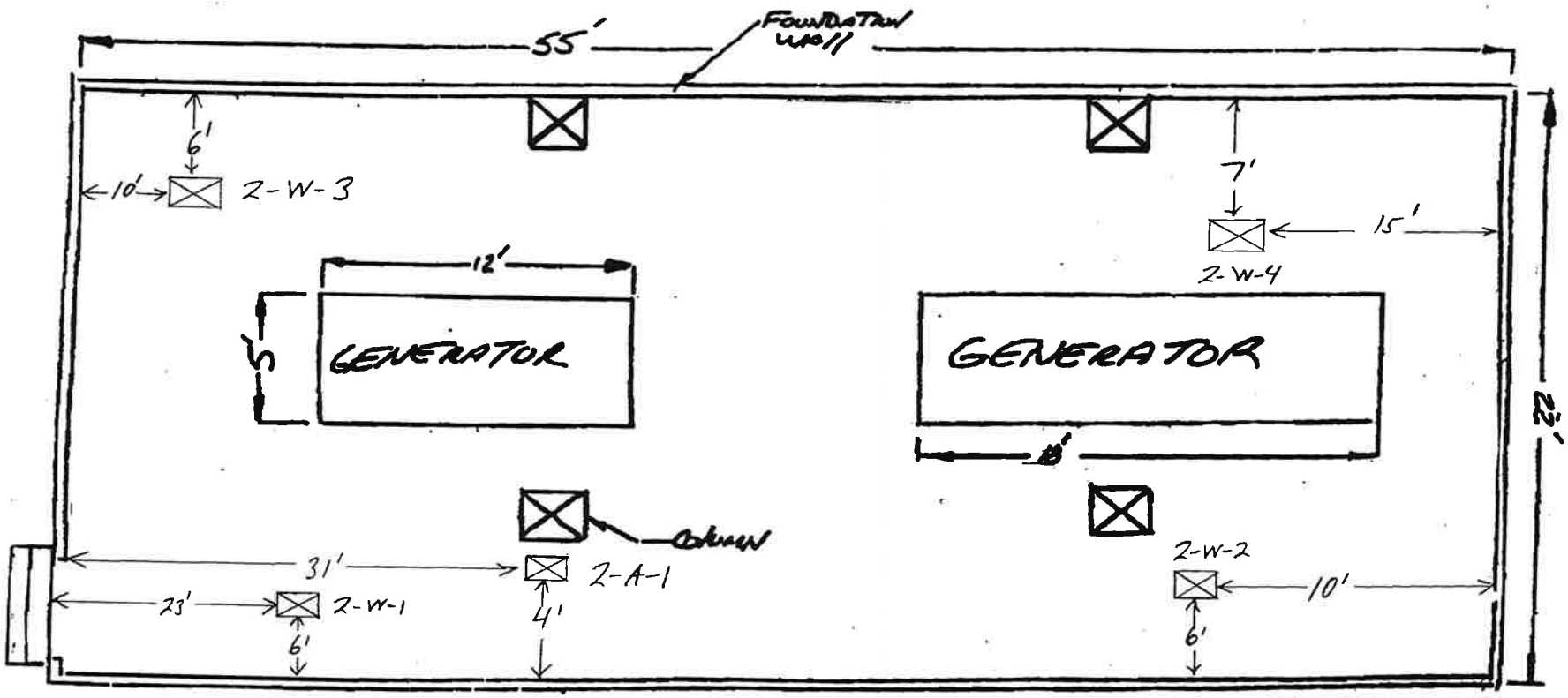
Bronx P.C.

May 4, 1999

(Not to Scale)

BRONX PSYC HOSPITAL
NY STATE OGS

April/May 1999



ELECTRICAL ROOM #2

PCB Air and Wipe Sample Locations

Bronx P.C.

May 4, 1999

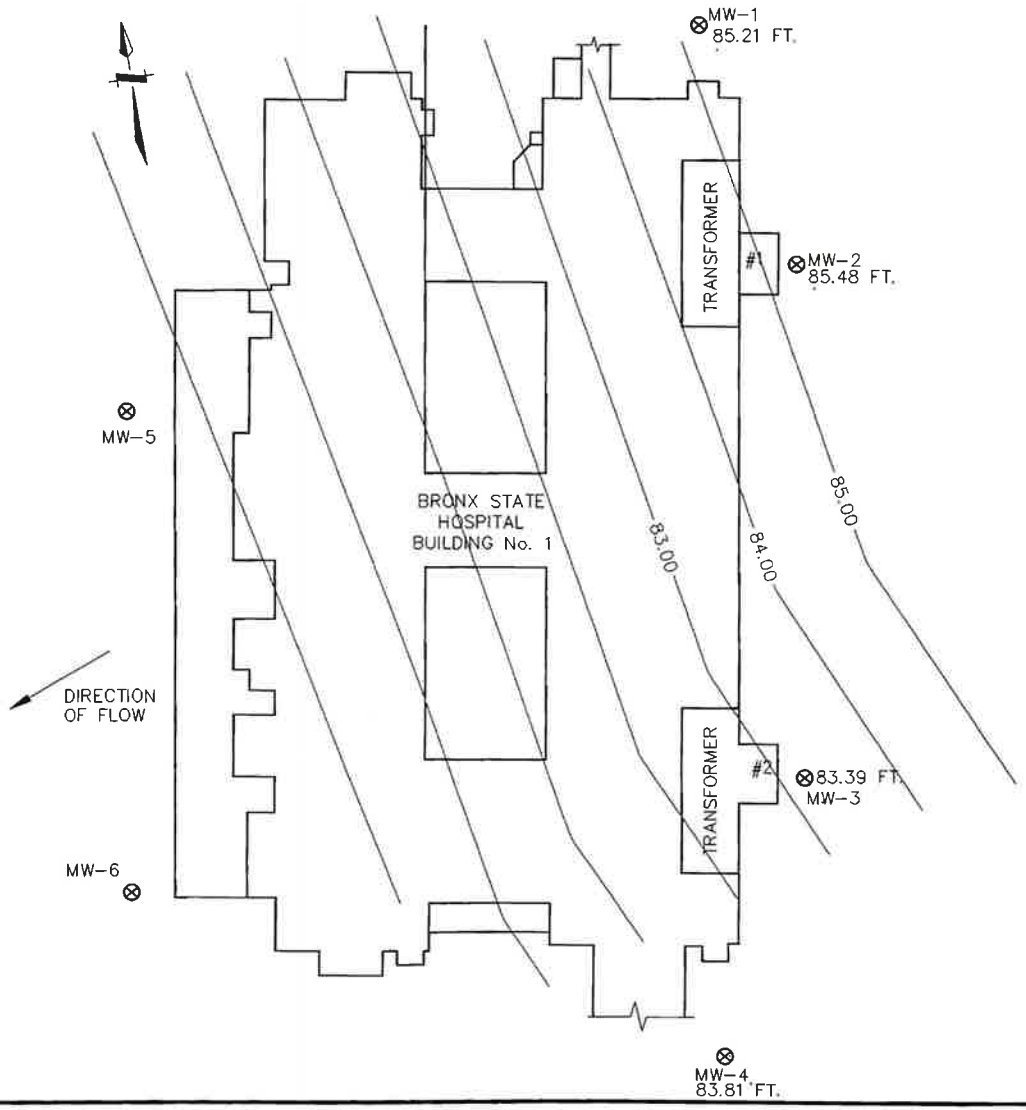
(Not to Scale)

BRONX PSYC. HOSPITAL
Weather Conditions 5-9-99 TPB
NY STATE OGS

April/May 1999

M:\CADD\FDCE\9605\GWMAP.DWG May 21 1999 12:47pm By:pb

WELL #	WATER TABLE ELEVATION
MW-1	85.21'
MW-2	85.48
MW-3	83.39'
MW-4	83.81'



LEGEND

⊗ MONITORING WELL

85.44 CONTOUR (FT)

FIGURE 1.0

BRONX PSYCHIATRIC HOSPITAL

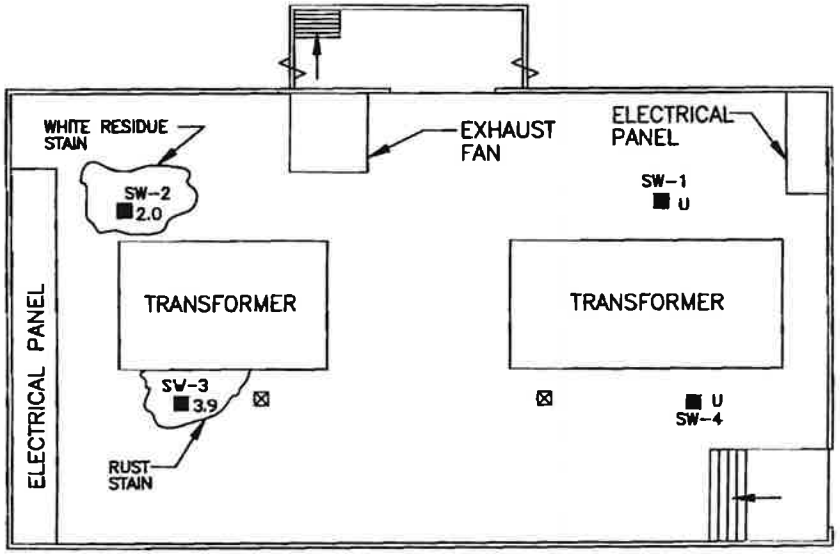
GROUNDWATER ELEVATION CONTOUR MAP

APRIL 26., 1999

ASSUMED SCALE: 1" = 40 ft.

April 1999

H2MGROUP ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS
MELVILLE, N.Y. TOTOWA, N.J.



LEGEND

SW-1 ■ SW-1 — FLOOR WIPE SAMPLE LOCATION (10/27/99); AROCHLOR 1'260 CONCENTRATION (ug/100cm²)

U — UNDETECTED

⊠ — STRUCTURAL COLUMN

0 5 10

SCALE IN FEET (APPROXIMATE)

October 1999

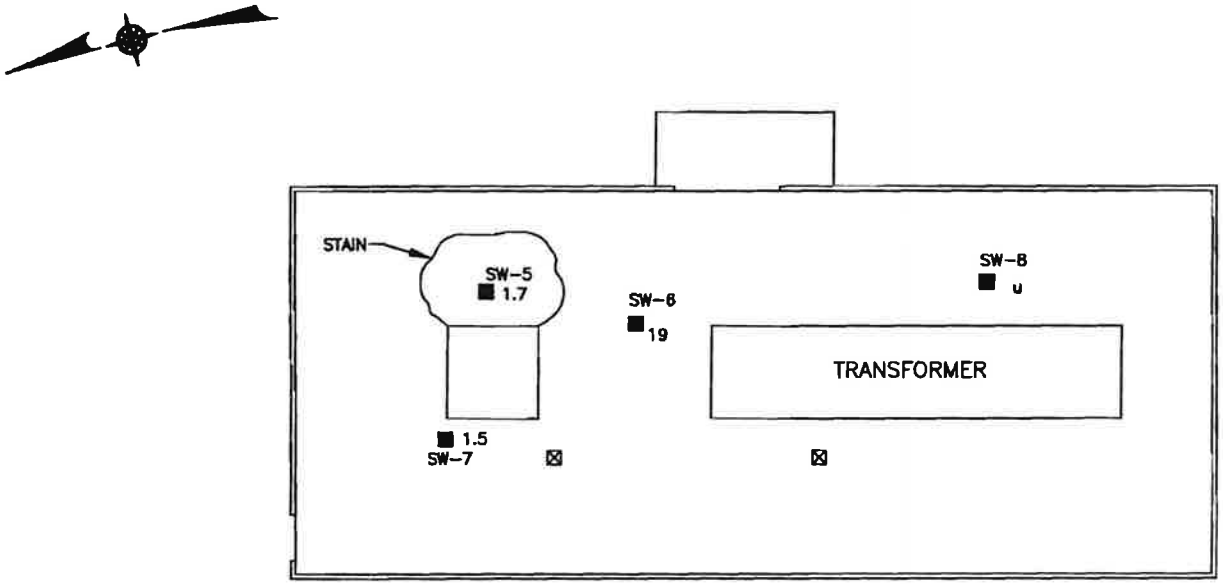
NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

WIPE SAMPLE LOCATIONS TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1

MON, DEC 13, 1999 02:43 P DGC E:\1700\DRAWING1700-1.DWG



LEGEND

SW-5 ■ FLOOR WIPE SAMPLE LOCATION (10/27/99)

2.0 AROCHLOR 1260 CONCENTRATION (ug/100cm²)

⊠ STRUCTURAL COLUMN

0 5 10

SCALE IN FEET (APPROXIMATE)

October 1999

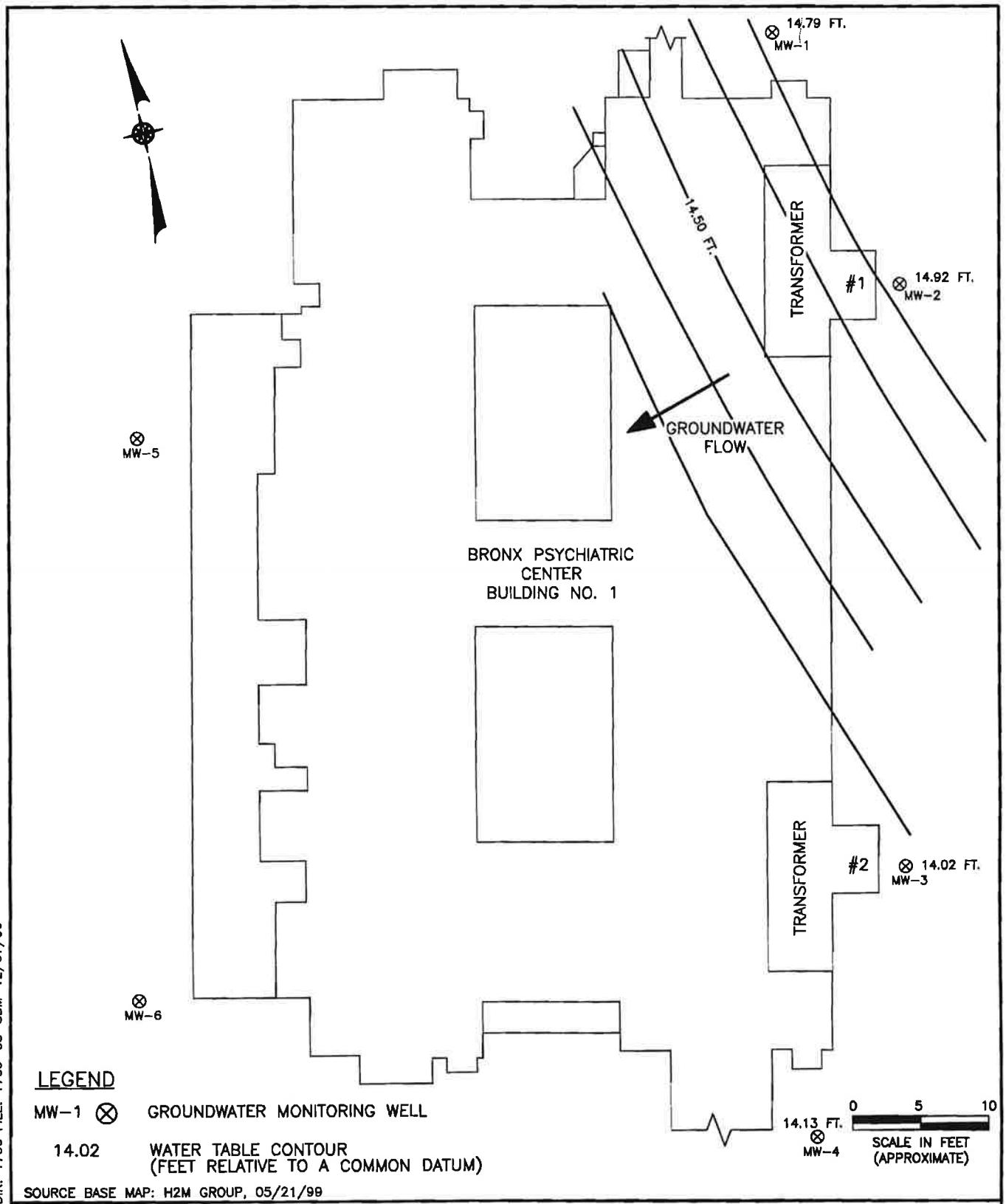
NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

WIPE SAMPLE LOCATIONS TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

MON, DEC 13, 1999 02:46 P DGC E:\1700\DRAWING\1700-2.DWG



LEGEND

MW-1 ⊗ GROUNDWATER MONITORING WELL

14.02 WATER TABLE CONTOUR
(FEET RELATIVE TO A COMMON DATUM)

SOURCE BASE MAP: H2M GROUP, 05/21/99

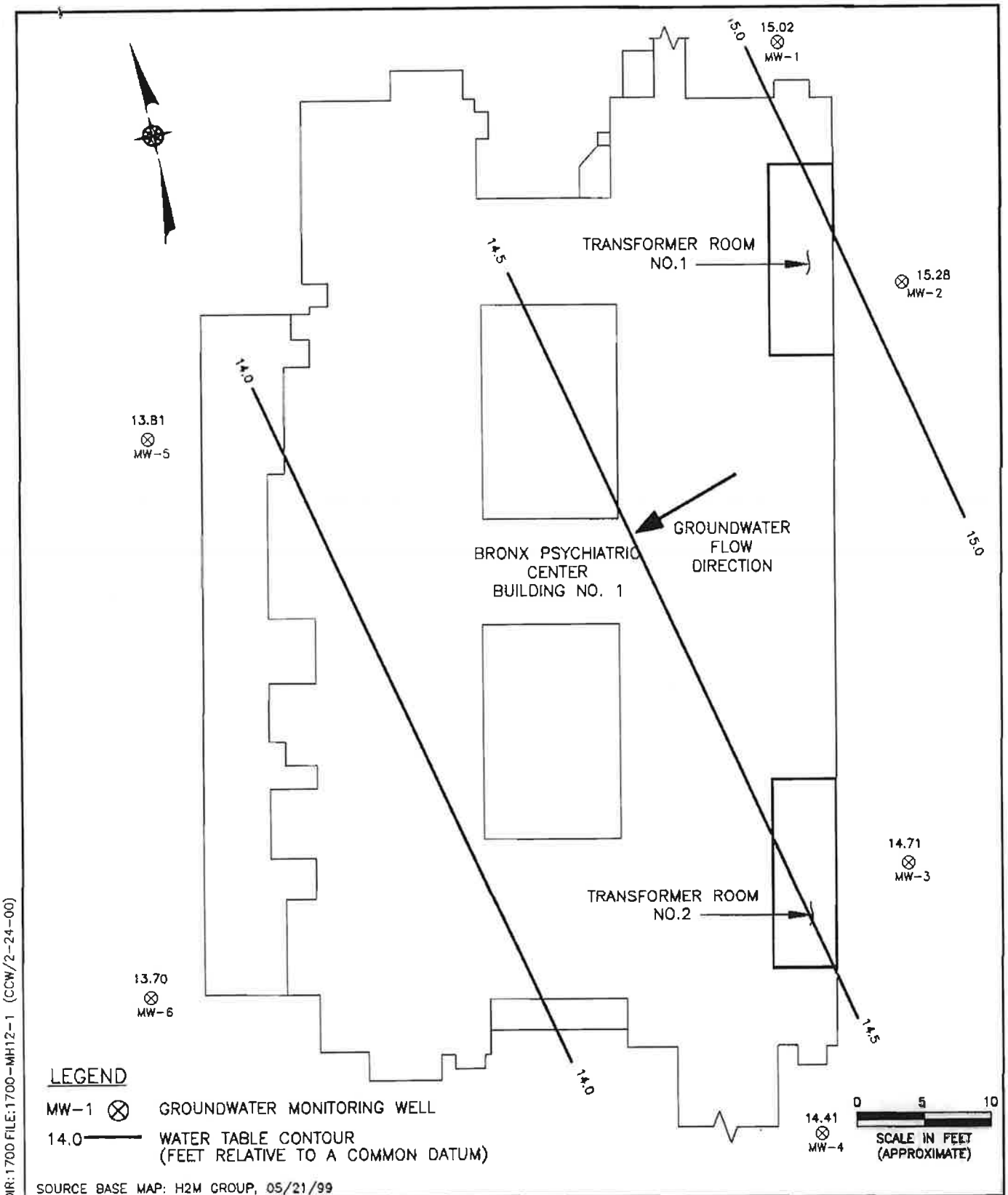
DIR: 1700 FILE: 1700-03-SDM-12/07/99

NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
OCTOBER 27, 1999

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3



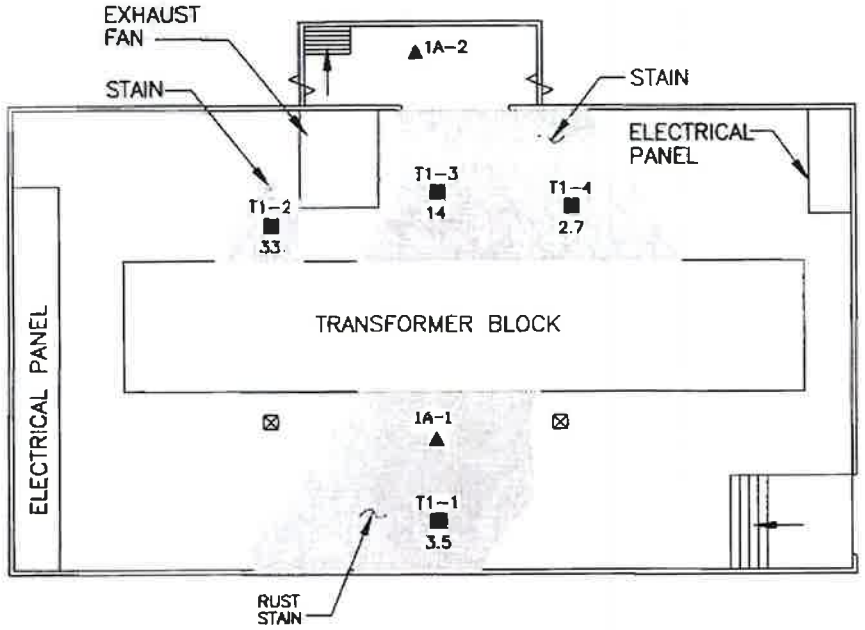
DIR:1700 FILE:1700-MH12-1 (CCW/2-24-00)

NEWYORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
MAY 3, 2000

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1



LEGEND

▲ AIR SAMPLE LOCATION (05-04-00)

T1-2 ■ FLOOR WIPE SAMPLE LOCATION (05-10-00)

1.4 AROCHLOR 1260 CONCENTRATION (ug/100cm²)

⊠ STRUCTURAL COLUMN

0 5 10

SCALE IN FEET (APPROXIMATE)

May 2000

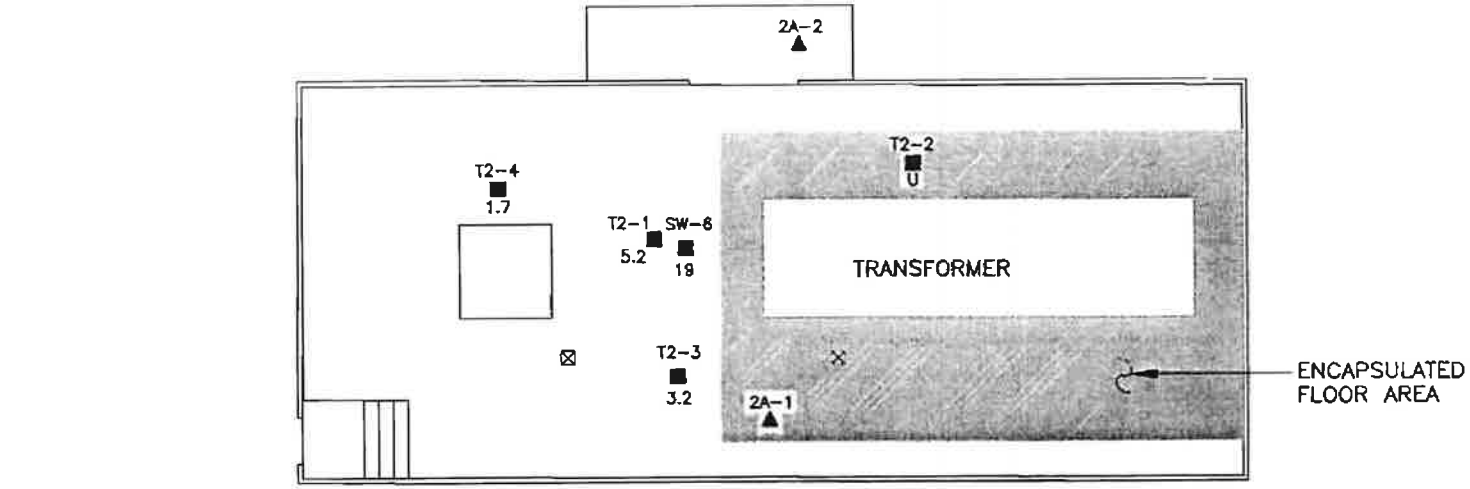
NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

MON, DEC 13, 1999 02:43 P CCW E:\1700\DRAWING\1700-MH12-2.DWG



LEGEND

- ▲ AIR SAMPLE LOCATION (05-04-00)
- T2-1 ■ FLOOR WIPE SAMPLE LOCATION (05-10-00)
- 2.0 AROCHLOR 1260 CONCENTRATION (ug/100cm²)
- ⊠ STRUCTURAL COLUMN

NOTE: SW-6 COLLECTED ON 10-27-99

May 2000

0 5 10
SCALE IN FEET
(APPROXIMATE)

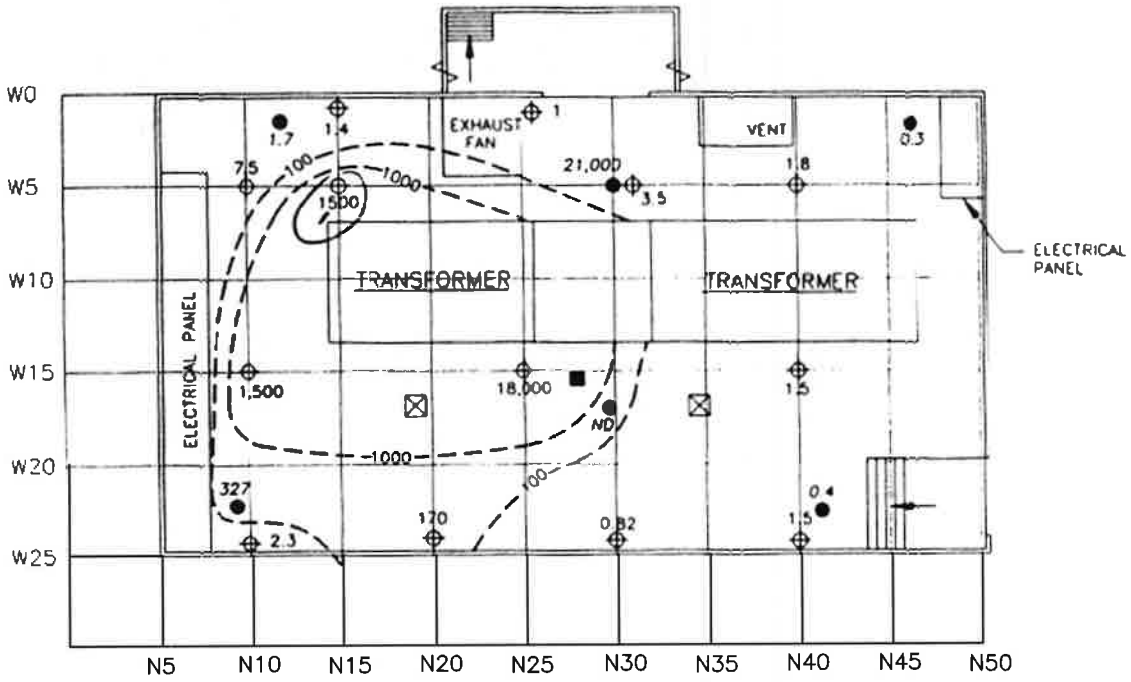
NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

MON, DEC 13, 1999 02:46 P DGC E:\1700\DRAWING\1700-MH12-3.DWG



LEGEND

- ● PREVIOUS CONCRETE FLOOR CORE SAMPLE ANALYZED IN 1993
- ⊕ CURRENT INVESTIGATION CONCRETE FLOOR CORE SAMPLE
- CONTOUR OF PCB CONCENTRATION IN PPM (BASED ON 8/2000 RESULTS)
- ■ FORMER DRAIN
- ⊠ STRUCTURAL COLUMN
- GRID SCALE AND REFERENCE

NOTES

CONCENTRATIONS IN PPM

ND NOT DETECTED

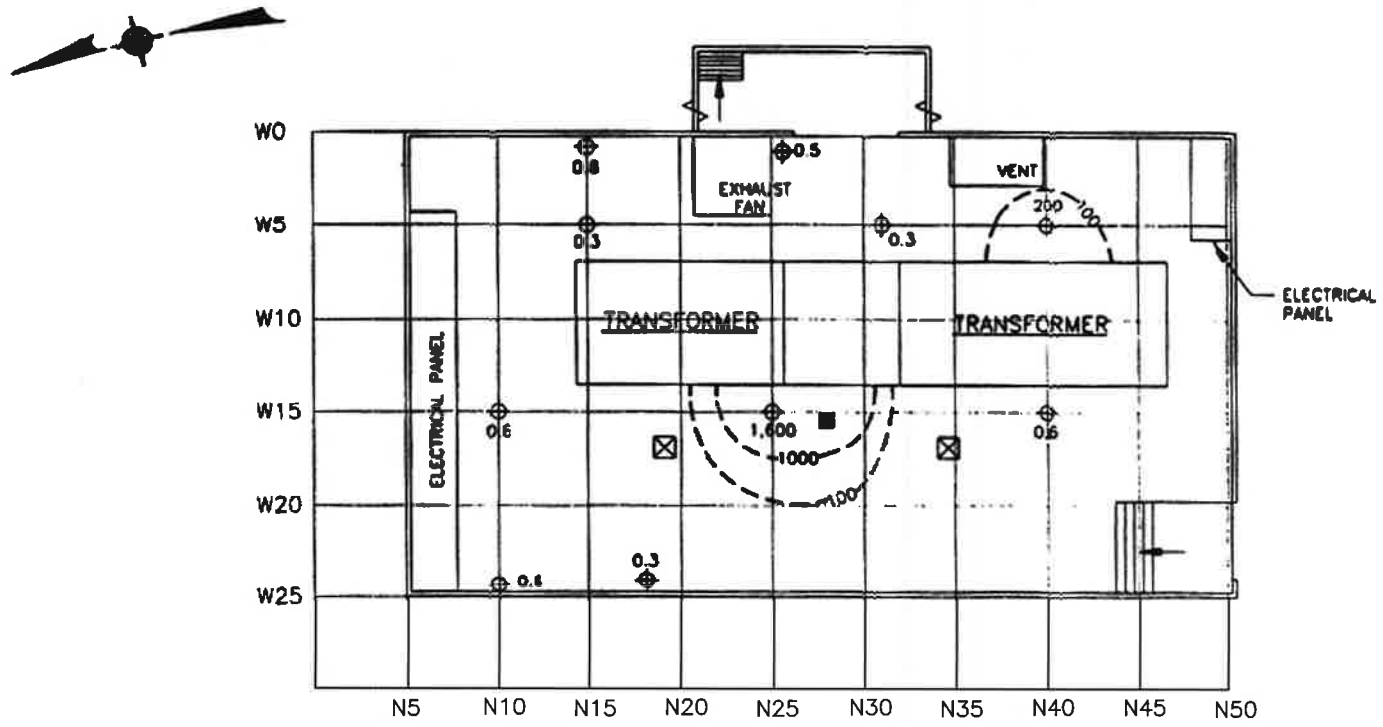
0 5 10
SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN TOP–INCH OF CONCRETE FLOOR CORE SAMPLES–TRANSFORMER ROOM No. 1
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095–06	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2–5



LEGEND

- CONCRETE FLOOR CORE
- CONTOUR OF PCB CONCENTRATION IN PPM (BASED ON 8/2000 RESULTS)
- FORMER DRAIN
- STRUCTURAL COLUMN
- GRID SCALE AND REFERENCE (W0, W5, 30 B5)

NOTES

CONCENTRATIONS IN PPM

ND NOT DETECTED

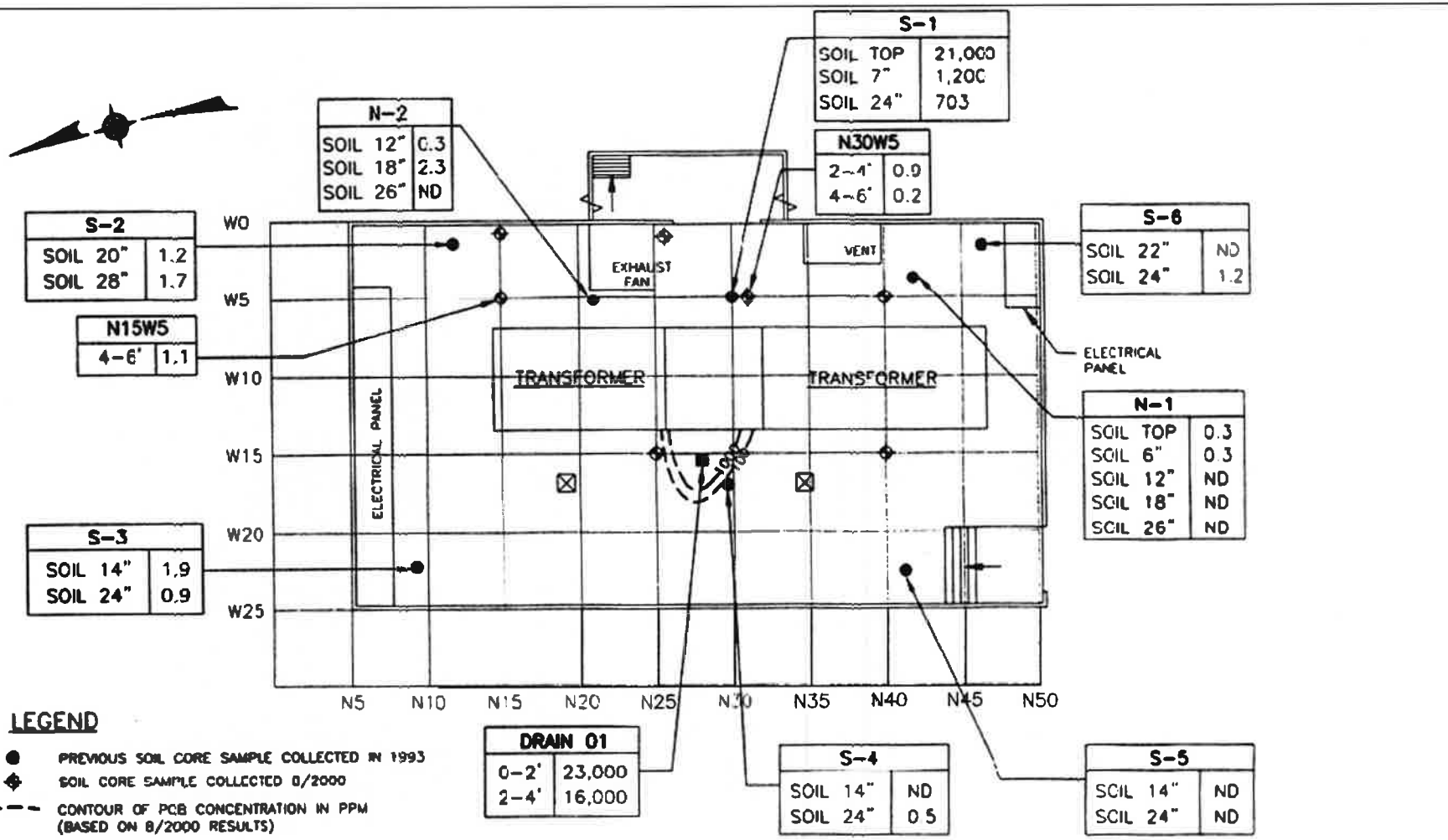
0 5 10
SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN BOTTOM–INCH OF CONCRETE FLOOR CORE SAMPLES–TRANSFORMER ROOM No. 1
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095–07	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2–6



LEGEND

- PREVIOUS SOIL CORE SAMPLE COLLECTED IN 1993
- SOIL CORE SAMPLE COLLECTED 8/2000
- CONTOUR OF PCB CONCENTRATION IN PPM (BASED ON 8/2000 RESULTS)
- FORMER DRAIN
- STRUCTURAL COLUMN
- GRID SCALE AND REFERENCE (W0, W5 / S0, S5)

NOTES

CONCENTRATIONS IN PPM
ND NOT DETECTED
DEPTHS ARE BELOW FLOOR

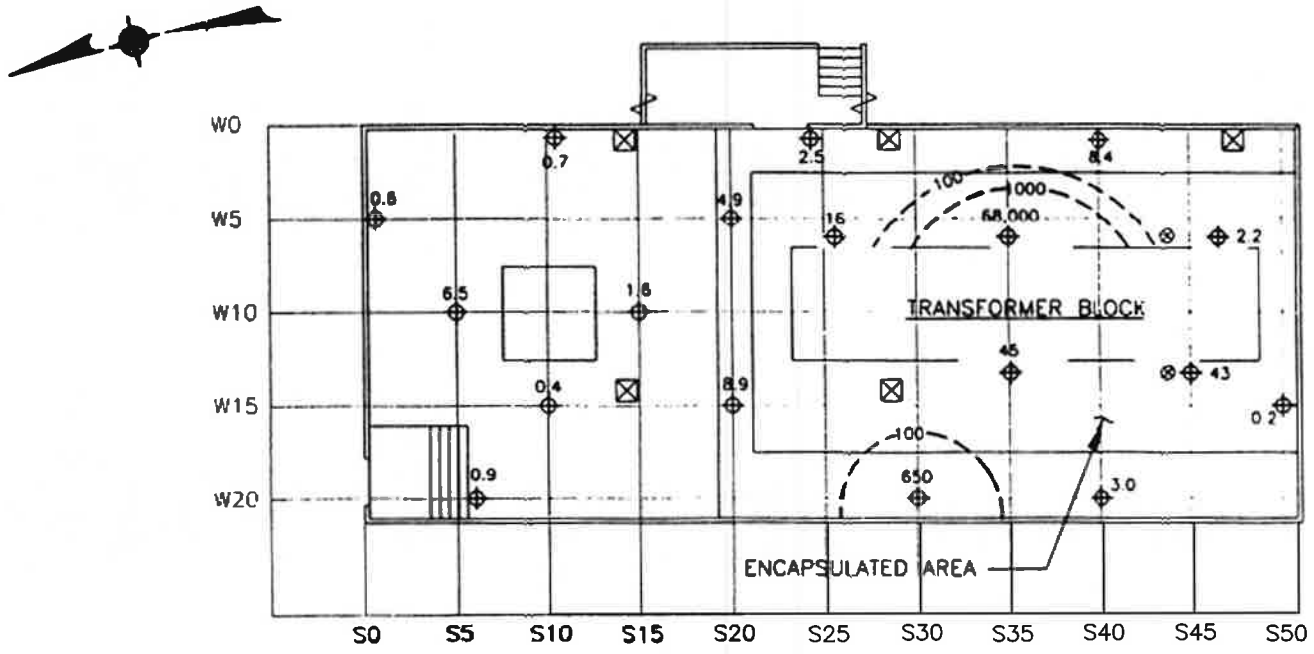
0 5 10
SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN SOIL SAMPLES
TRANSFORMER ROOM No. 1
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-08	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-7



LEGEND

- ⊕ CONCRETE FLOOR CORE COLLECTED 8/2000
- ---- CONTOUR OF PCB CONCENTRATION IN PPM (BASED ON 8/2000 RESULTS)
- ⊗ PLUGGED FLOOR DRAIN
- ⊠ STRUCTURAL COLUMN
- W0 / W5 / S0 / S5 GRID SCALE AND REFERENCE
- REPORTED APPROXIMATE STAIN LOCATION 5/9/94 (APPLIED SERVICES TECHNOLOGIES, INC. 1995)

NOTE:

CONCENTRATIONS IN PPM

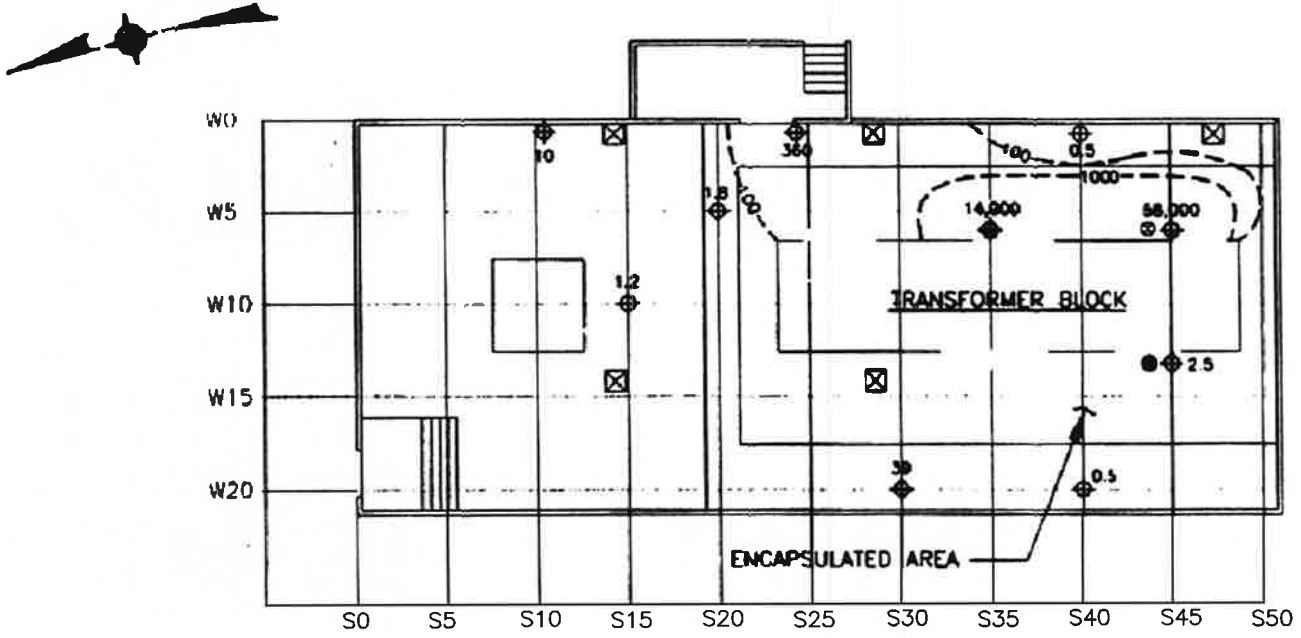
0 5 10
SCALE (FEET)

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN TOP-INCH OF CONCRETE FLOOR CORE SAMPLES-TRANSFORMER ROOM No. 2
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO.38395095-09	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-8



LEGEND

- CONCRETE FLOOR CORE COLLECTED 8/2000
- CONTOUR OF PCB CONCENTRATION IN PPM (8/2000 RESULTS)
- PLUGGED FLOOR DRAIN
- STRUCTURAL COLUMN
- GRID SCALE AND REFERENCE
- REPORTED APPROXIMATE STAIN LOCATION 5/9/94 (APPLIED TECHNOLOGY SERVICES, INC. 1995)

0 5 10
SCALE (FEET)

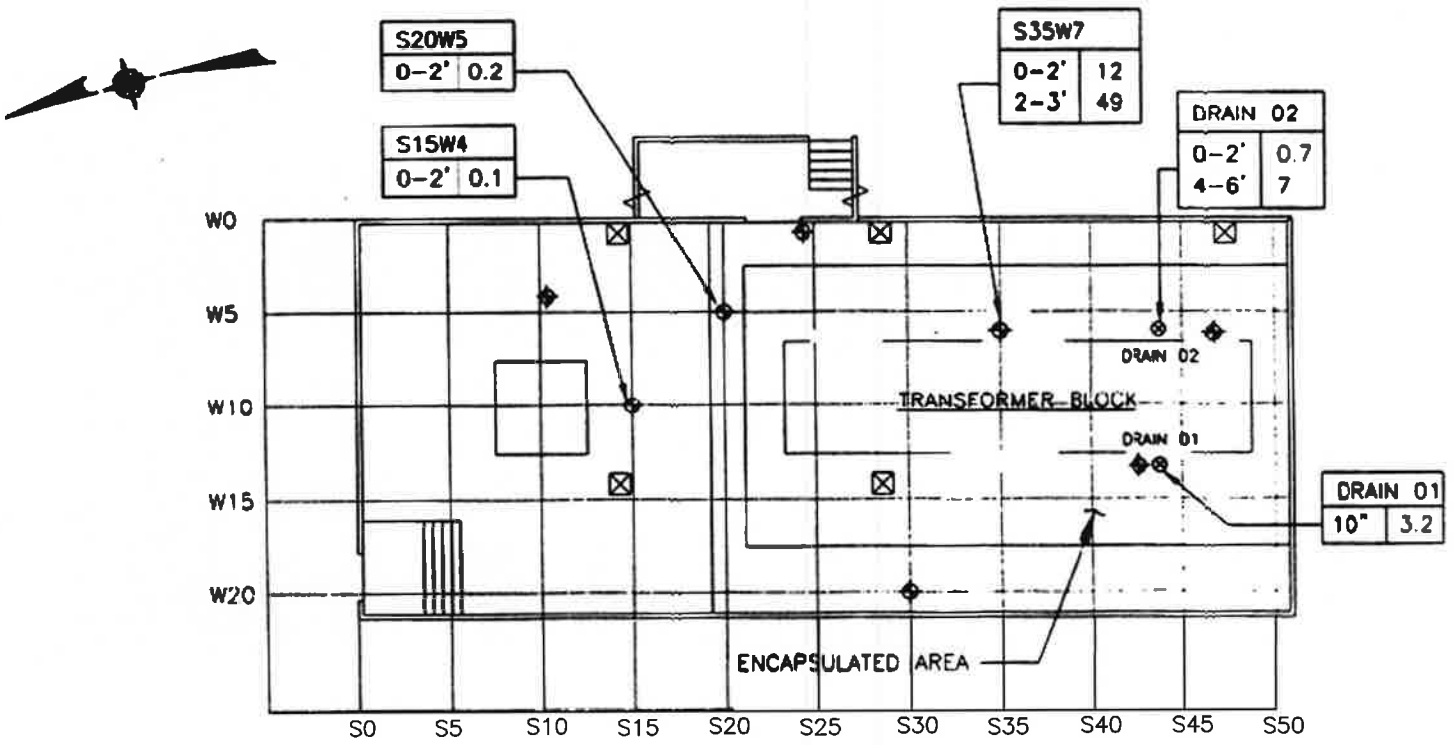
NOTE:
CONCENTRATIONS IN PPM

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN BOTTOM–INCH OF CONCRETE FLOOR CORE SAMPLES–TRANSFORMER ROOM No. 2
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO. 38395095–10	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2–9



LEGEND

- SOIL SAMPLE CORE COLLECTED 8/2000
- PLUGGED FLOOR DRAIN
- STRUCTURAL COLUMN
- GRID SCALE AND REFERENCE
- REPORTED APPROXIMATE STAIN LOCATION 5/9/94 (APPLIED TECHNOLOGY SERVICES, INC. 1995)

0 5 10
SCALE (FEET)

NOTE:

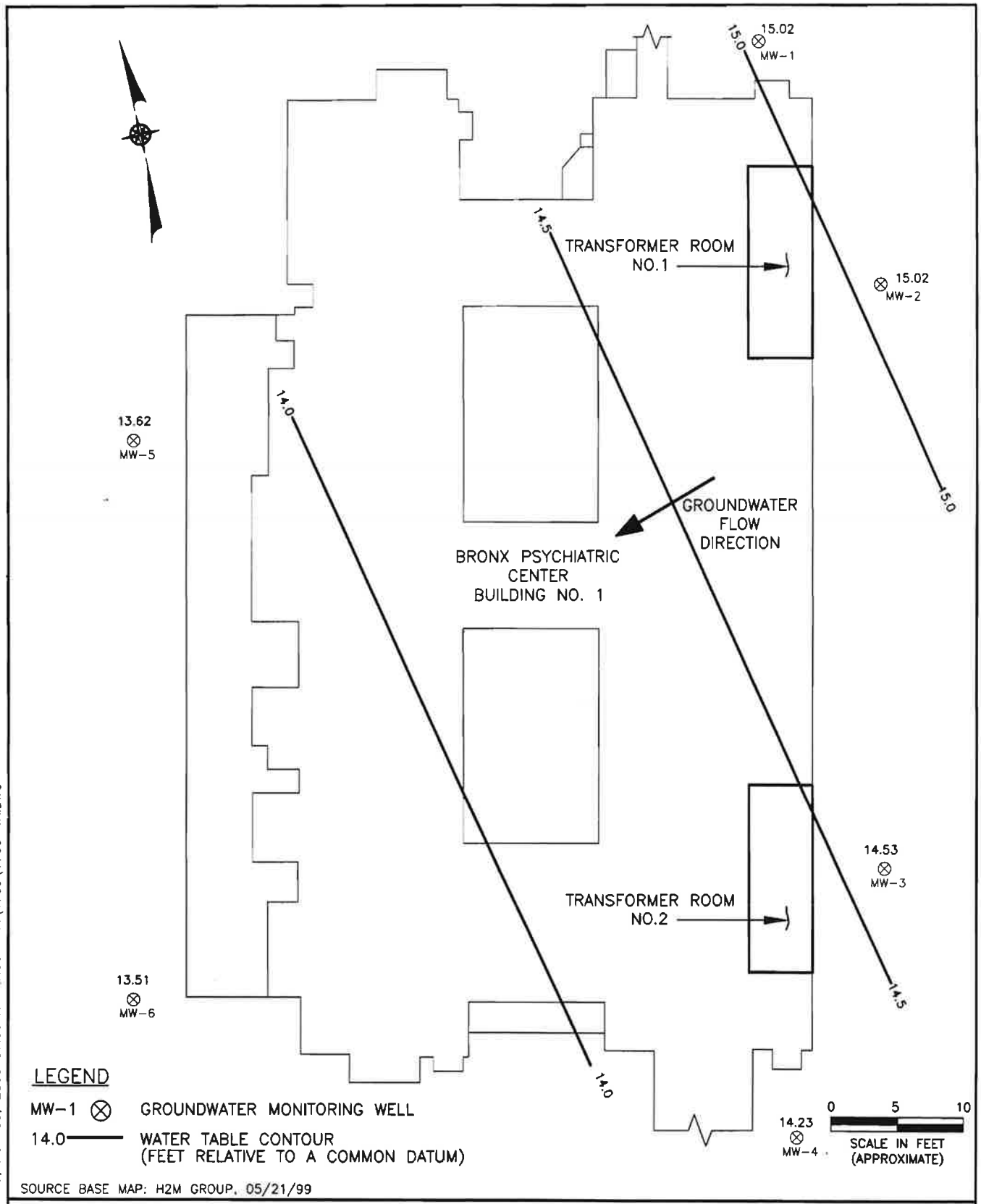
CONCENTRATIONS IN PPM
DEPTHS ARE BELOW FLOOR

MAP SOURCE:
DVIRKA AND BARTILUCCI CONSULTING ENGINEERS, NOV., 2000.

PCB CONCENTRATIONS IN SOIL SAMPLES
TRANSFORMER ROOM No. 2
STATE OF NEW YORK OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

URS
CLIFTON, NEW JERSEY

DR. BY	ET	SCALE AS SHOWN	DWG. NO. 38395095-11	PROJ. NO.	38395095
CK'D. BY	SK	DATE	JULY 9, 2012	FIG. NO.	2-10



SOURCE BASE MAP: H2M GROUP, 05/21/99

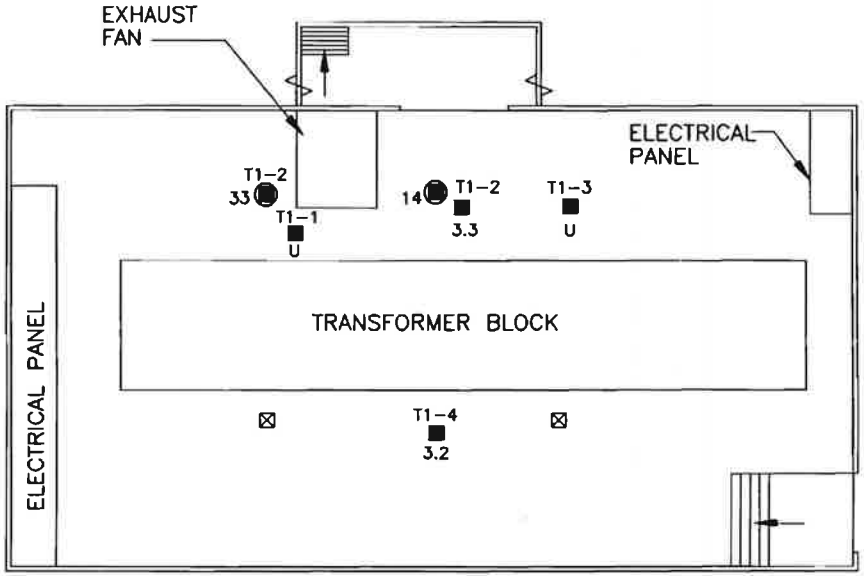
THU, NOV 09, 2000 07:56 A T.MCC F:\1700\1700-1A.DWG

NEWYORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
OCTOBER 5, 2000

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1



LEGEND

- FLOOR WIPE SAMPLE LOCATION (05-10-00)
- T1-2 FLOOR WIPE SAMPLE LOCATION (11-5-00)
- 1.4 AROCHLOR 1260 CONCENTRATION (ug/100cm²)
- STRUCTURAL COLUMN

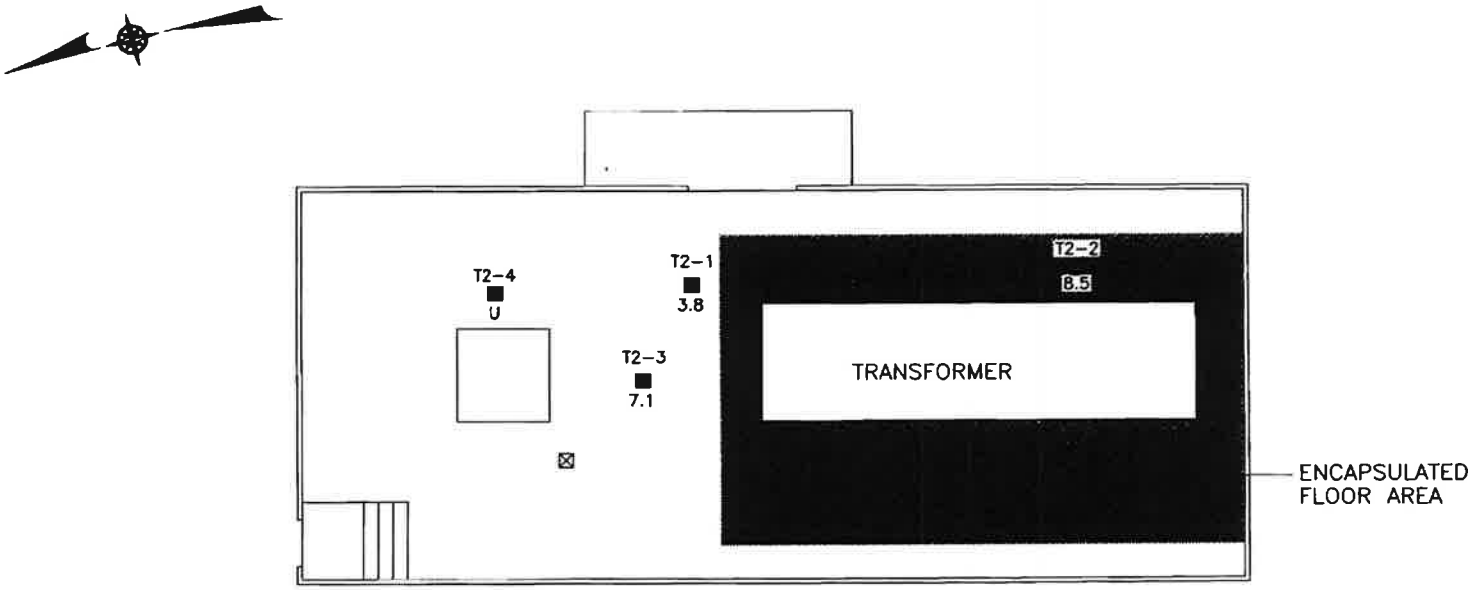
0 5 10
SCALE IN FEET
(APPROXIMATE)

NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2



LEGEND

T2-1 ■ FLOOR WIPE SAMPLE LOCATION (11-05-00)

2.0 AROCHLOR 1260 CONCENTRATION (ug/100cm²)

⊠ STRUCTURAL COLUMN

0 5 10

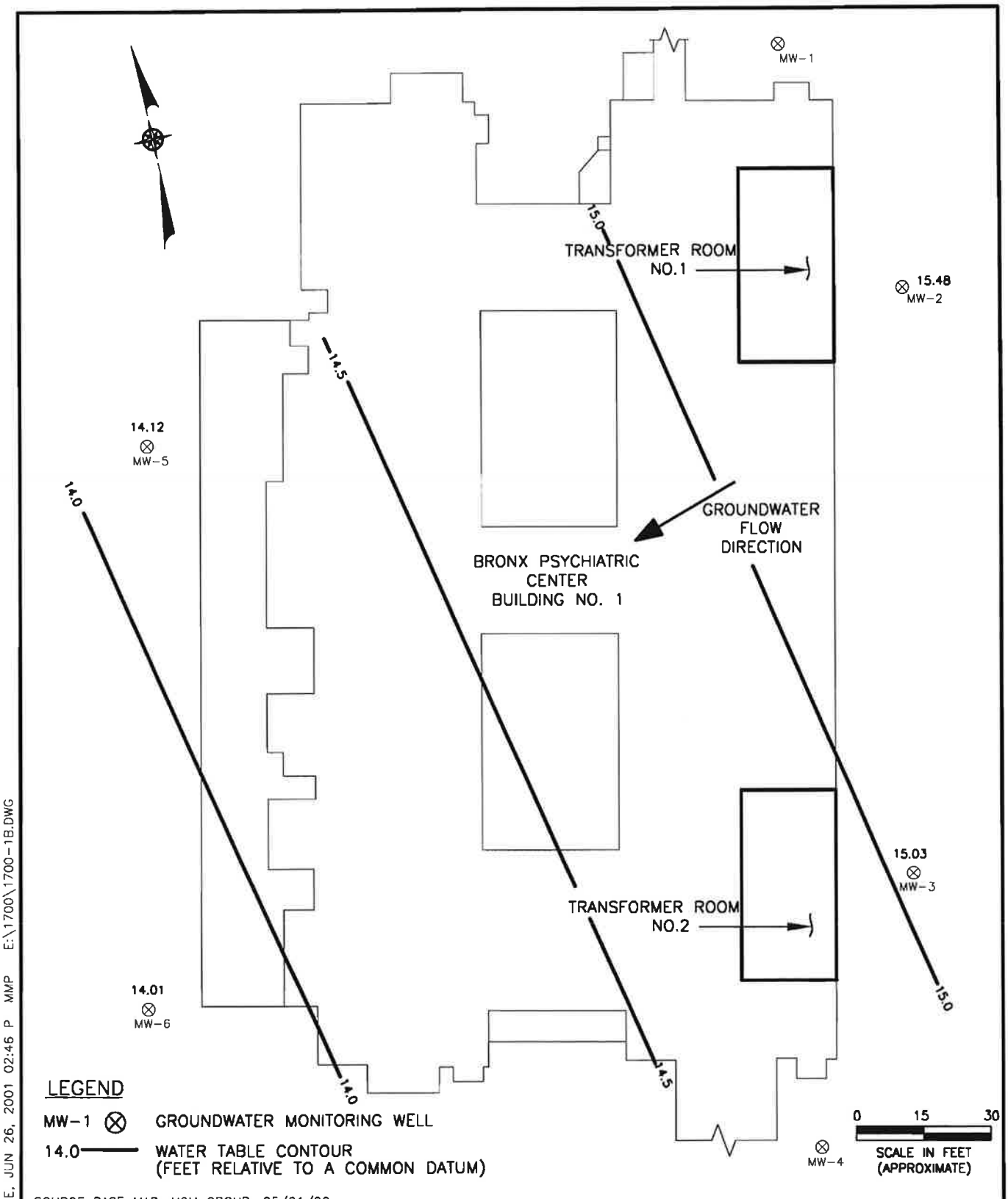
SCALE IN FEET
(APPROXIMATE)

NEW YORK STATE OFFICE OF MENTAL HEALTH
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3



SOURCE BASE MAP: H2M GROUP, 05/21/99

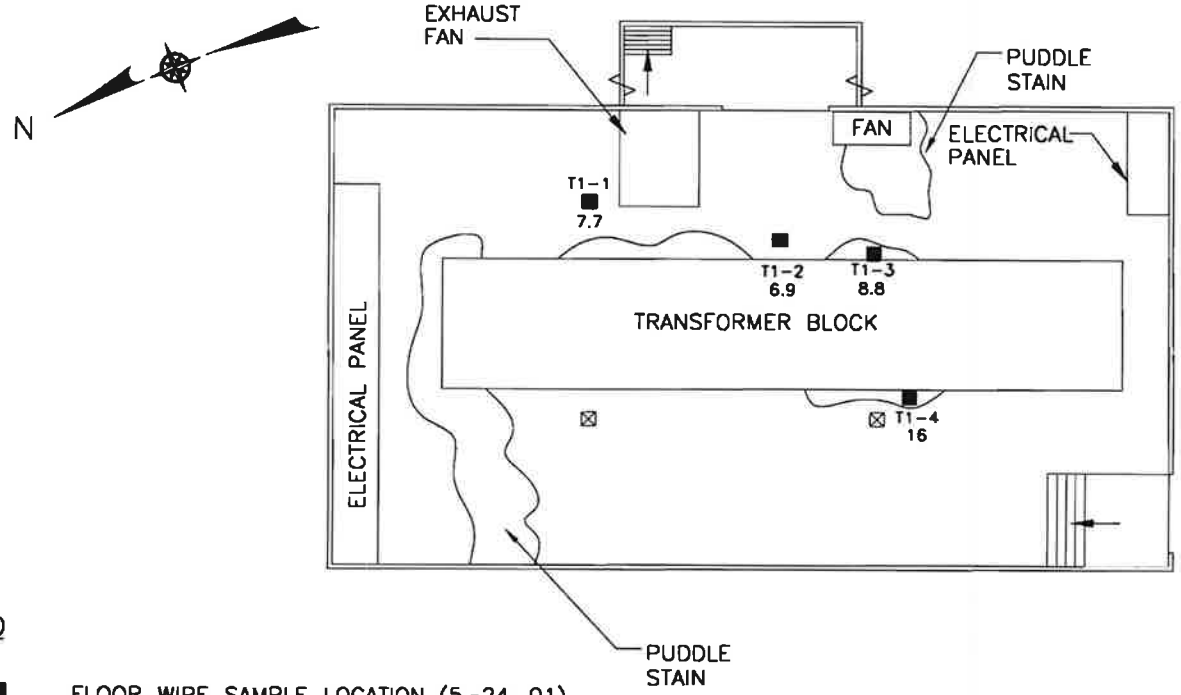
TUE, JUN 26, 2001 02:46 P MMP E:\1700\1700-1B.DWG

DASNY
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
MAY 24, 2001

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1



LEGEND

T1-2 ■ FLOOR WIPE SAMPLE LOCATION (5-24-01)

1.4 AROCHLOR 1260 CONCENTRATION (ug/100cm²)

⊠ STRUCTURAL COLUMN

0 5 10

SCALE IN FEET (APPROXIMATE)

May 2001

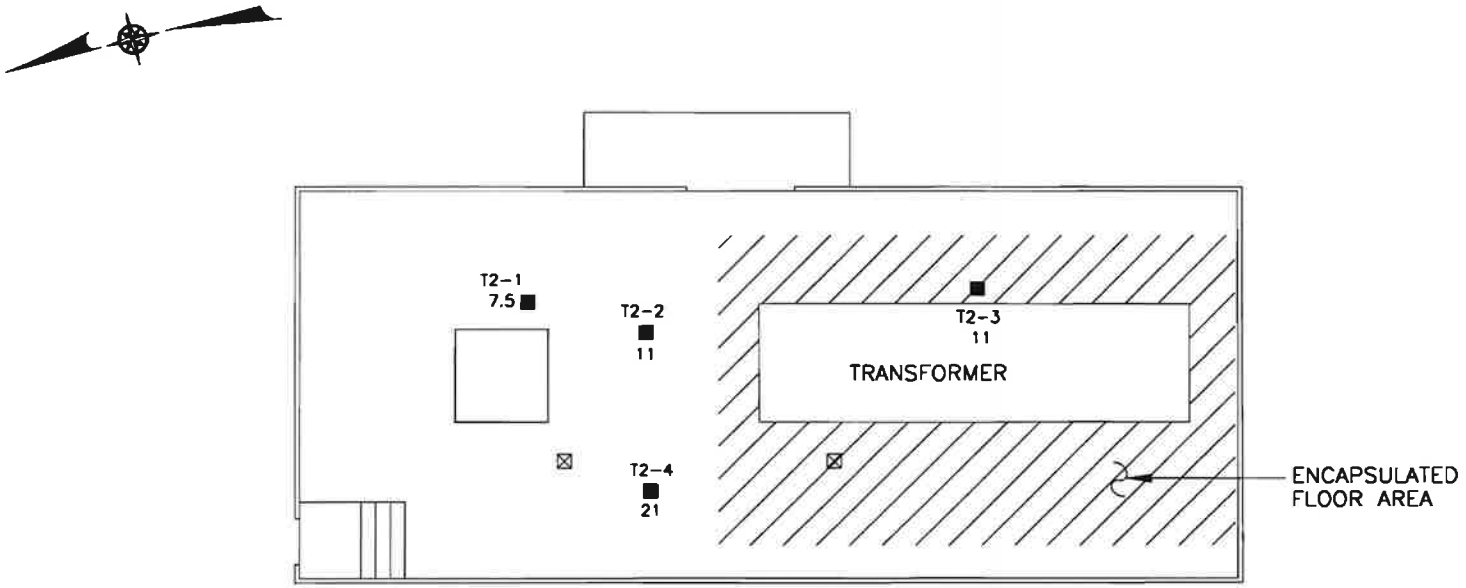
DASNY
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

THU, JUN 28, 2001 10:32 A MMP E:\1700\DRAWING1700-MH12-6.DWG



LEGEND

T2-1 ■ FLOOR WIPE SAMPLE LOCATION (5-24-01)

2.0 AROCHLOR 1260 CONCENTRATION (ug/100cm²)

⊠ STRUCTURAL COLUMN

0 5 10

SCALE IN FEET
(APPROXIMATE)

May 2001

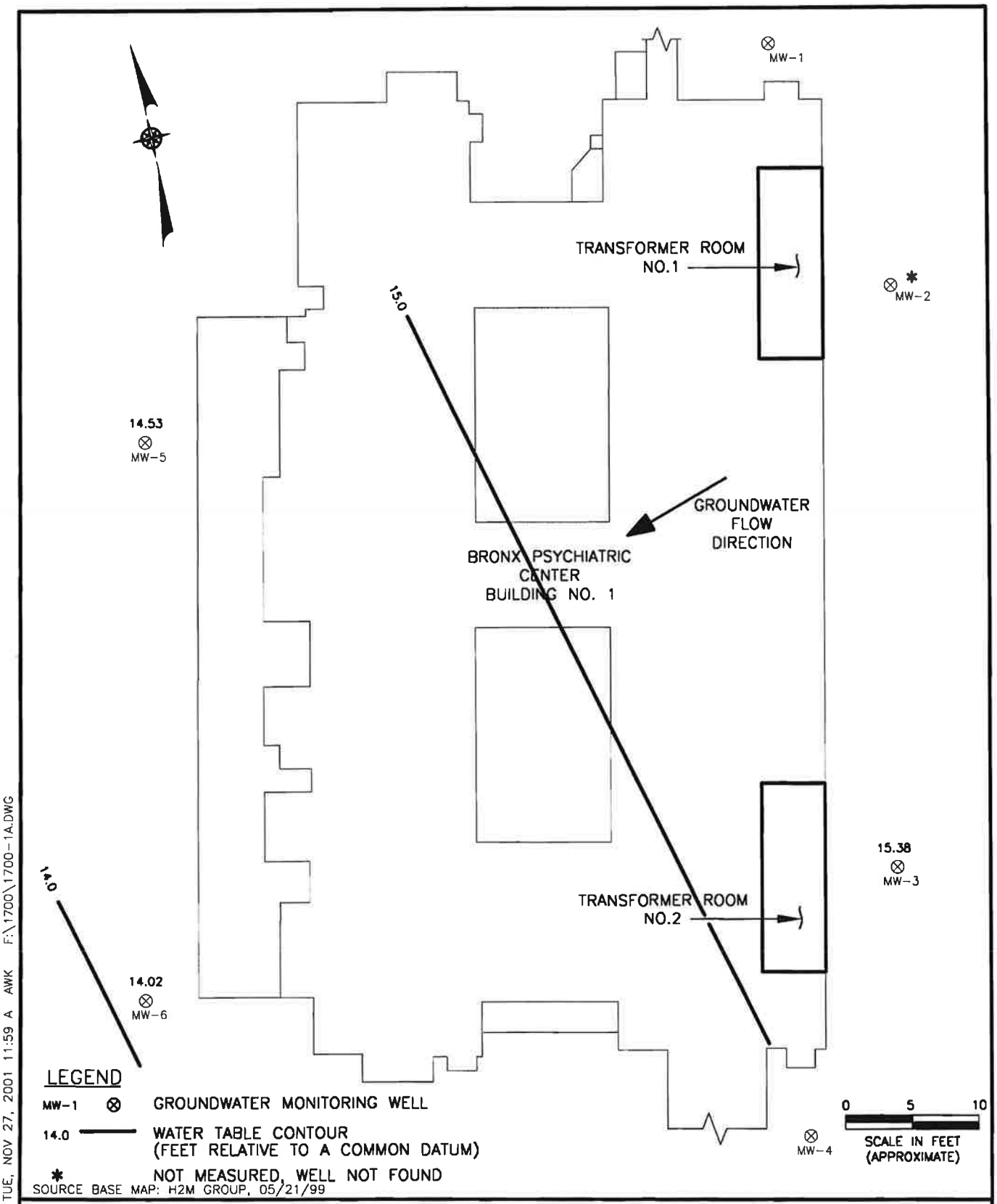
DASNY
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

THU, JUN 28, 2001 10:35 A MMP E:\1700\DRAWING\1700-MH12-5.DWG



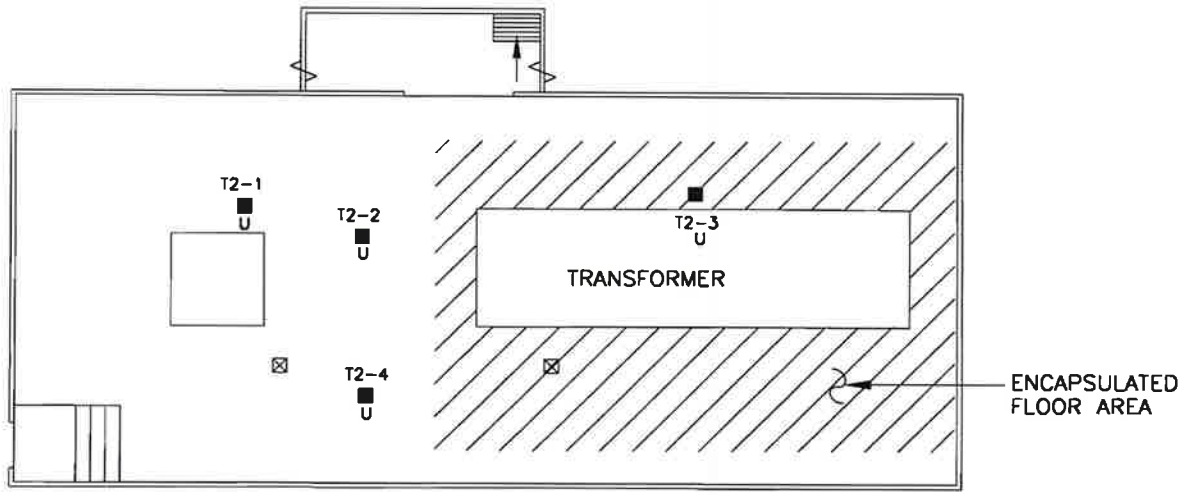
TUE, NOV 27, 2001 11:59 A AWK F:\1700\1700-1A.DWG

DASNY
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
SEPTEMBER 21, 2001

Dvirka and Bartilucci Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (9-21-01)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
U		UNDETECTED (< 1.0 ug/100cm²)
	⊠	STRUCTURAL COLUMN

September 2001

0 5 10
SCALE IN FEET
(APPROXIMATE)

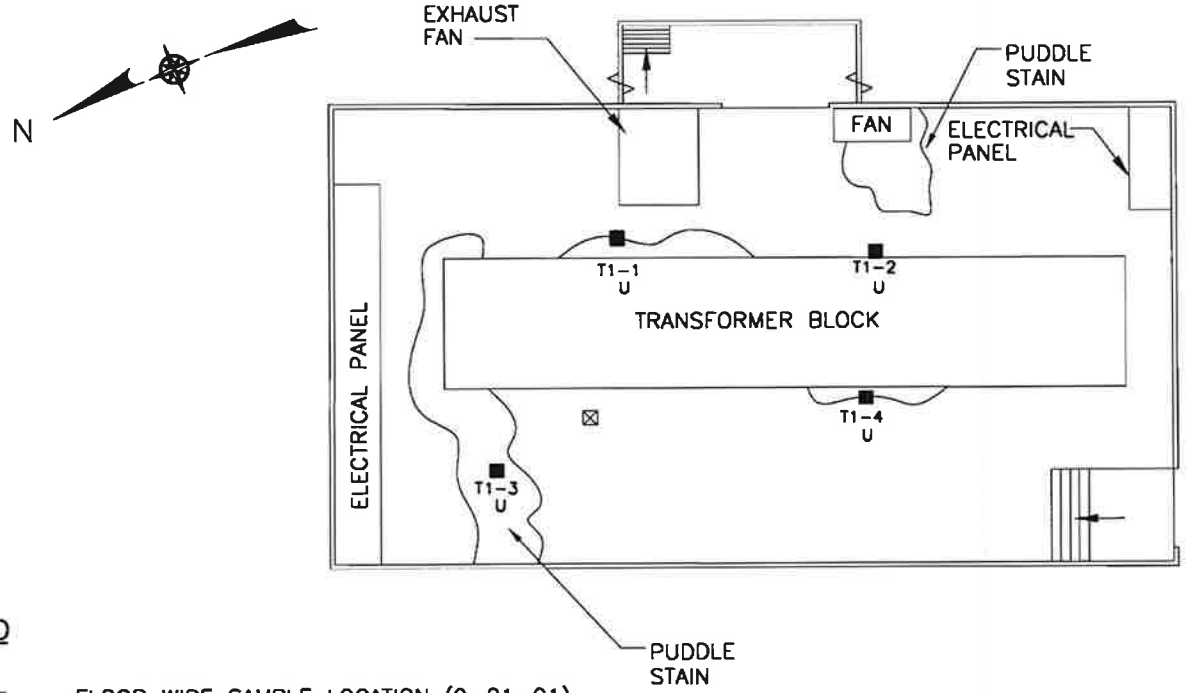
DASNY
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

THU, NOV 29, 2001 09:46 A AWK F:\1700\DRAWING\1700-MH12-5.DWG



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (9-21-01)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
U		UNDETECTED (< 1.0 ug/100cm²)
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

September 2001

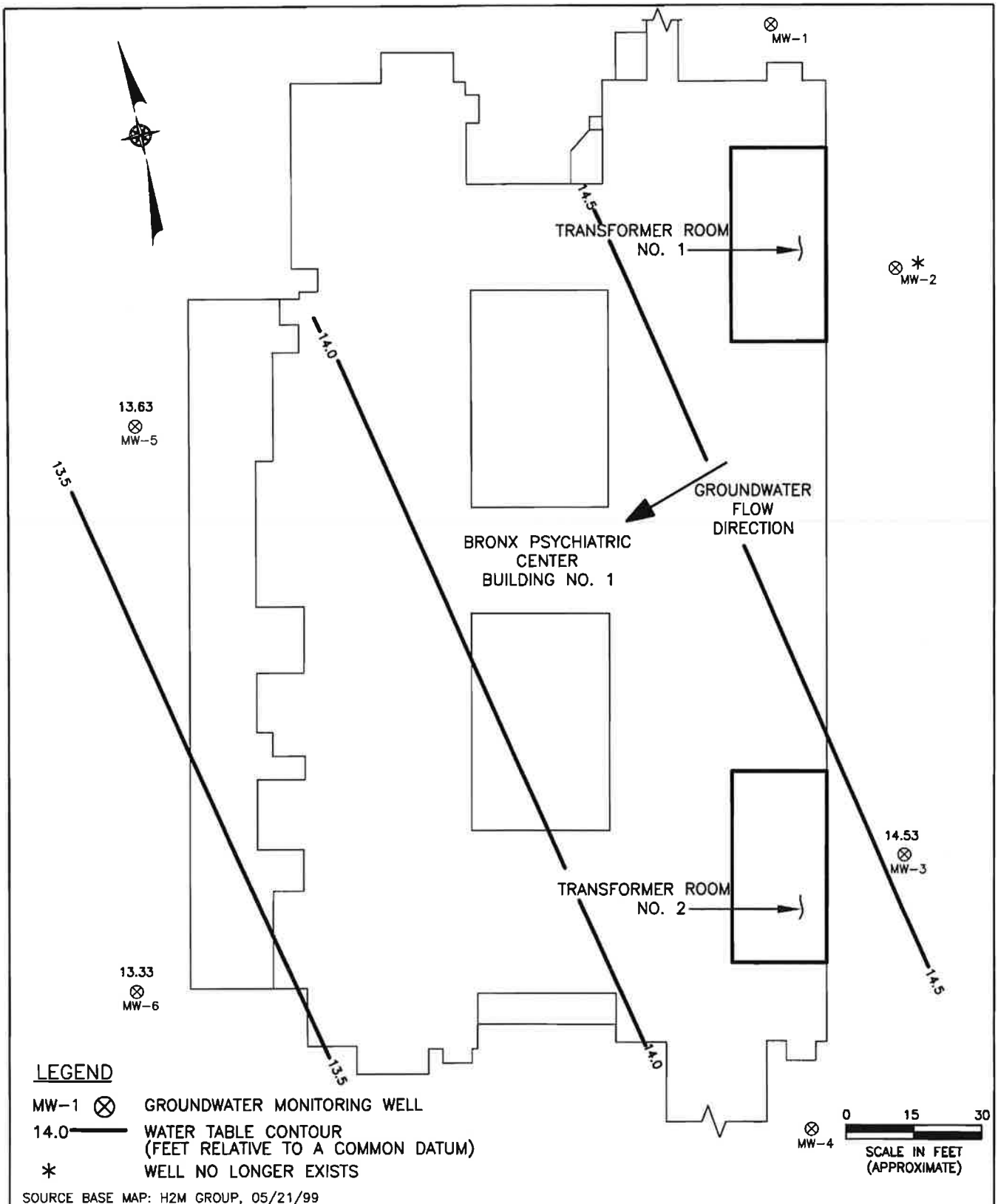
DASNY
BRONX PSYCHIATRIC CENTER

SAMPLE LOCATIONS AND RESULTS TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

THU, NOV 29, 2001 09:47 A AWK F:\1700\DRAWING\1700-MH12-6.DWG



SOURCE BASE MAP: H2M GROUP, 05/21/99

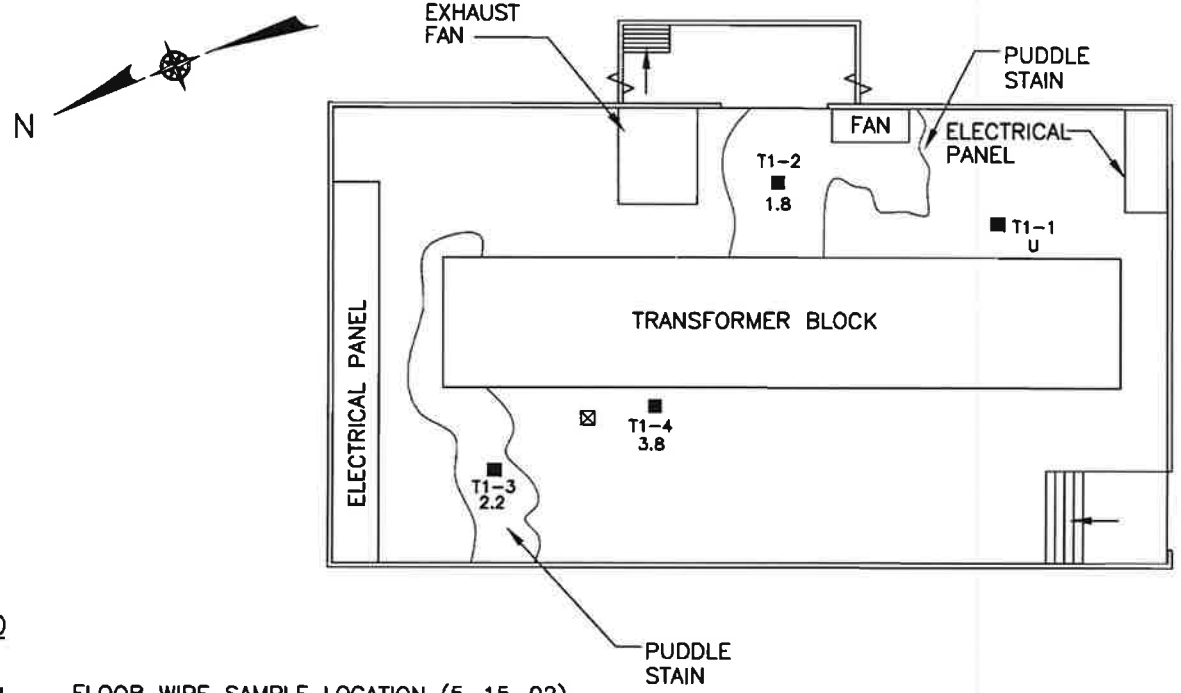
DASNY
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
MAY 15, 2002

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1

F:\11700\1700-1B.dwg, 07/10/02 09:19:47 AM, MPomerantz



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (5-15-02)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
U		UNDETECTED (< 1.0 ug/100cm²)
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

May 2002

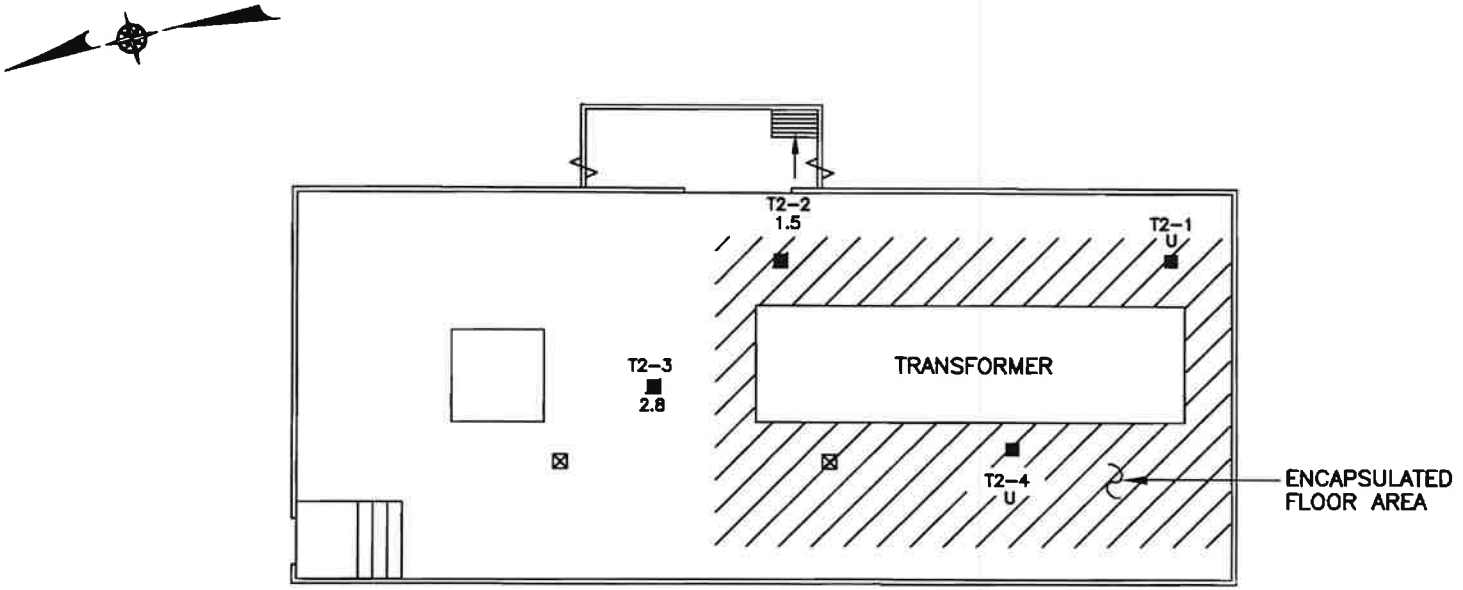
DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

F:\1700\Drawing1700-MH12-6-1.dwg, 07/03/02 12:13:09 PM, MPomerantz



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (5-15-02)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
U		UNDETECTED
	⊠	STRUCTURAL COLUMN

May 2002

0 5 10
SCALE IN FEET
(APPROXIMATE)

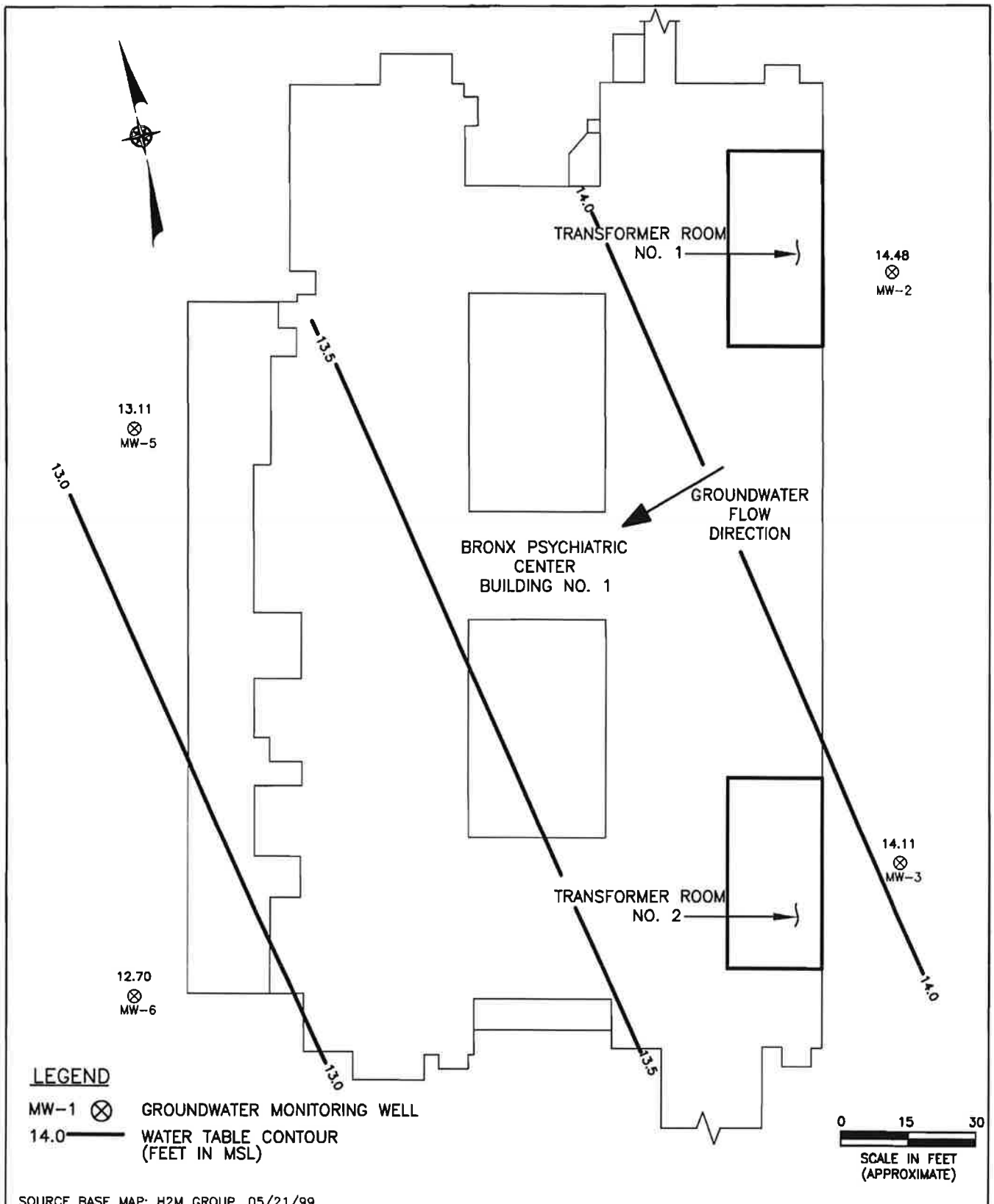
DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

F:\1700\Drawing\1700-MH12-5-1.dwg, 07/10/02 09:18:42 AM, MPomerantz



SOURCE BASE MAP: H2M GROUP, 05/21/99

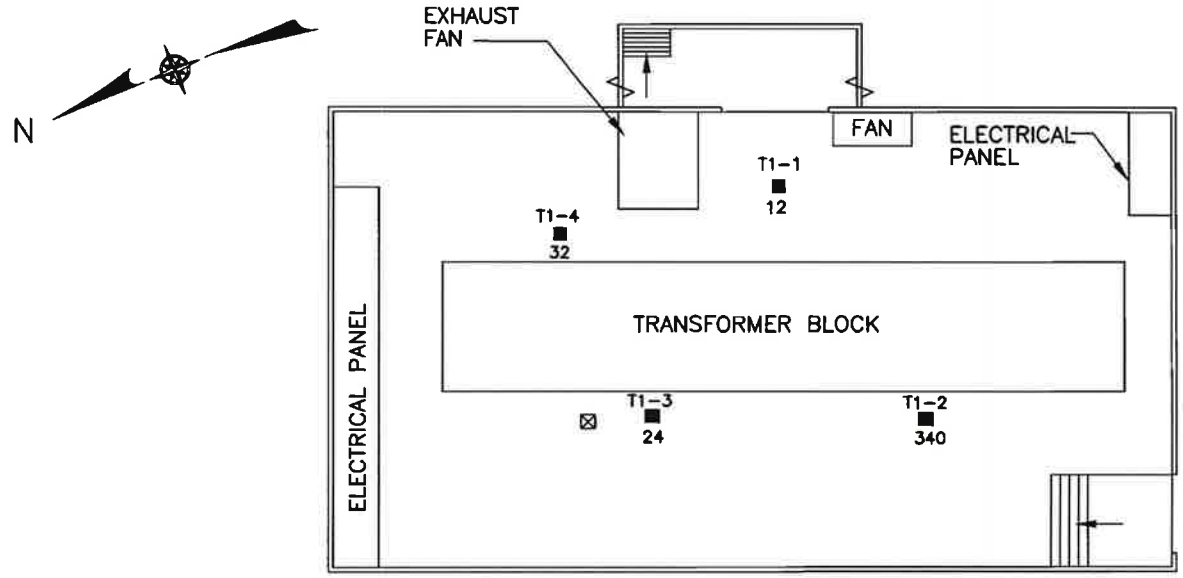
DASNY
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP NOVEMBER 12, 2002

Dvirka and Bartilucci Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1

F:\17001\1700-1B.dwg, 12/10/02 11:04:19 AM, MPomerantz



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (11-12-02)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10

SCALE IN FEET
(APPROXIMATE)

November 2002

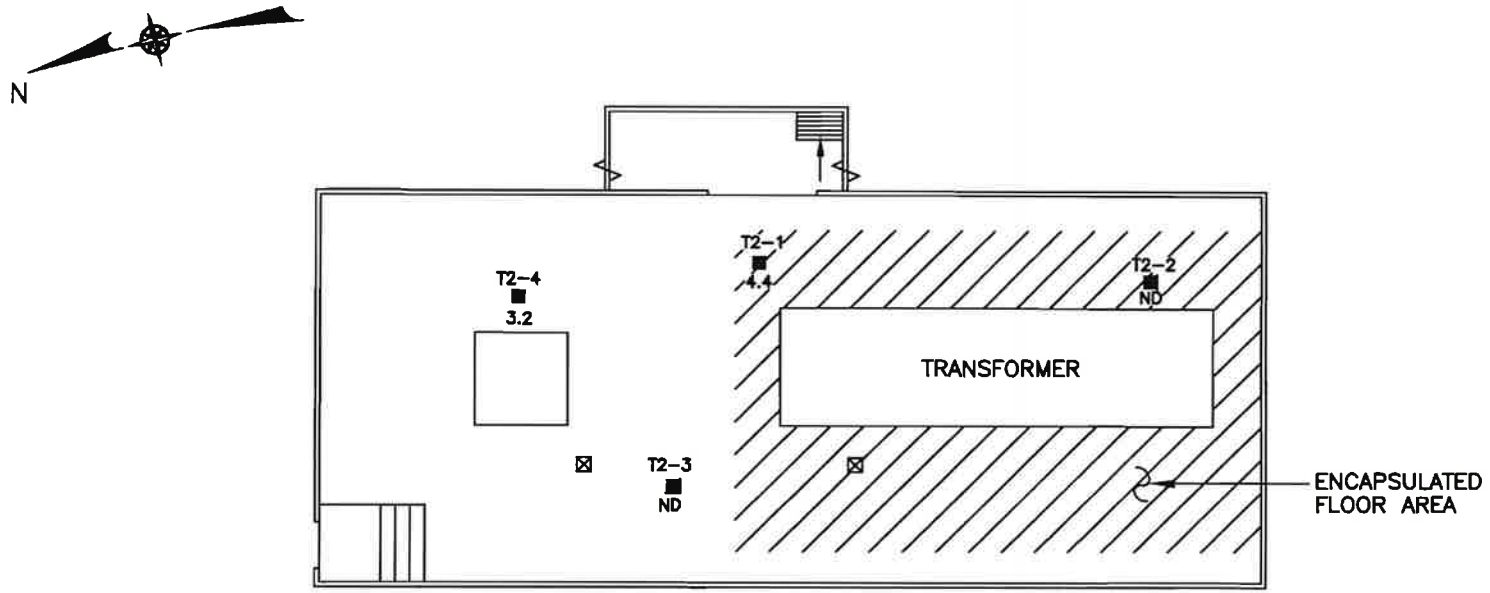
DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2

F:\1700\Drawing\1700-MH12-6-1.dwg, 12/10/02 11:33:17 AM, MPomerantz



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (11-12-02)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
⊠		STRUCTURAL COLUMN

November 2002

0 5 10
SCALE IN FEET
(APPROXIMATE)

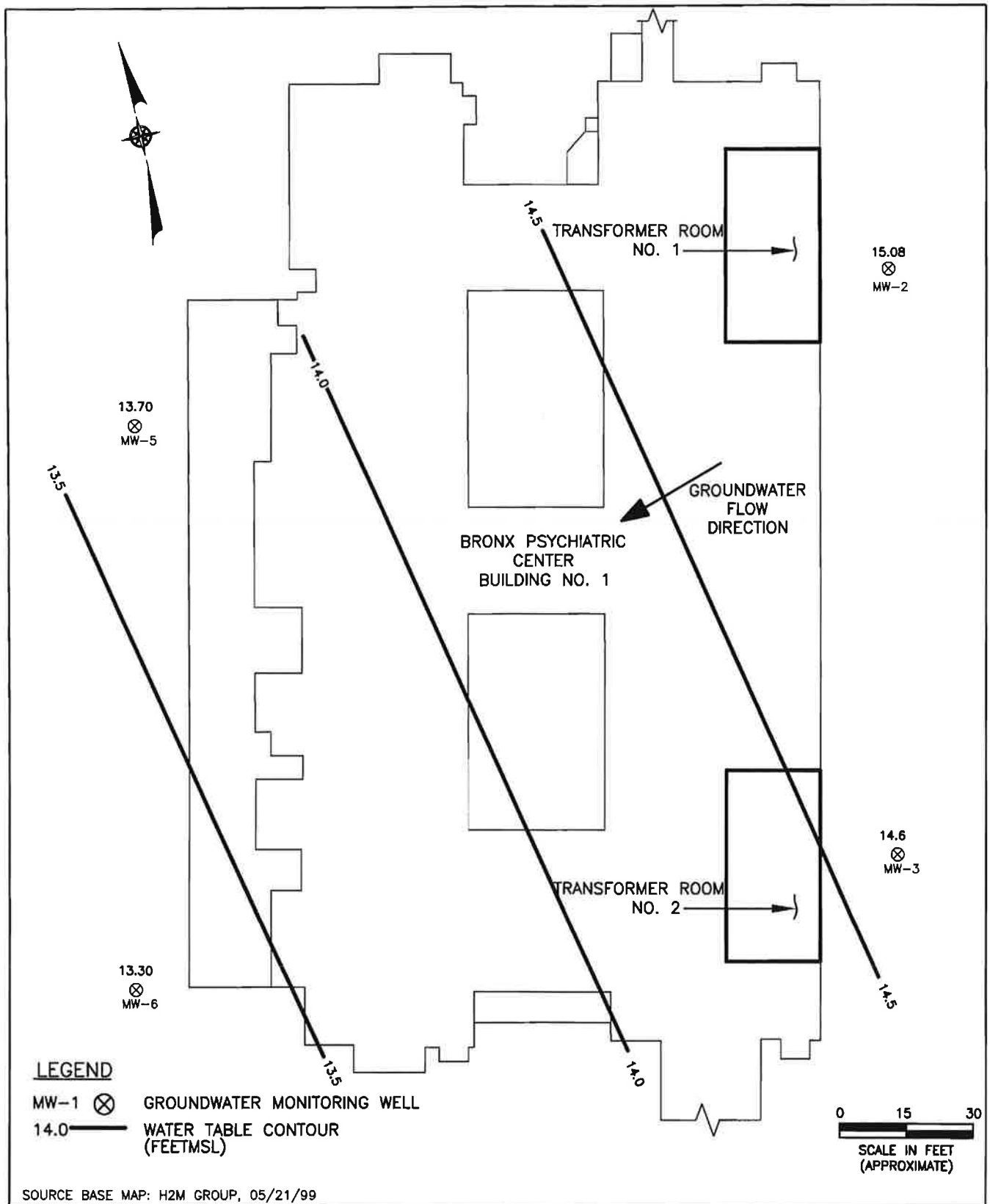
DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

F:\1700\Drawing1700-MH12-5-1.dwg, 12/10/02 11:03:14 AM, MPomerantz



SOURCE BASE MAP: H2M GROUP, 05/21/99

DASNY
BRONX PSYCHIATRIC CENTER

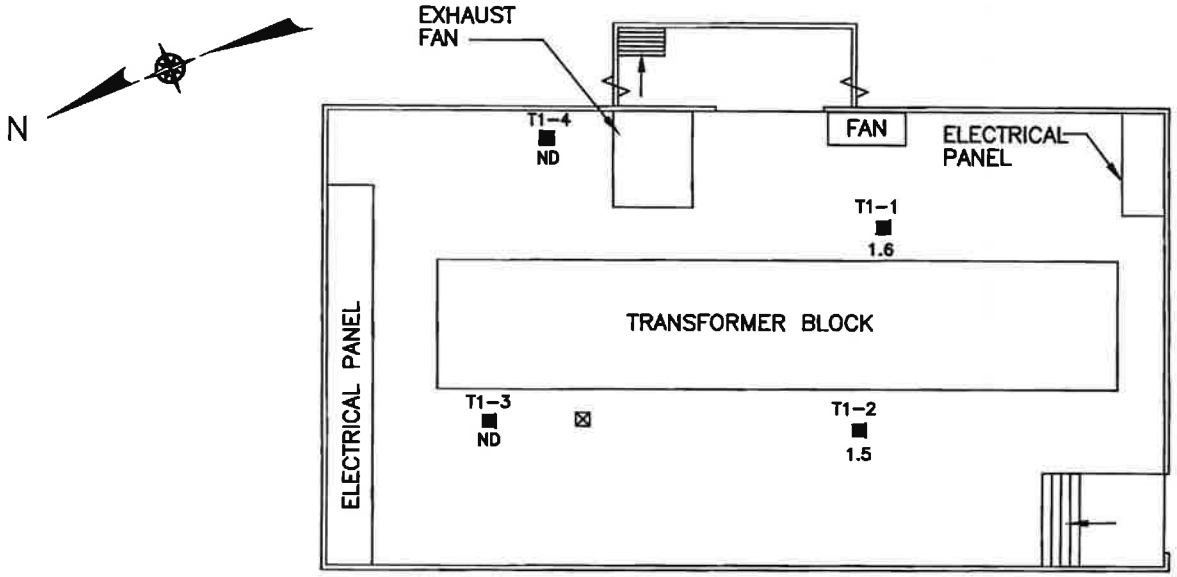
WATER TABLE CONTOUR MAP
JUNE 06, 2003

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1

F:\17001\1700-1B.dwg, 07/30/03 12:19:04 PM, DCortes

F:\1700\Drawing1700-MH12-6-1.dwg, 07/31/03 03:10:07 PM, JZegers



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (06-06-03)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

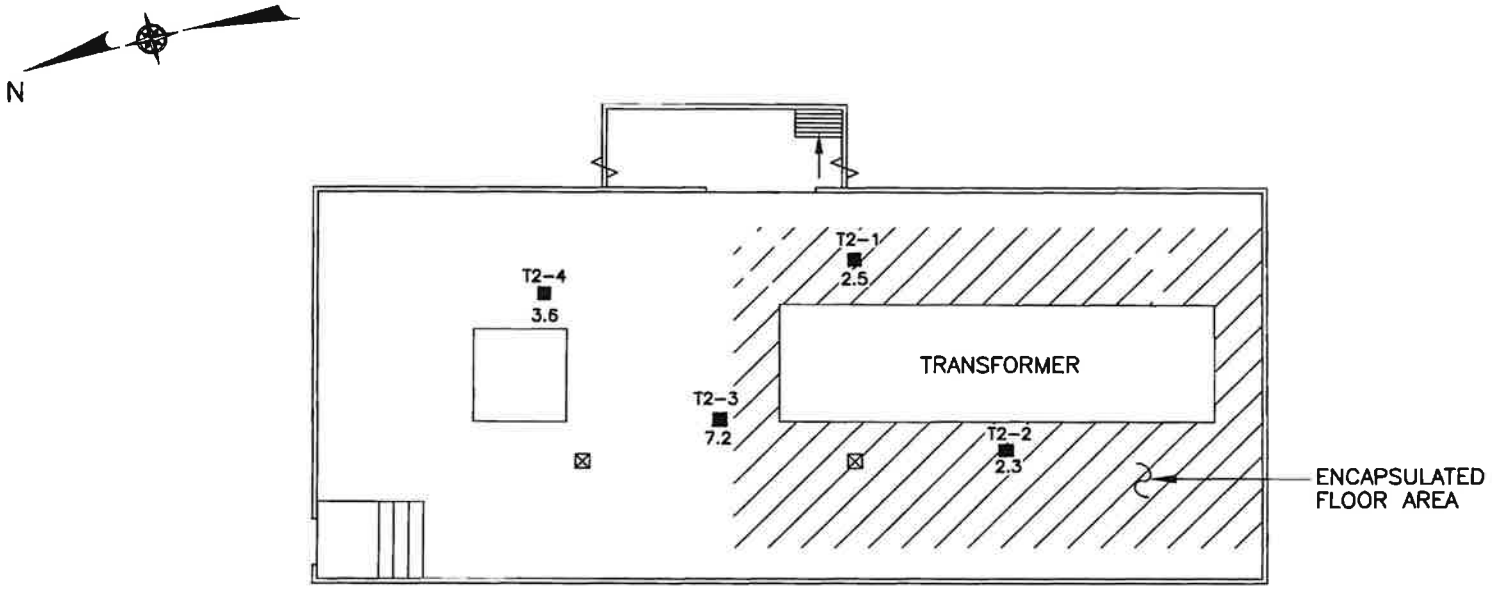
June 2003

DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (06-06-03)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10

SCALE IN FEET
(APPROXIMATE)

June 2003

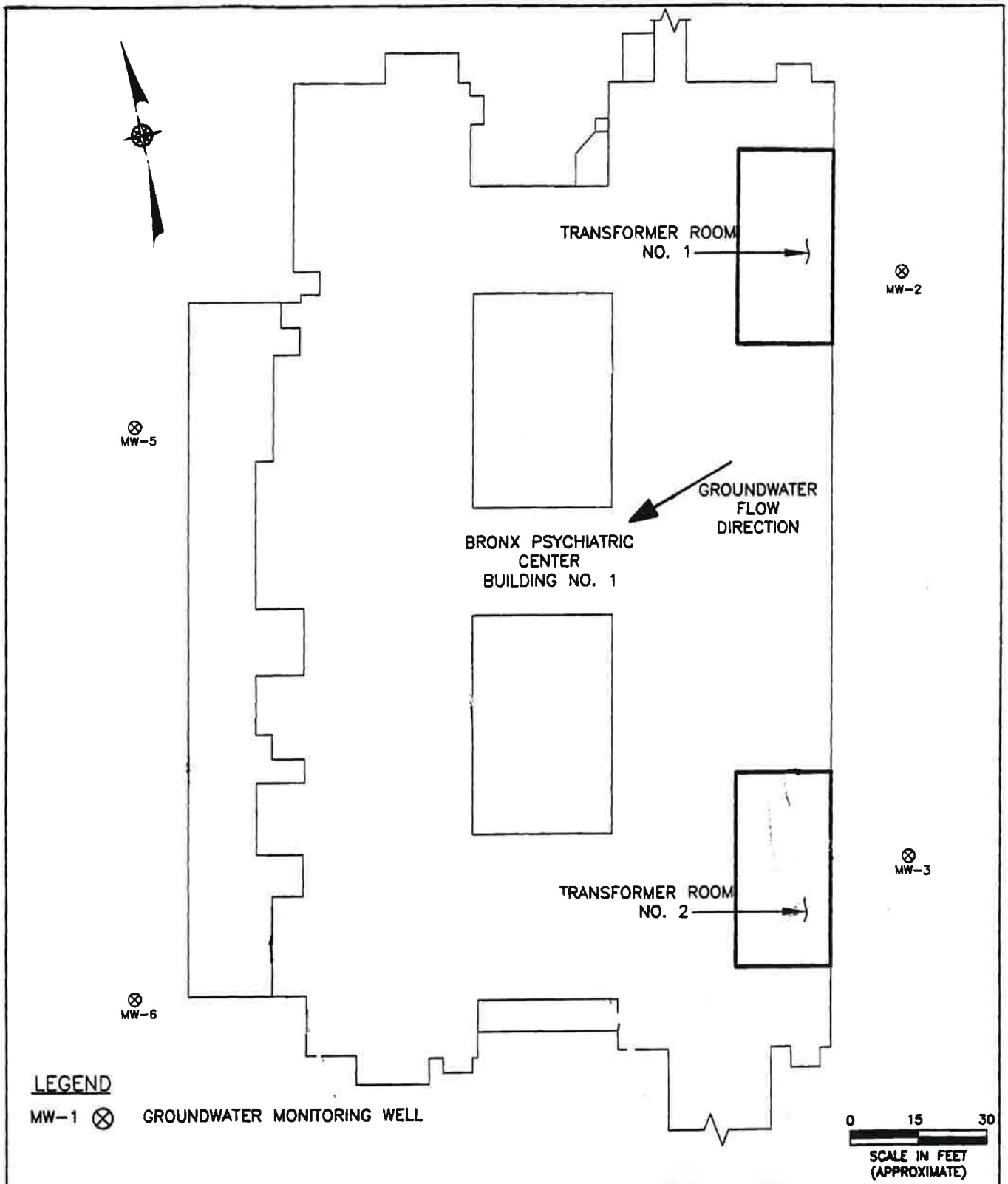
DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3

F:\1700\Drawing1700-MH12-5-1.dwg, 07/30/03 12:20:00 PM, DCortes



SOURCE BASE MAP: H2M GROUP, 05/21/99

November 2003

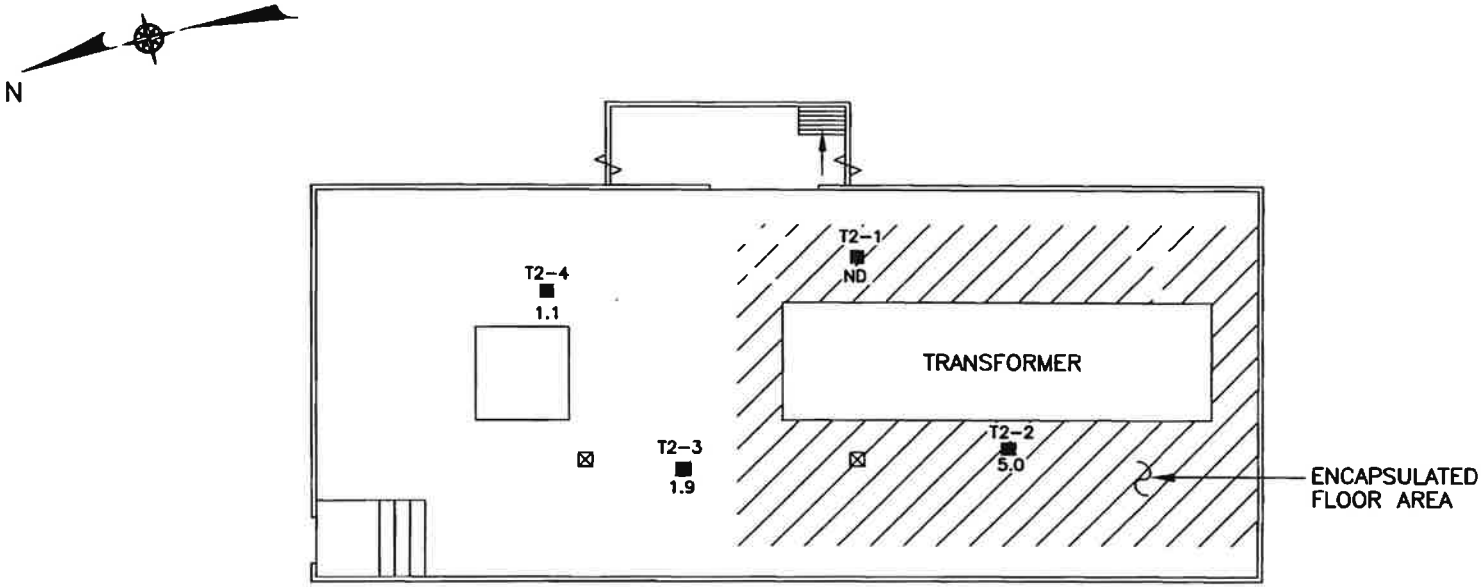
DASNY
BRONX PSYCHIATRIC CENTER

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 1

F:\1700\1700-1B.dwg, 07/30/03 12:19:04 PM, DCortes

F:\1700\Drawing1700-MH12-5-2.dwg, 12/22/03 01:25:50 PM, DCortes



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (11-25-03)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

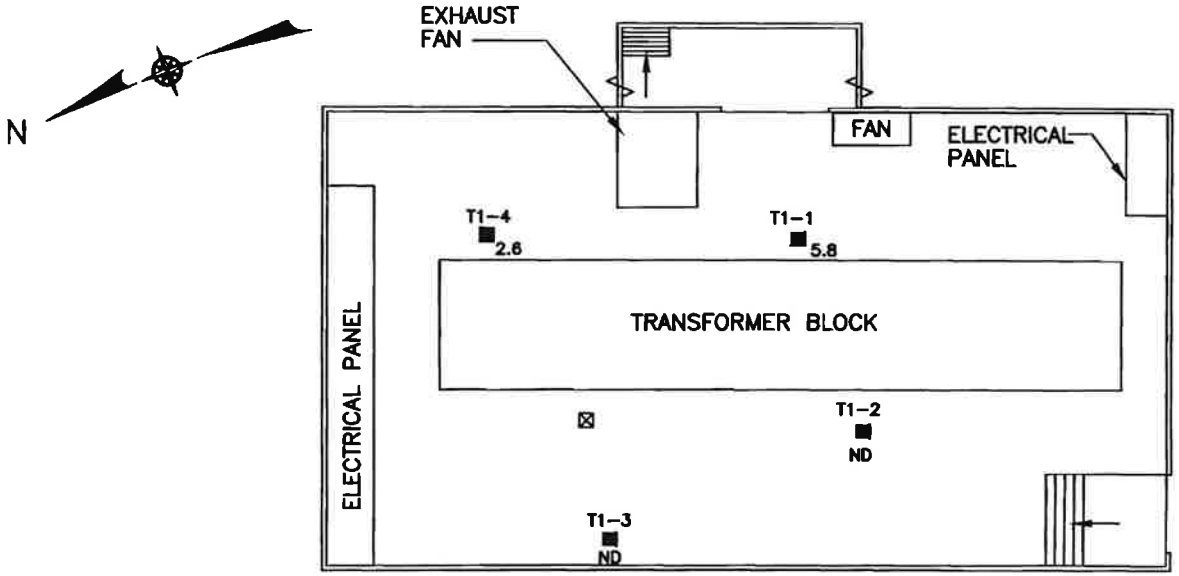
November 2003

DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #2 (SOUTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 3



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (11-25-03)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

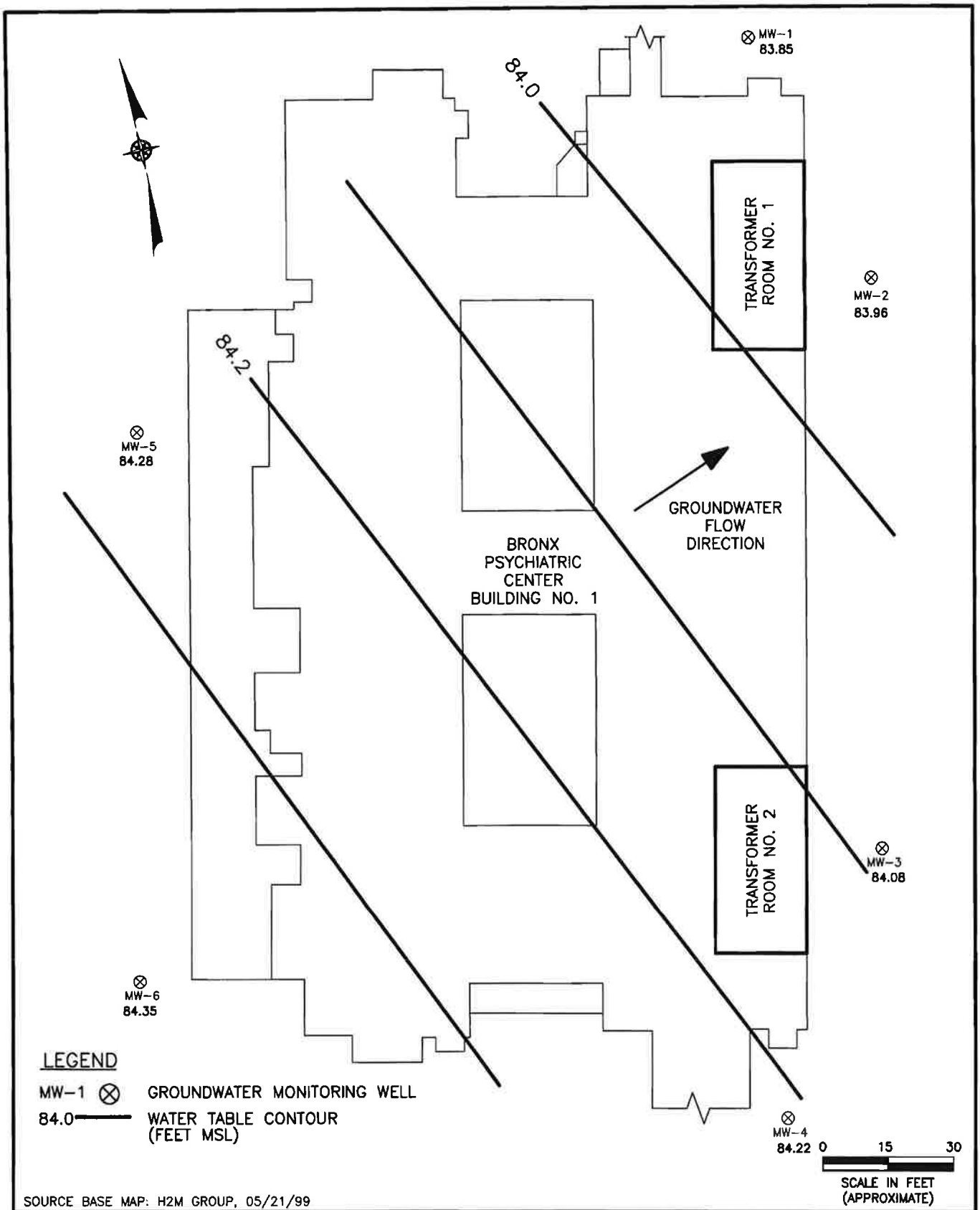
November 2003

DASNY
BRONX PSYCHIATRIC CENTER

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS
TRANSFORMER ROOM #1 (NORTH)

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

FIGURE 2



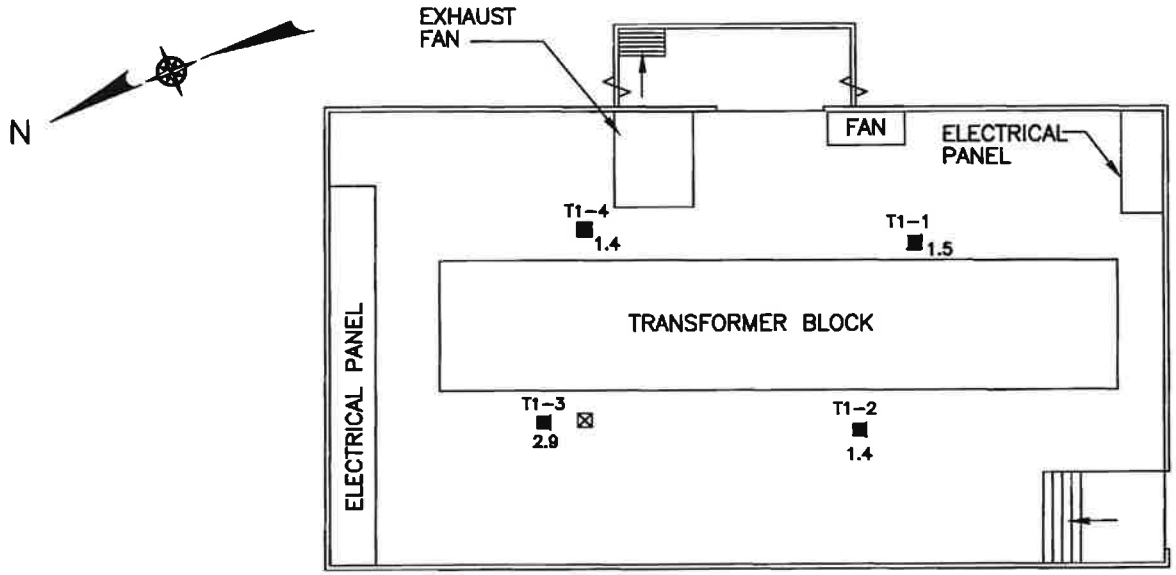
DASNY
BRONX PSYCHIATRIC CENTER

WATER TABLE CONTOUR MAP
JUNE 22, 2004

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FIGURE 1

F:\1700\1700-1C.dwg, Layout1, 07/13/04 12:13:10 PM, DCortes



LEGEND

T1-2	■	FLOOR WIPE SAMPLE LOCATION (05-25-04)
1.4		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
	⊠	STRUCTURAL COLUMN

0 5 10
SCALE IN FEET

May 2004

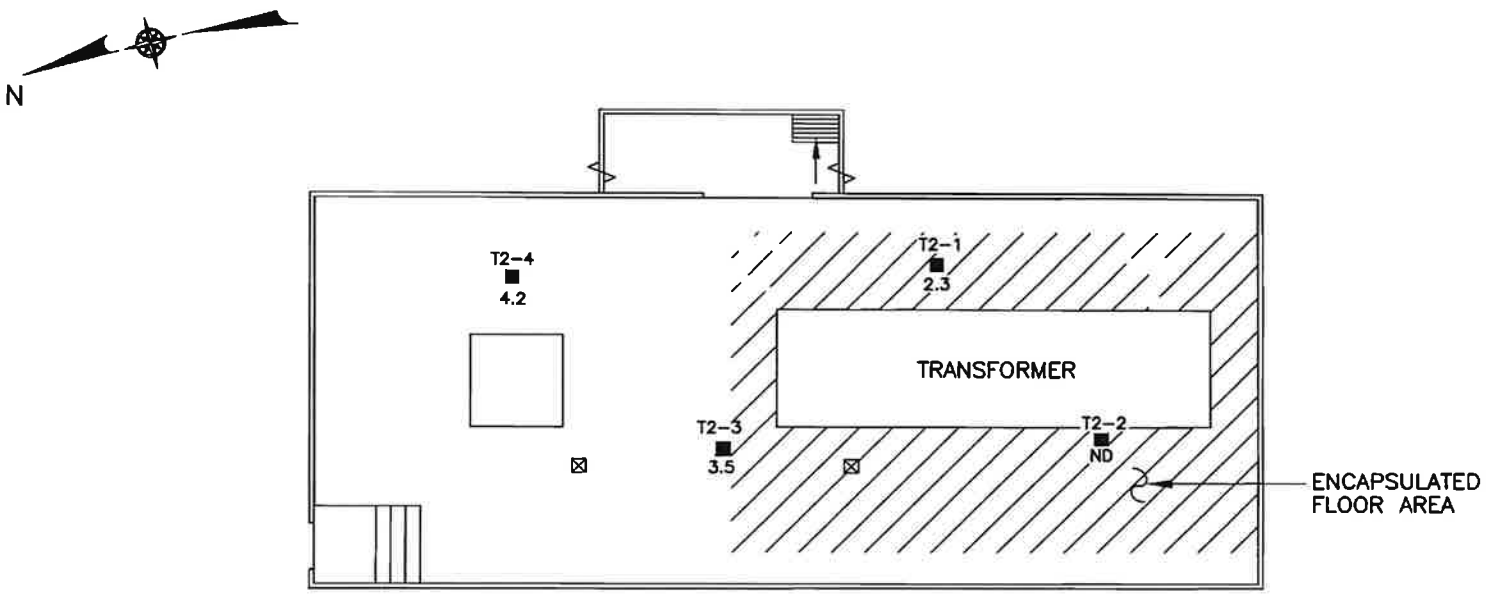
DASNY
BRONX PSYCHIATRIC CENTER

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS TRANSFORMER ROOM #1 (NORTH)

FIGURE 3

F:\1700\Drawing1700-MH12-6-2.dwg, Layout1, 07/12/04 12:22:31 PM, DCortes



LEGEND

T2-1	■	FLOOR WIPE SAMPLE LOCATION (05-25-04)
2.0		AROCHLOR 1260 CONCENTRATION (ug/100cm²)
ND		NOT DETECTED
⊠		STRUCTURAL COLUMN

0 5 10
SCALE IN FEET
(APPROXIMATE)

May 2004

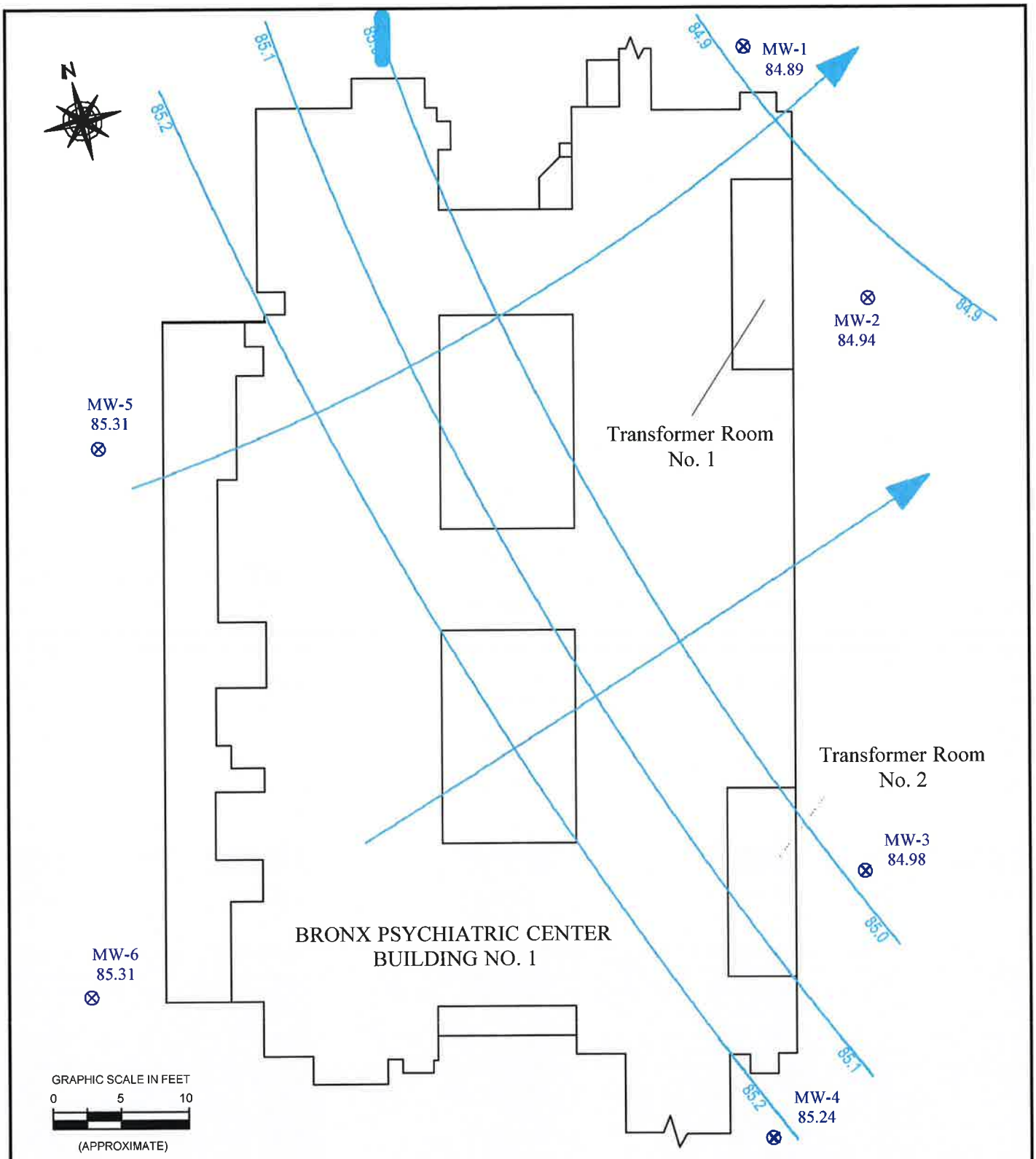
DASNY
BRONX PSYCHIATRIC CENTER

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

FLOOR WIPE SAMPLE LOCATIONS AND RESULTS TRANSFORMER ROOM #2 (SOUTH)

FIGURE 4

F:\1700\Drawing1700-MH12-5-2.dwg, Layout1, 07/12/04 12:23:06 PM, DCortes



LEGEND

- MW-1 84.89 — Groundwater Monitoring Well with Groundwater Elevations (feet)
- Groundwater Elevation Contour (feet)
- Groundwater Flow Line

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: MONITORING WELL LOCATIONS AND GROUNDWATER ELEVATIONS 2004 BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

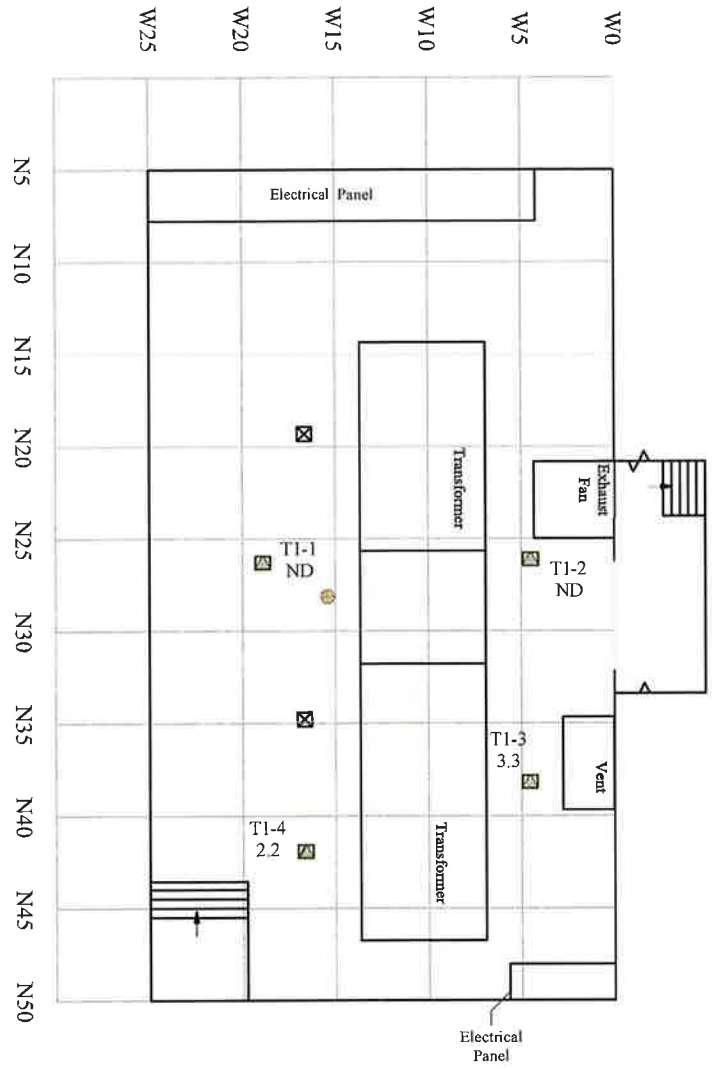
ent: STATE OF NEW YORK OFFICE OF MENTAL HEALTH

URS

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
MKM	July 2012
Drg. Size:	Job No.:
8.5 x 11	3839095.00000

FIGURE 3-1



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

T1-4 2.2 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm^2)

Former Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
2004 BIANNUAL SAMPLING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: DORMITORY AUTHORITY OF
THE STATE OF NEW YORK

NOTES:
ND: Not Detected
All locations are approximate.

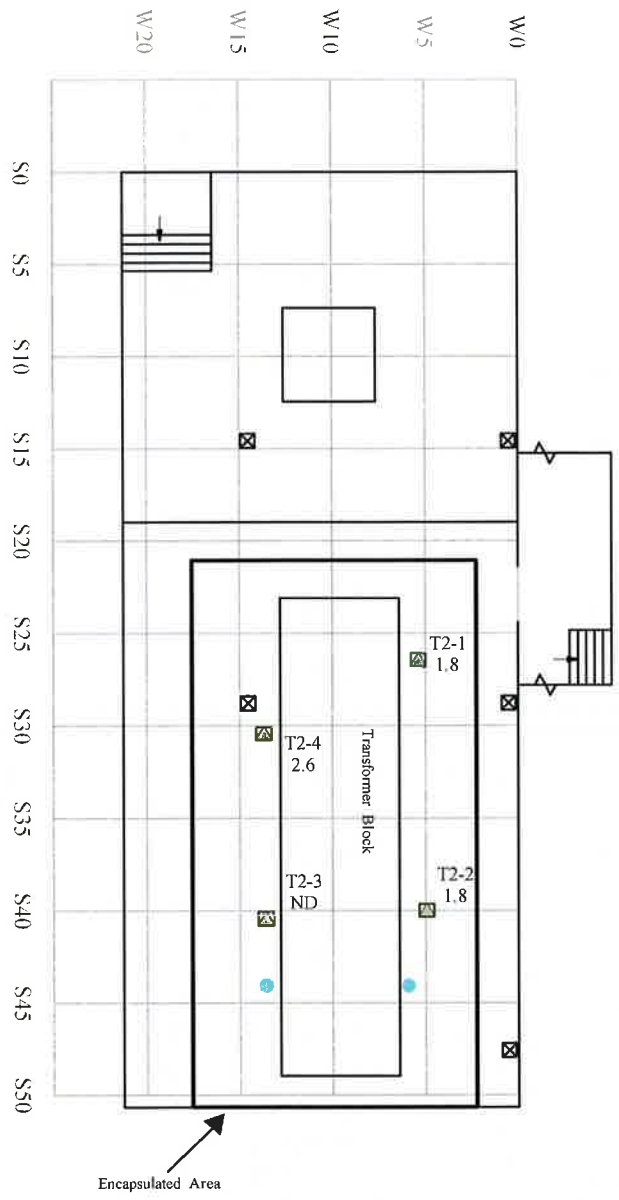
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
MKM	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-2



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

- T2-1 1.8 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100 cm^2)
- Plugged Floor Drain
- Structural Column
- W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2
WIPE SAMPLE LOCATIONS
2004 BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: DORMITORY AUTHORITY OF
THE STATE OF NEW YORK

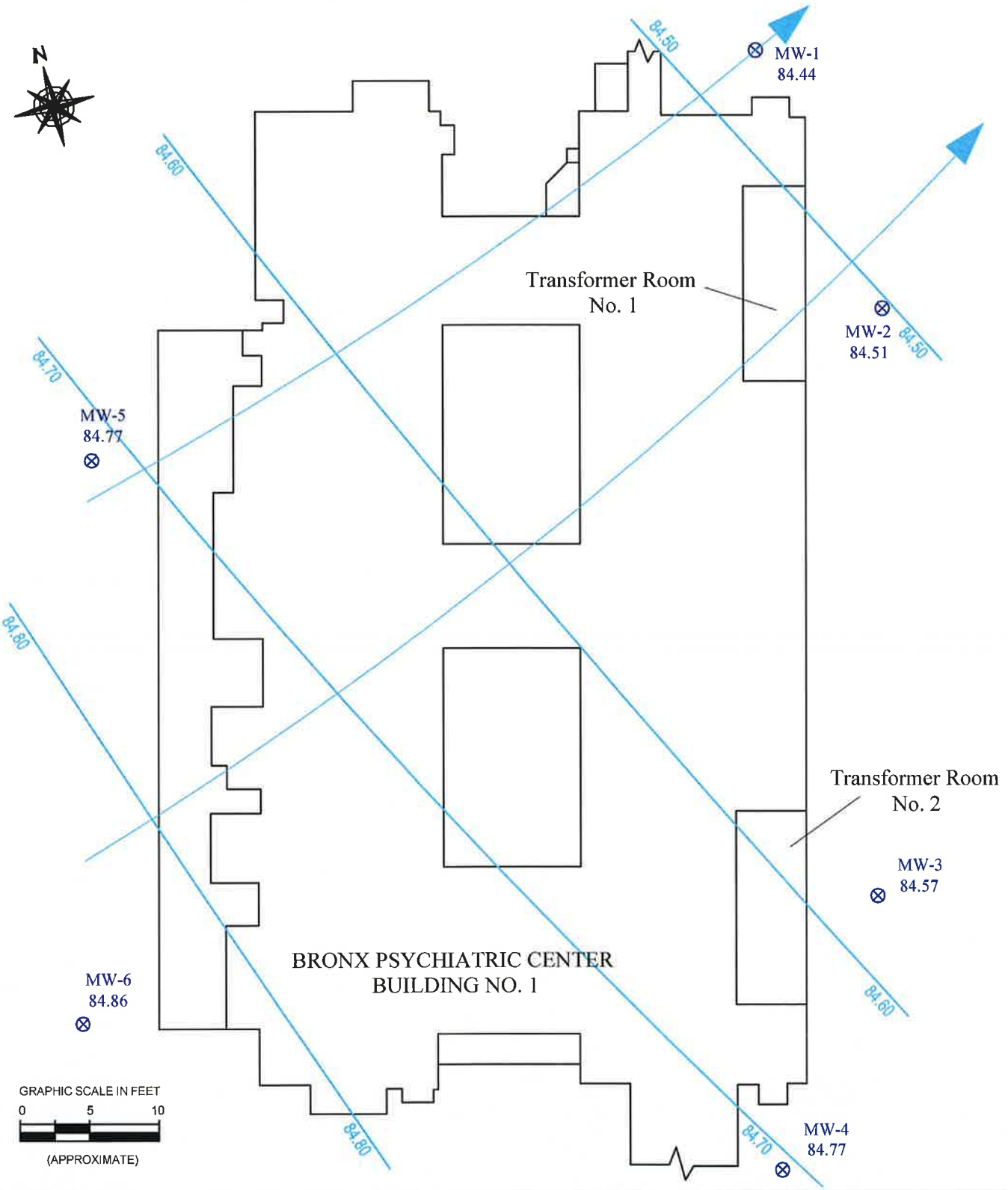
NOTES:
ND: Not Detected
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
MKM	January 2005
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-3



LEGEND

- MW-1 84.44 — Groundwater Monitoring Well with Groundwater Elevations (feet)
- Groundwater Elevation Contour (feet)
- Groundwater Flow Line

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: MONITORING WELL LOCATIONS AND GROUNDWATER ELEVATIONS 2005 1ST BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

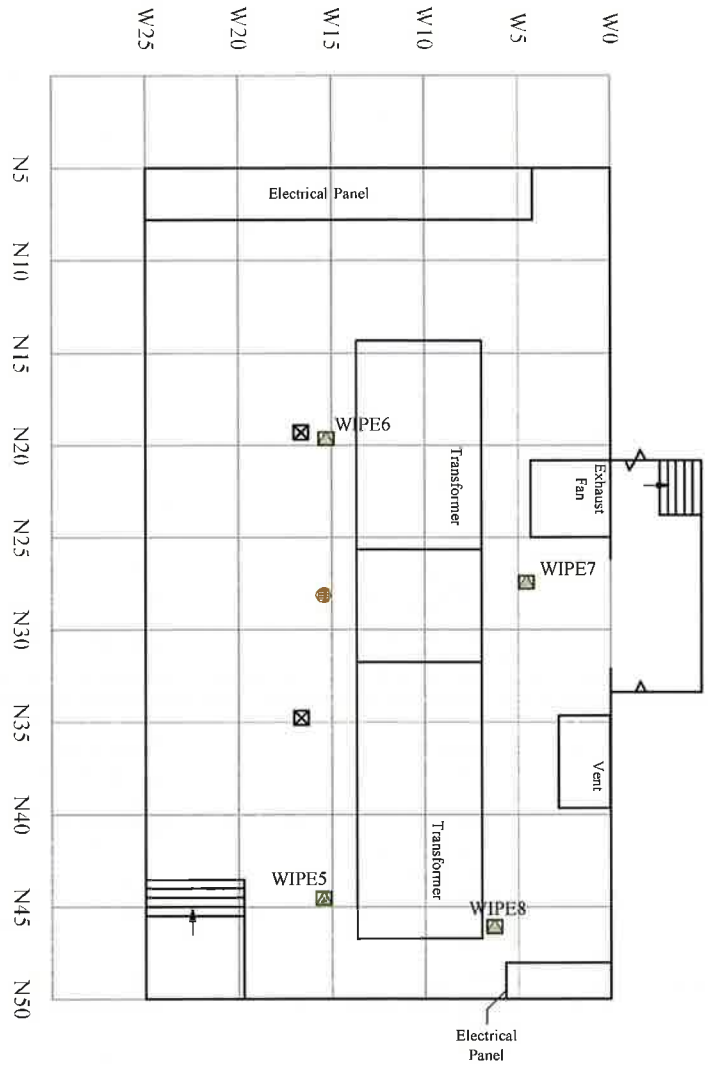
Client: DORMITORY AUTHORITY STATE OF NEW YORK

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg Size:	Job No:
8.5 x 11	38395095.00000

FIGURE 3-4

P:\In Progress \Bronx Psychiatric Center \May 2005 Figures \Figure 1 - GW Elevations May 2005.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

- T1-4 2.2 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)
- Former Drain
- Structural Column
- W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
2005 1st BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: DORMITORY AUTHORITY OF
THE STATE OF NEW YORK

NOTES:
ND: Not Detected
All locations are approximate.

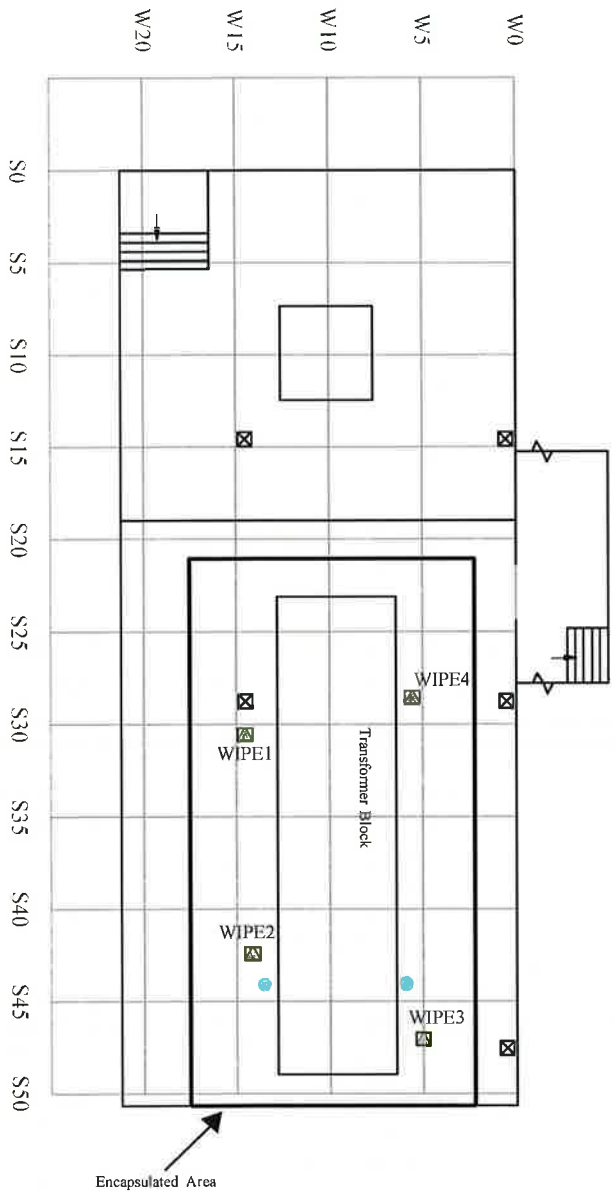
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-5

P:\In Progress\Bronx Psychiatric Center May 2005 Figures \Figure 2 - Wipe Sample Locations.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

- WIPE1 — Wipe Sample Location
- Plugged Floor Drain
- Structural Column
- W0 / W5, S0 / S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2
WIPE SAMPLE LOCATIONS
2005 1st BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: DORMITORY AUTHORITY OF
THE STATE OF NEW YORK

NOTES:
ND: Not Detected
All locations are approximate.

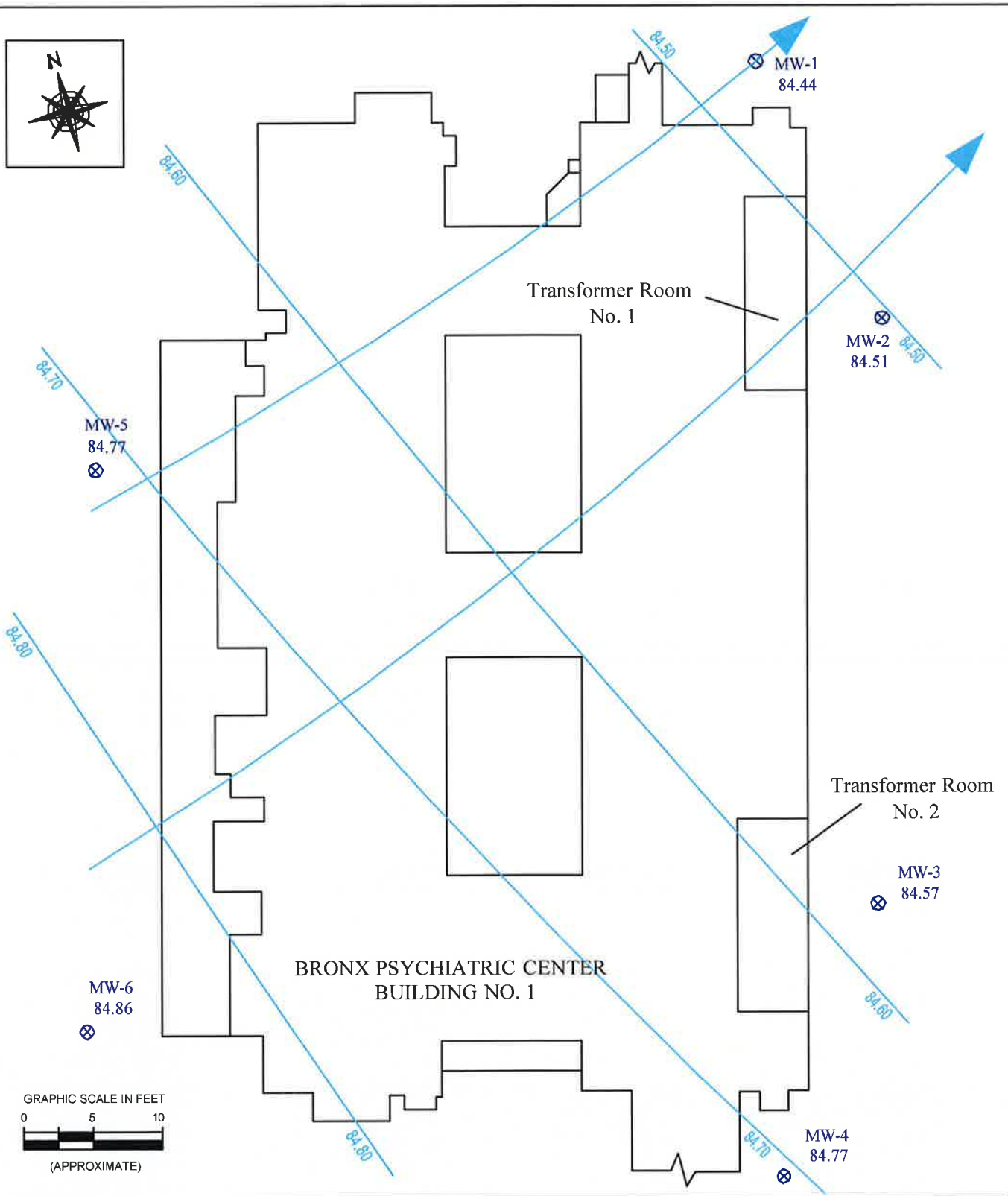
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-6

P:\In Progress\Bronx Psychiatric Center\May 2005 Figures\Figure 3 - Wipe Sample Locations.dwg



LEGEND

- MW-1 84.44 — Groundwater Monitoring Well with Groundwater Elevations (feet)
- Groundwater Elevation Contour (feet)
- Groundwater Flow Line

NOTES:
All locations are approximate.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: GROUNDWATER ELEVATIONS
December 2005
2005 2nd BIANNUAL MONITORING

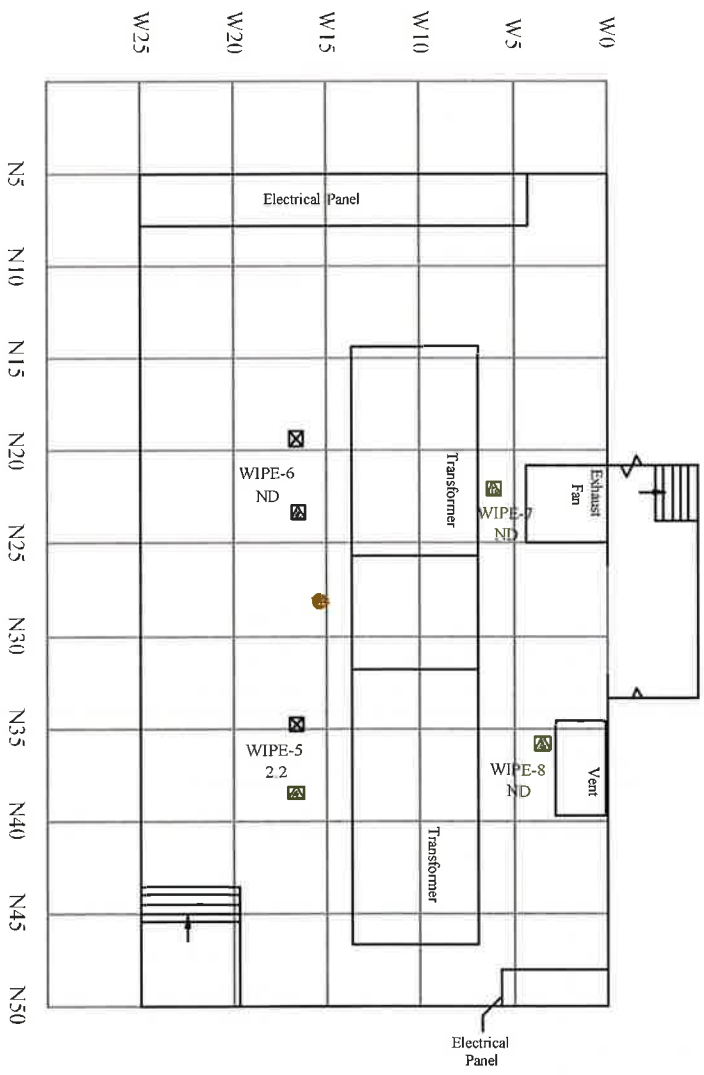
Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-7



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

WIPE-5 2.2 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm)^2

Former Drain

Structural Column

S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
2005 2nd BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

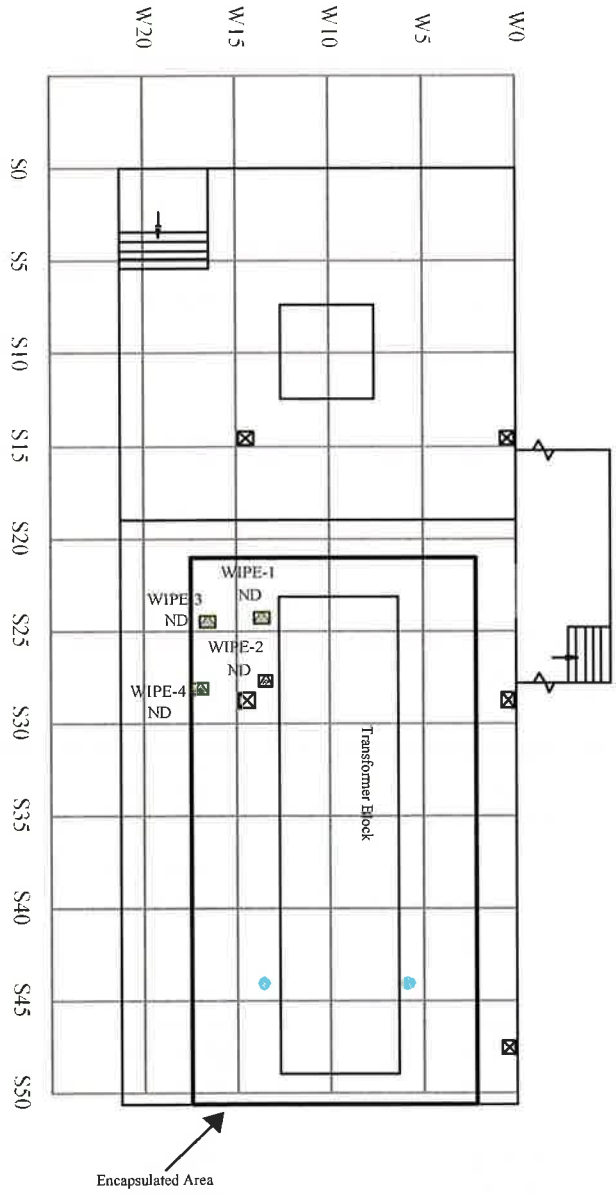
NOTES:
ND: Not Detected
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-8



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

- WIPE-1 ND — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm²)
- Plugged Floor Drain
- Structural Column
- V0 V5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2
WIPE SAMPLE LOCATIONS
2005 2nd BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

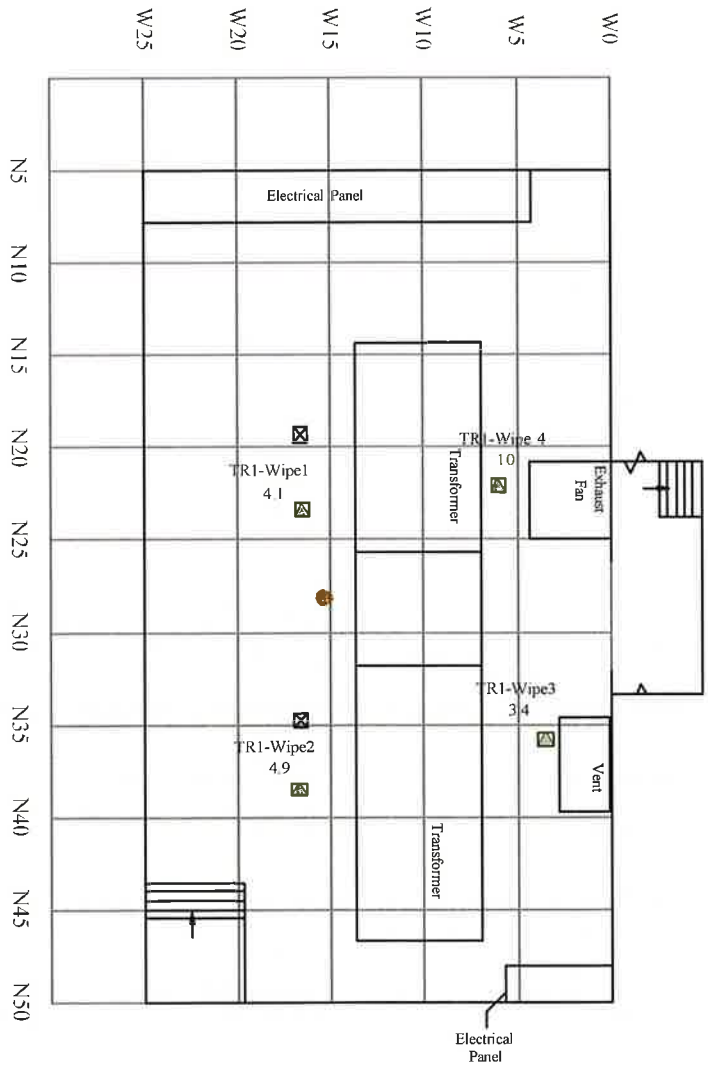
NOTES:
ND: Not Detected
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-9



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1 4.1 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm ²)

Former Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
2006 1st BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

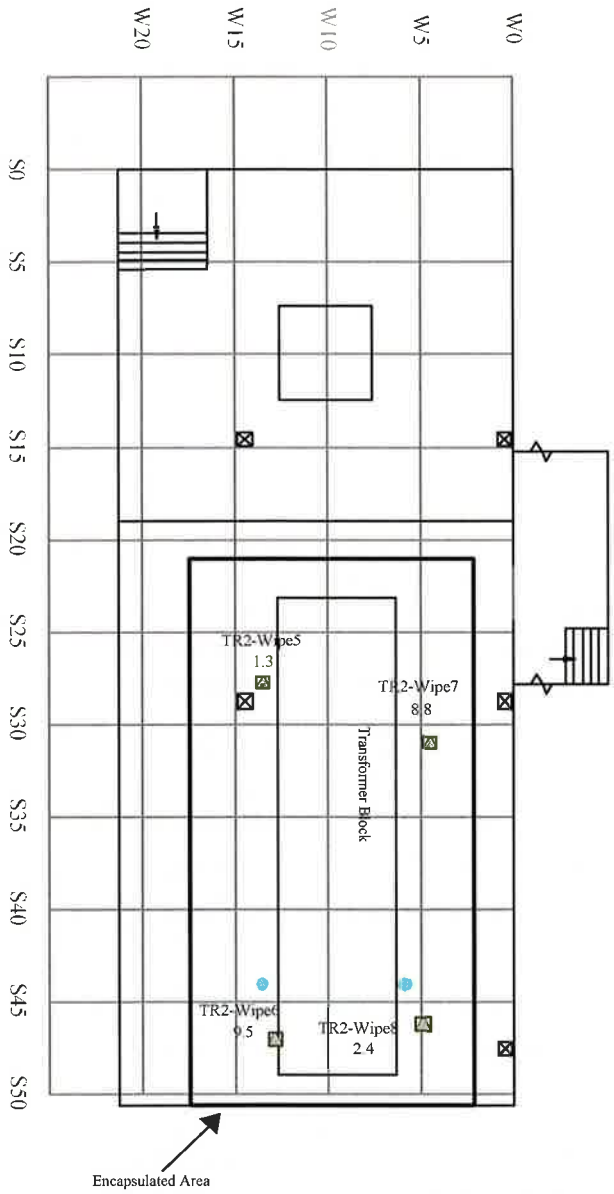
NOTES:
ND: Not Detected
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-10



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 1.3 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm ²)

Plugged Floor Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2
WIPE SAMPLE LOCATIONS
2006 1st BIANNUAL MONITORING

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

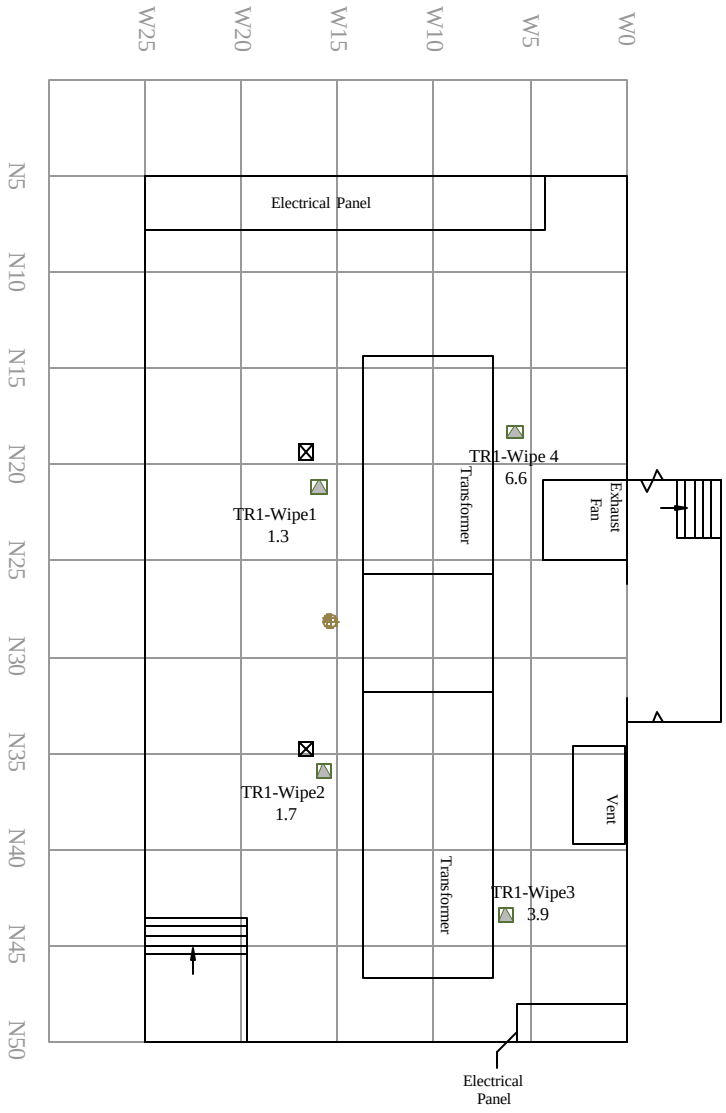
NOTES:
ND: Not Detected
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	July 2012
Drg. Size:	Job No.:
8.5 x 11	38395095.00000

FIGURE 3-11



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
1.3 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm ²)

Former Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

NOTES:

ND: Not Detected

All locations are approximate.

BASE MAP SOURCE:

Dvirka and Bartilucci Consulting Engineers, 11/21/00

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

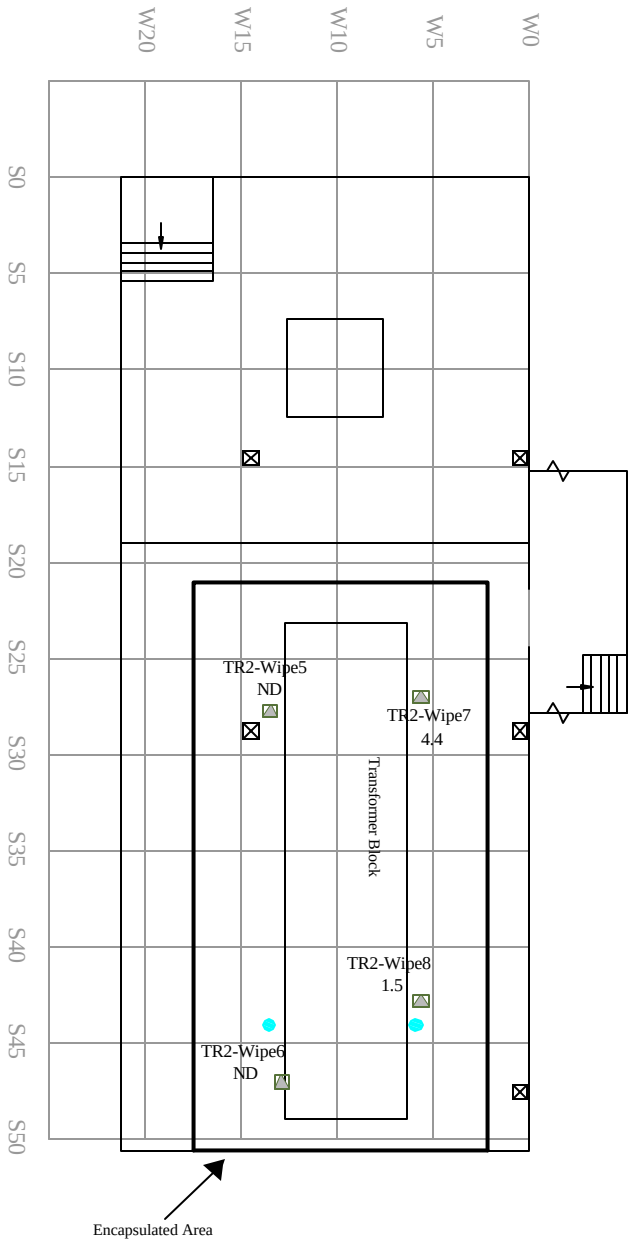
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	January 2007
Drg. Size:	Job No.:
8.5 x 11	11174956.00010

FIGURE 1

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\2007 Building 1 Wipe Sampling\Figures\Figure 1 - Wipe Sample Locations Room No. 1.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe8 1.5 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm ²)

Plugged Floor Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

NOTES:

ND: Not Detected

All locations are approximate.

BASE MAP SOURCE:

Dvirka and Bartilucci Consulting Engineers, 11/21/00

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

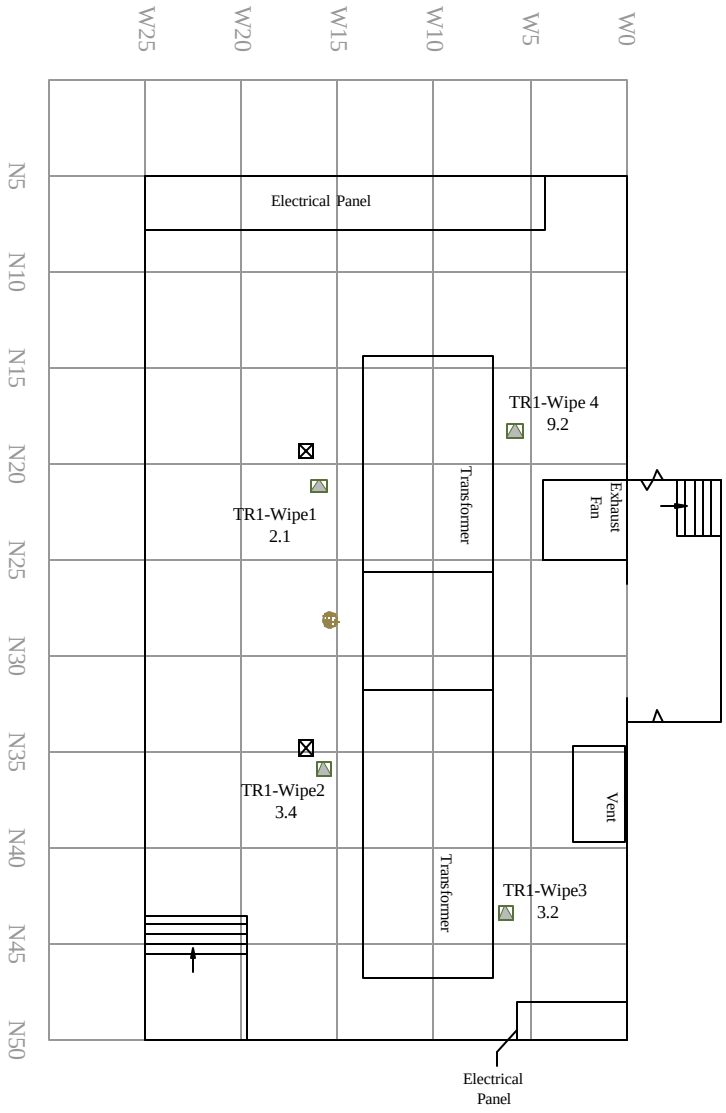
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	January 2007
Drg. Size:	Job No.:
8.5 x 11	11174956.00010

FIGURE 2

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\2007 Building 1 Wipe Sampling\Figures\Figure 2 - Wipe Sample Locations Room No. 2.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
2.2 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm ²)

Former Drain

Structural Column

WD W5 SD S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
ND: Not Detected
All locations are approximate.

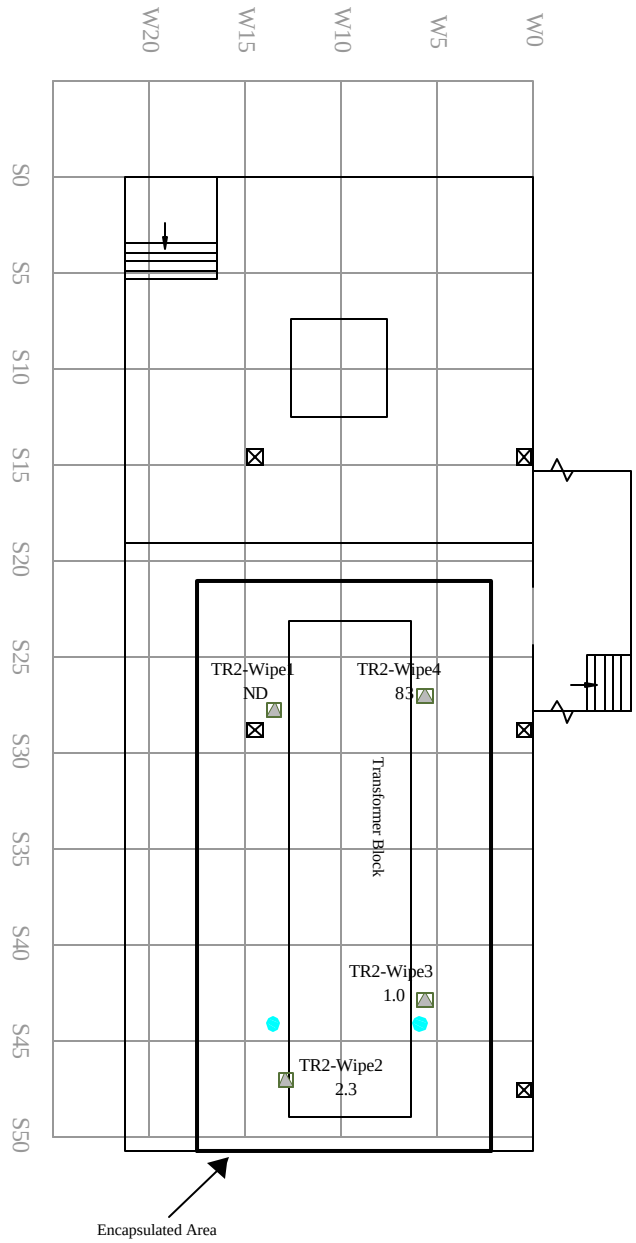
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	December 2007
Drg. Size:	Job No.:
8.5 x 11	11175426.00010

FIGURE 1

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Dec 2007 Building 1 Wipe Sampling\Draft\Figures\Figure 1 - Wipe Sample Lo.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe2 2.3 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm ^{2})

Plugged Floor Drain

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:

ND: Not Detected

All locations are approximate.

BASE MAP SOURCE:

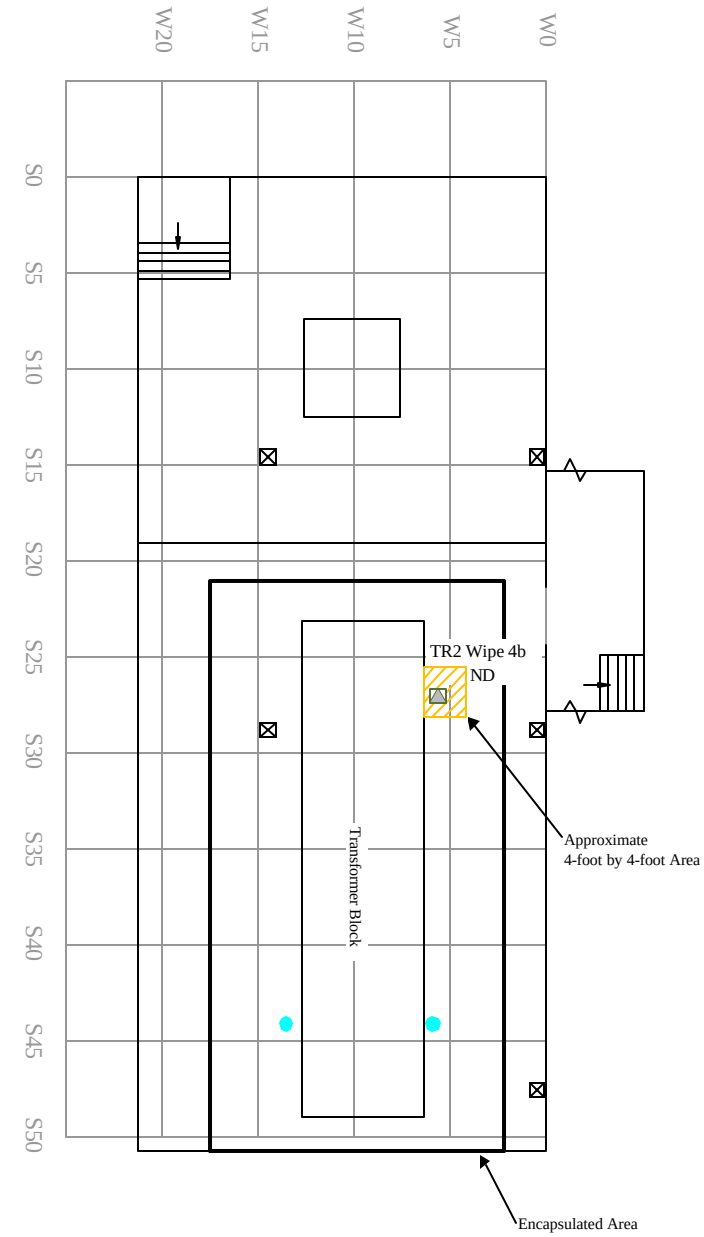
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	December 2007
Drg. Size:	Job No.:
8.5 x 11	11175426.00010

FIGURE 2

J:\11175426\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Dec 2007 Building 1 Wipe Sampling\Draft\Figures\Figure 2 - Wipe Lo.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

- TR2 Wipe 4b ND — Wipe Sample Location with Total PCB Concentration (ug/100 cm ²)
- Plugged Floor Drain
- Structural Column
- W0 W5 S0 S5 — Grid Scale and Reference
- Cleaned / Epoxied Area

NOTES:

ND: Not Detected

All locations are approximate.

BASE MAP SOURCE:

Dvirka and Bartilucci Consulting Engineers, 11/21/00

Title: TRANSFORMER ROOM NO. 2 CONFIRMATION WIPE SAMPLE LOCATION AND CLEANED / EPOXIED AREA

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

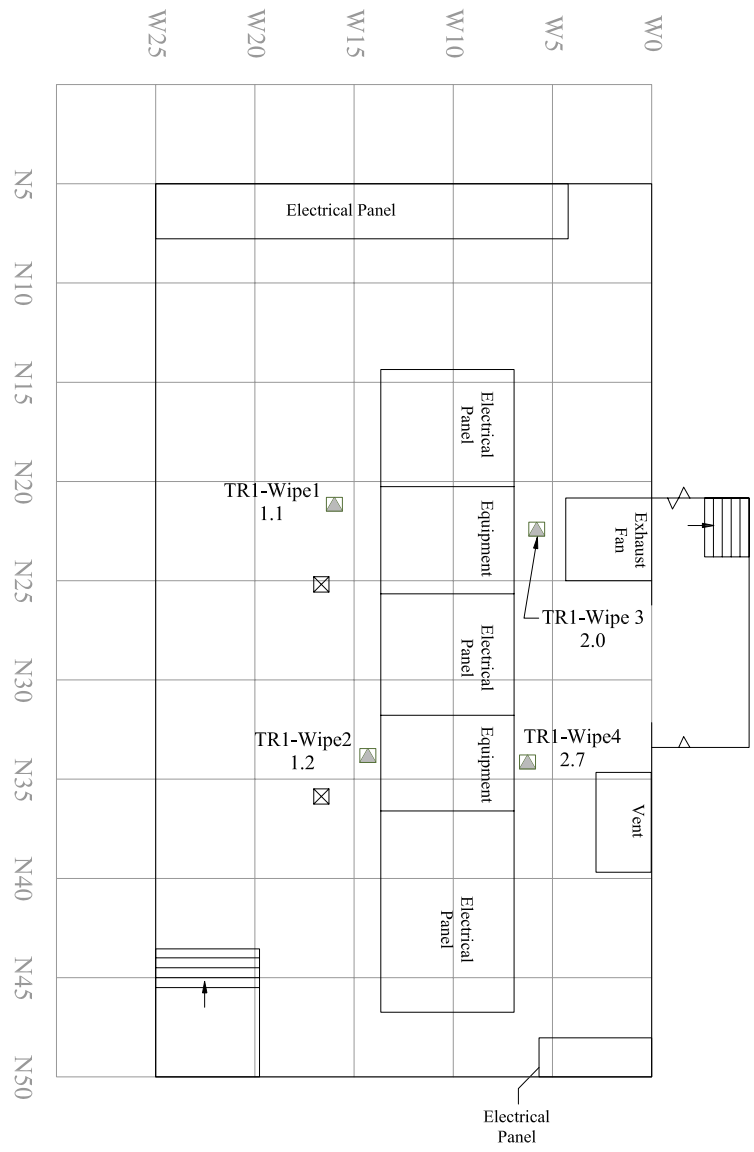
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
DAD	February 2008
Drg. Size:	Job No.:
8.5 x 11	11175426.00010

FIGURE 1

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Dec 2007 Building 1 Wipe Sampling\Draft\Figures\Figure 2 - Wipe Lo.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
1.1 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

NOTES:
All locations are approximate.

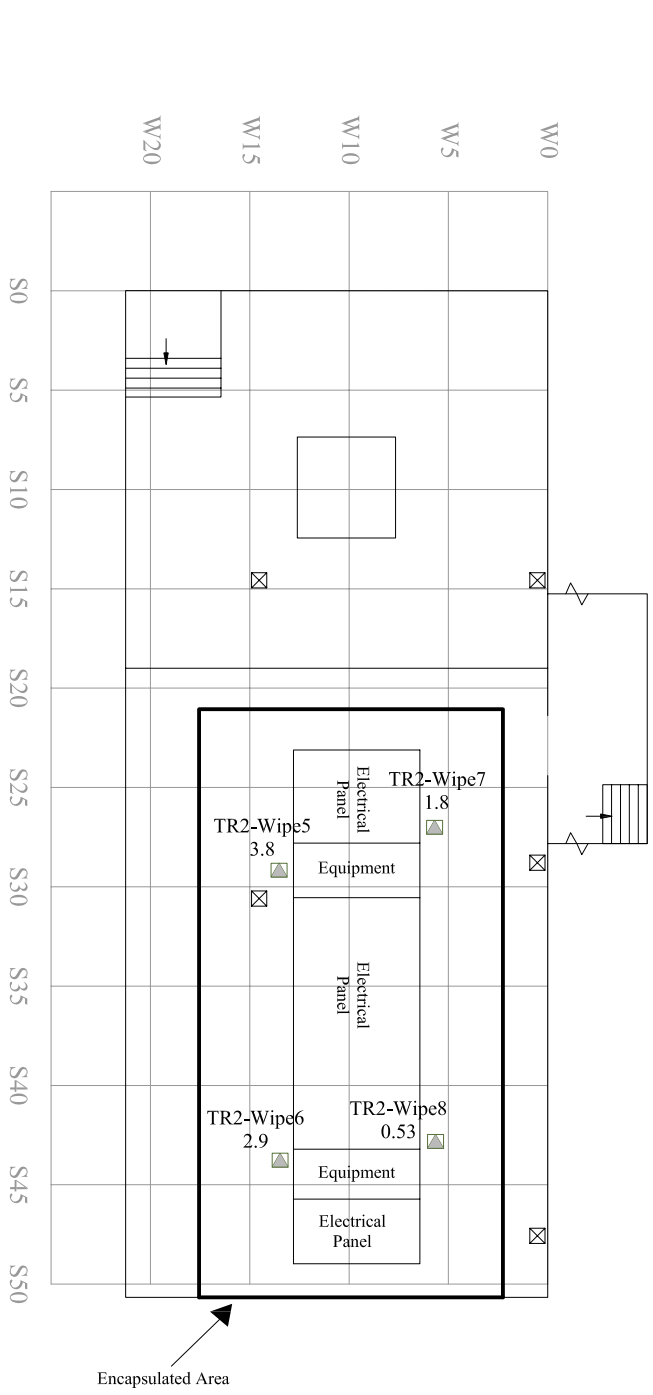
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2008
Drg. Size:	Job No.:
8.5 x 11	38394639.00010

FIGURE 1

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Nov 2008 Building 1 Wipe Sampling\Draft\Figures\Figure 1 - Wipe Sample Lo.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5
3.8 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

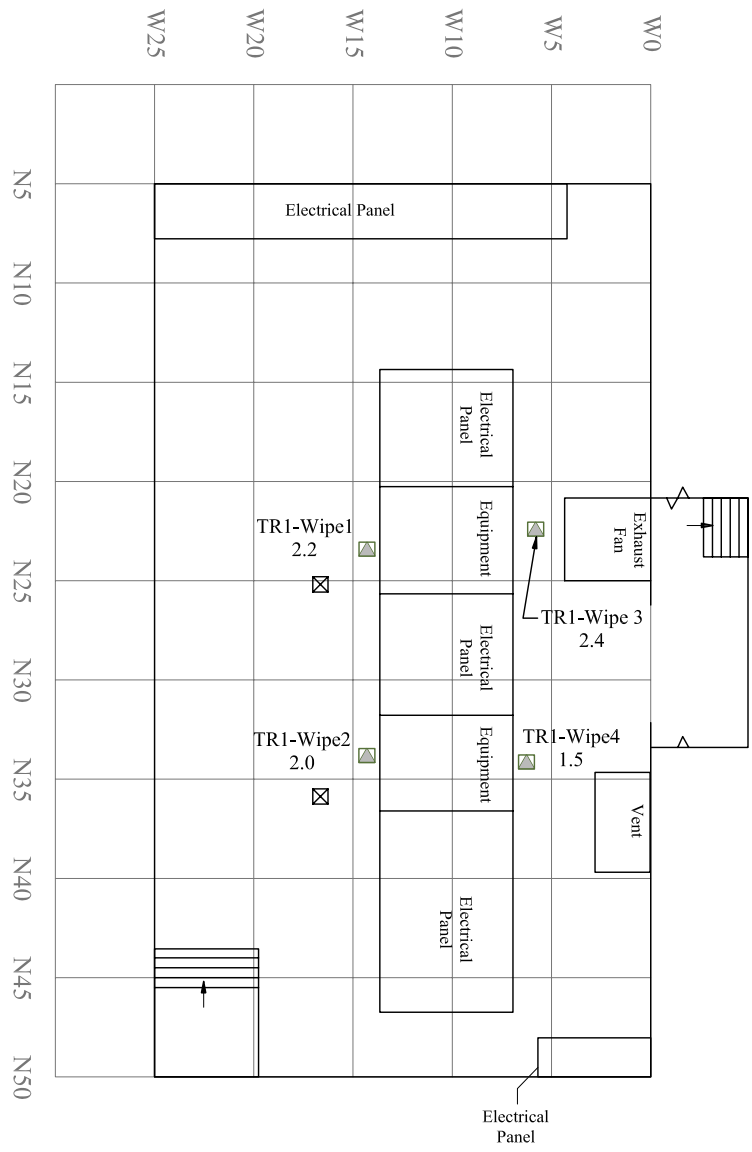
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2008
Drg. Size:	Job No.:
8.5 x 11	38394639.00010

FIGURE 2

J:\11173717\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Nov 2008 Building 1 Wipe Sampling\Draft\Figures\Figure 2 - Wipe Lo.dwg



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
2.2 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

NOTES:
All locations are approximate.

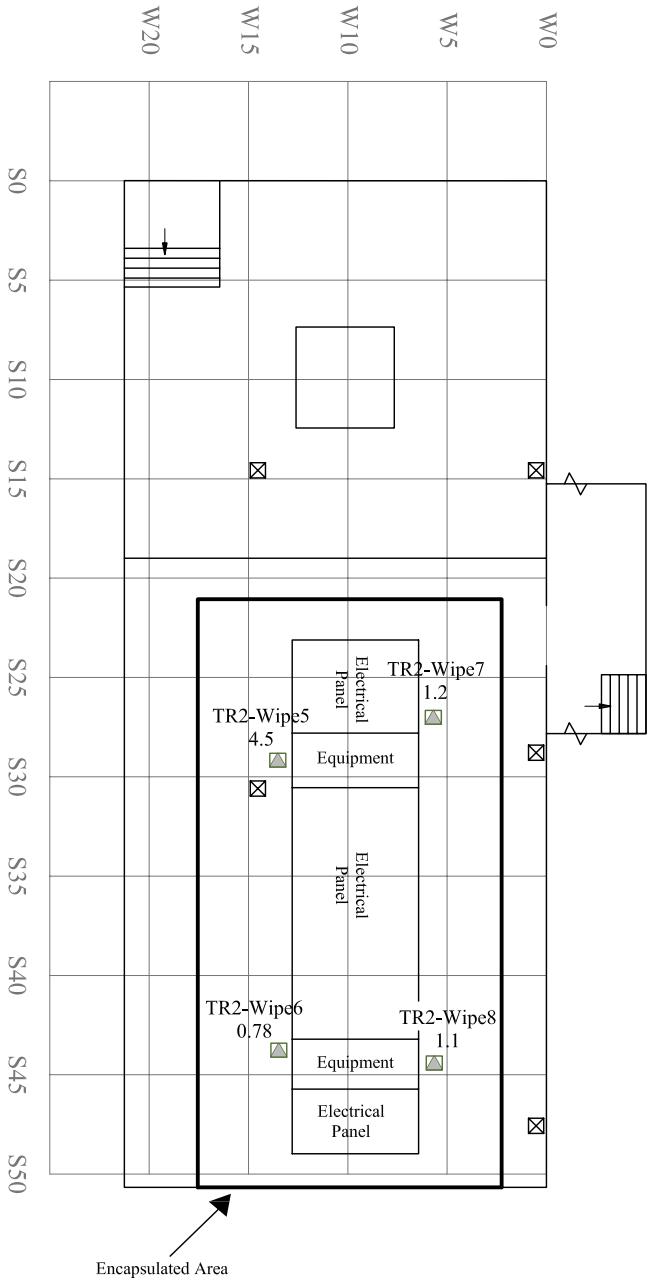
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2009
Drg. Size:	Job No.:
8.5 x 11	38394691.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Nov 2009 Building 1 Wipe Sampling\Figures\Figure 1 – Wipe Sample Locations Room No. 1.dwg User: andrew_zawilinski Jan 04, 2010 – 2:32pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 4.5 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

NOTES:

All locations are approximate.

BASE MAP SOURCE:

Dvirka and Bartilucci Consulting Engineers, 11/21/00

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

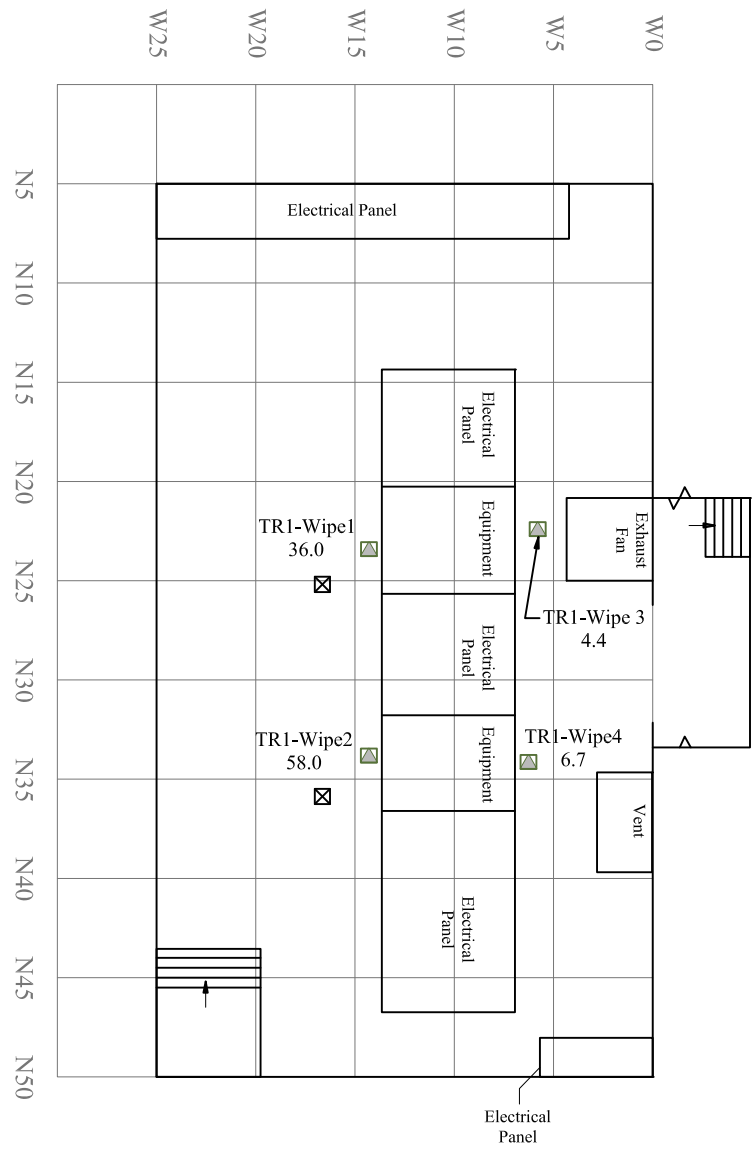
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2009
Drg. Size:	Job No.:
8.5 x 11	38394691.00010

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Nov 2009 Building 1 Wipe Sampling\Figures\Figure 2 - Wipe Sample Locations Room No. 2.dwg User:andrew_zawilinski Jan 04, 2010 - 2:30pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

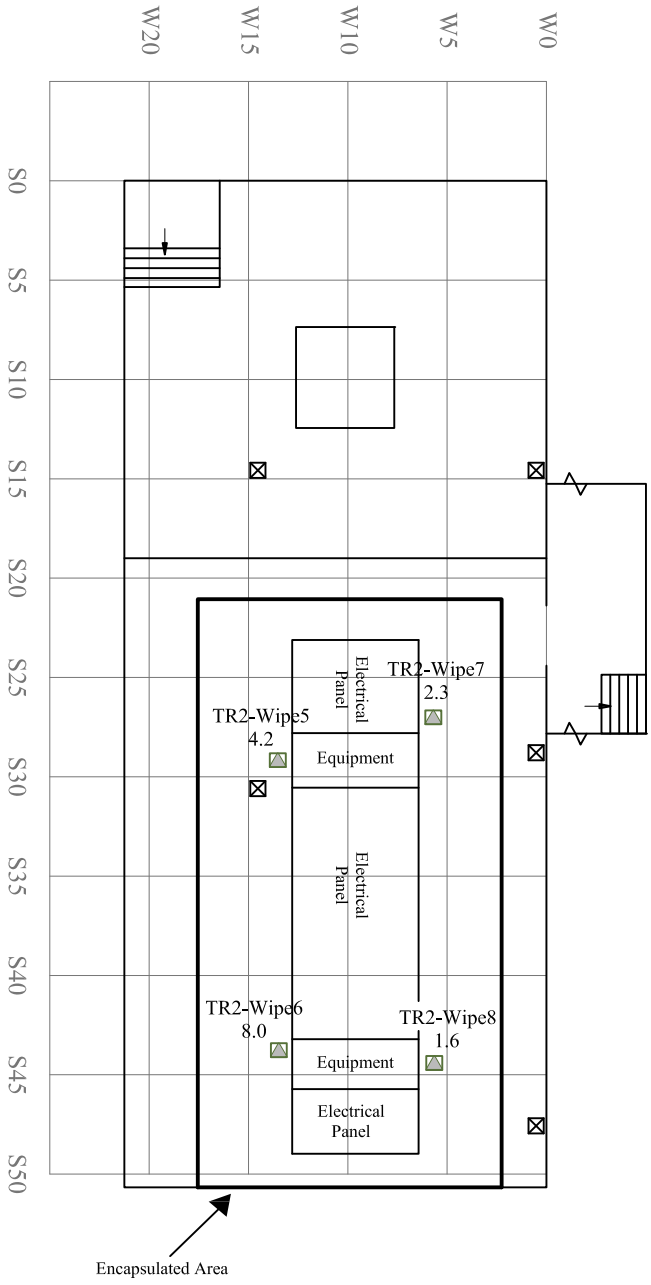
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2010
Drg. Size:	Job No.:
8.5 x 11	38394726.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Oct 2010 Building 1 Wipe Sampling\Draft\Figures\Figure 1 - Wipe Sample Locations Room No 1 38394726.dwg User:Carrie_Szczepanski Nov 16, 2010 - 8:58pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 4.2 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

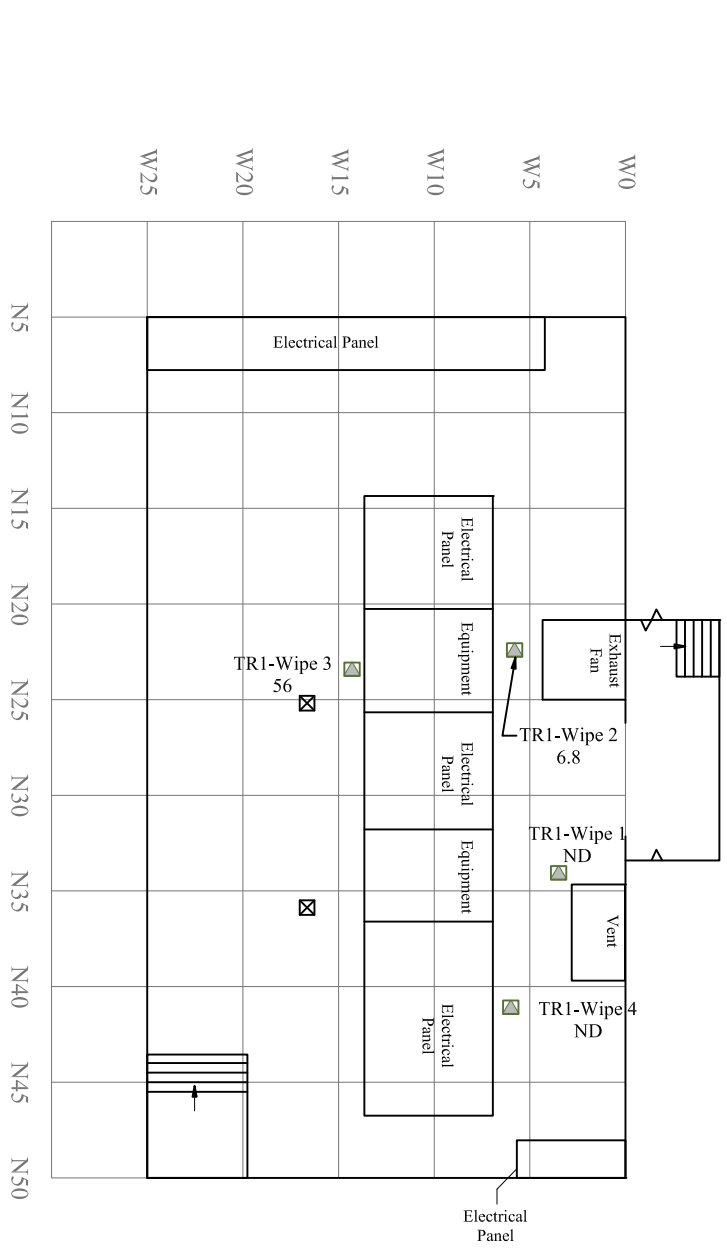
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
ARZ	November 2010
Drg. Size:	Job No.:
8.5 x 11	38394726.00010

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\Oct 2010 Building 1 Wipe Sampling\Draft\Figures\Figure 2 – Wipe Sample Locations Room No. 2 38394726.dwg User: Carrie_Szczepanski Nov 16, 2010 – 8:58pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm ²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

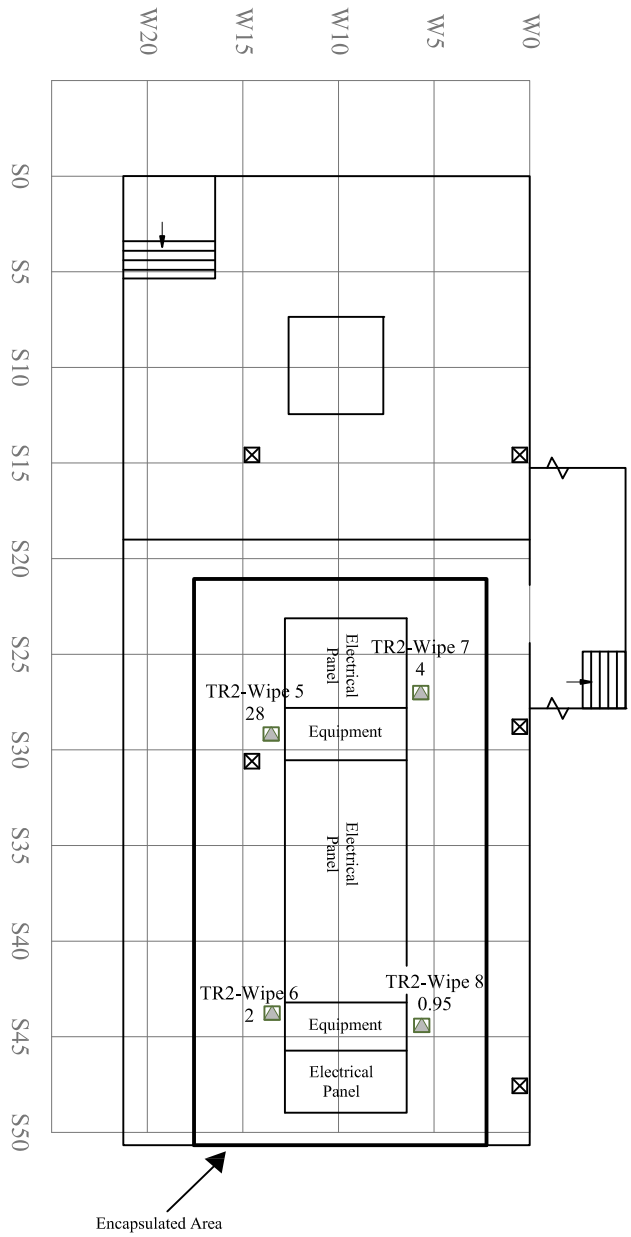
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
ARZ	December 2011
Drg. Size:	Job No.:
8.5 x 11	38394932.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010--Bronx Adult\Building 1 PCB Remedy\December 2011 Sampling\Figure 1 – Wipe Sample Locations Room No 1 38394932 December 2011.dwg User:Carrie_Szczepanski Dec 07, 2011 – 2:12pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 4.2 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm ²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

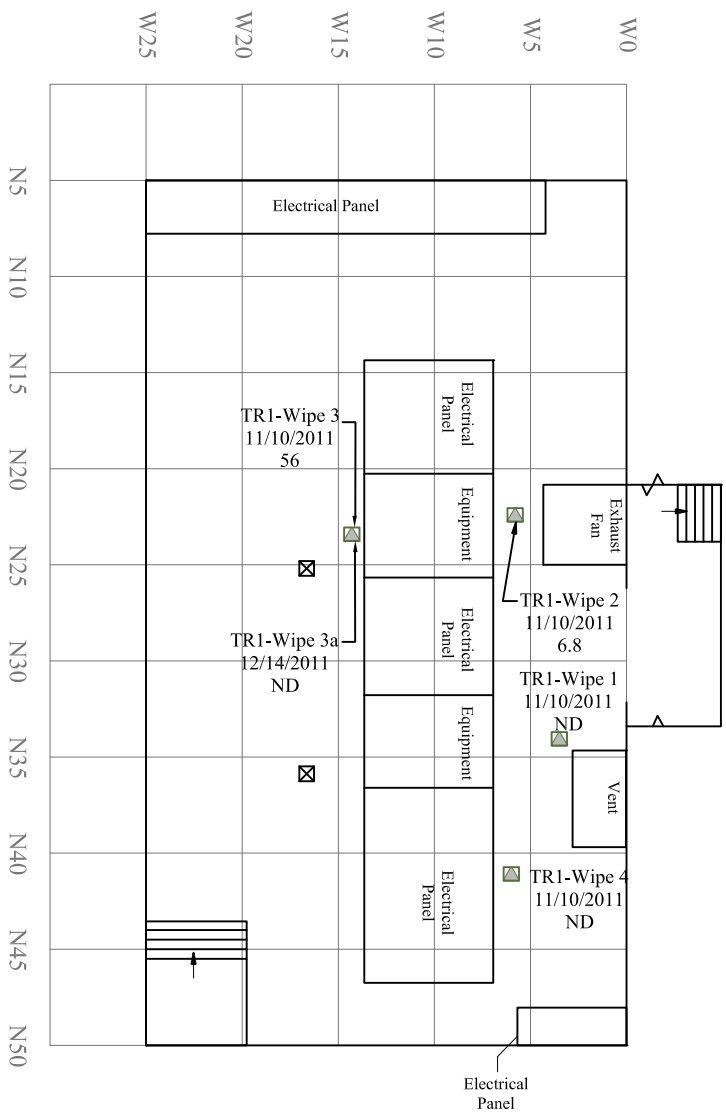
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
ARZ	December 2011
Drg. Size:	Job No.:
8.5 x 11	38394932.00010

FIGURE 2

J:\11173717 DASNY\General Services\00010--Bronx Adult\Building 1 PCB Remedy\December 2011 Sampling\Figure 2 – Wipe Sample Locations Room No. 2 38394932 December 2011.dwg User: Carrie_Szczepanski Dec 08, 2011 – 10:30am



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with date and Aroclor 1260 Concentration (µg/100cm²)

⊠ — Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

ND — Not Detected

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

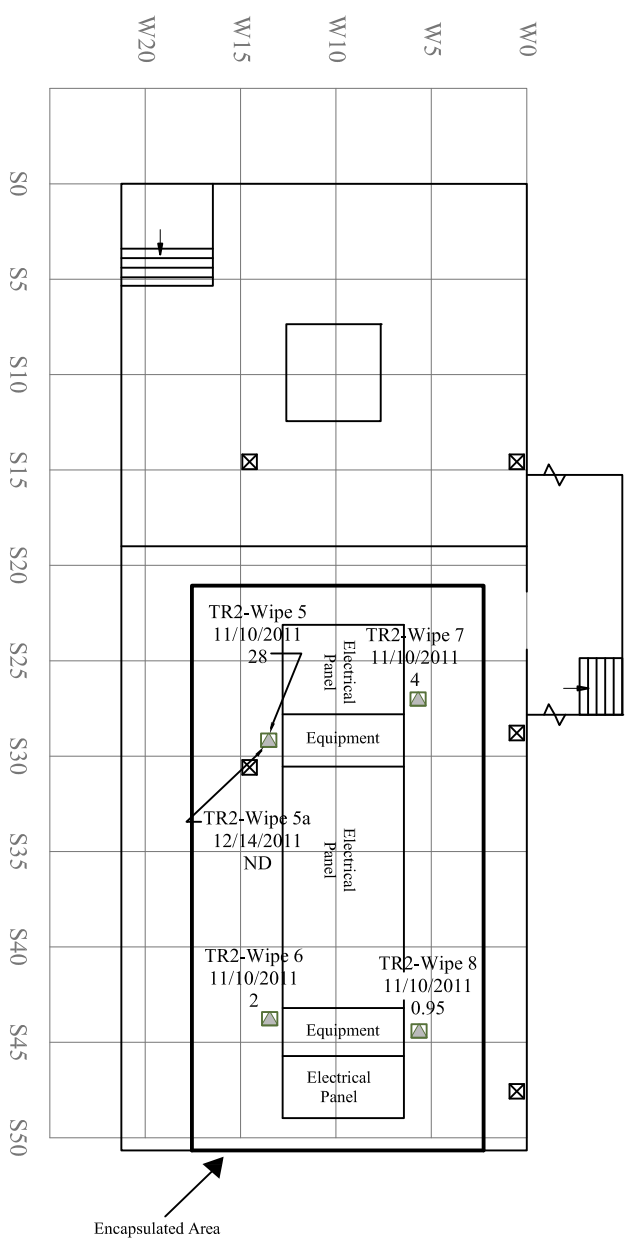
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

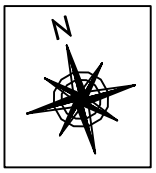
URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	December 2011
Drg. Size:	Job No.:
8.5 x 11	38395037.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\November 2011 Floor Repair-Sampling and Dec2011 Re-Sampl\Figure 1 - Wipe Sample Locations Room No 1 38395037 December 2011.dwg User:Carrie_Szczeponski Jan 04, 2012 - 2:48pm





GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 4.2 — Wipe Sample Location with date and Aroclor 1260 Concentration (ug/100 cm²)

Structural Column

W0 W5 / S0 S5 — Grid Scale and Reference

ND — Not Detected

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

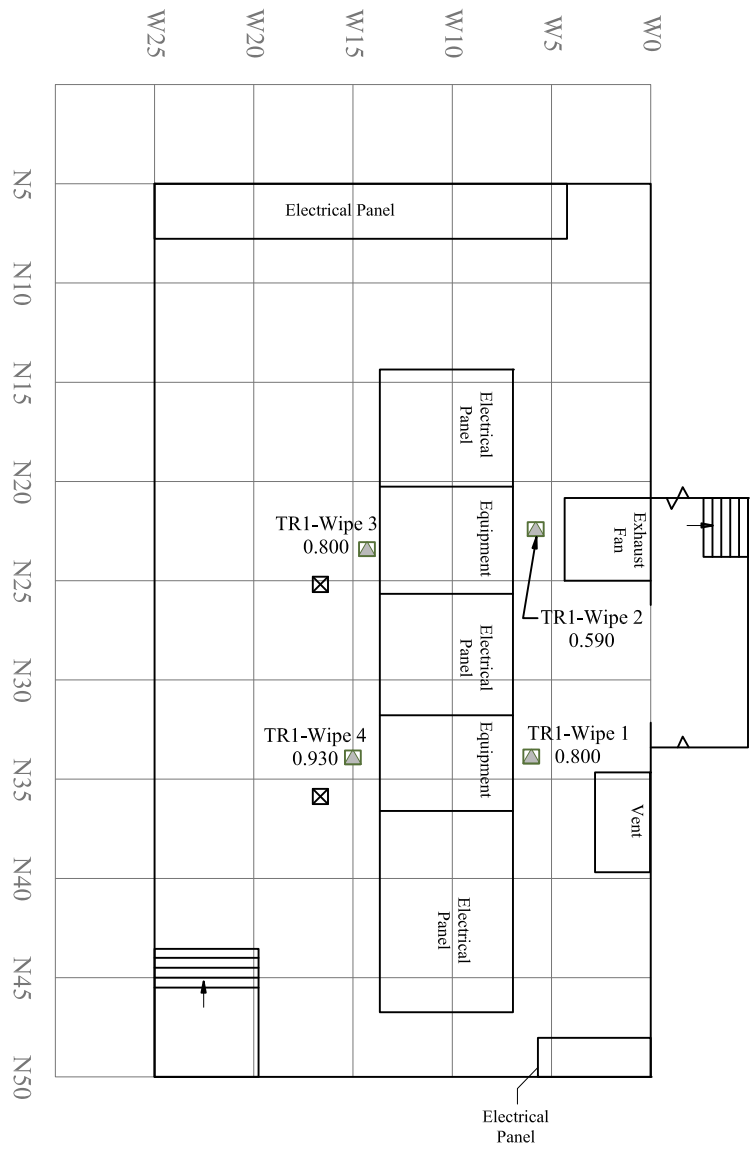
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	December 2011
Drg. Size:	Job No.:
8.5 x 11	38395037.00010

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Building 1 PCB Remedy\November 2011 Floor Repair-Sampling and Dec2011 Re-Sampl\Figure 2 - Wipe Sample Locations Room No. 2 38395037 December 2011.dwg User: Carrie_Szczepanski Jan 04, 2012 - 2:52pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1 WIPE SAMPLE LOCATIONS DECEMBER 2012

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

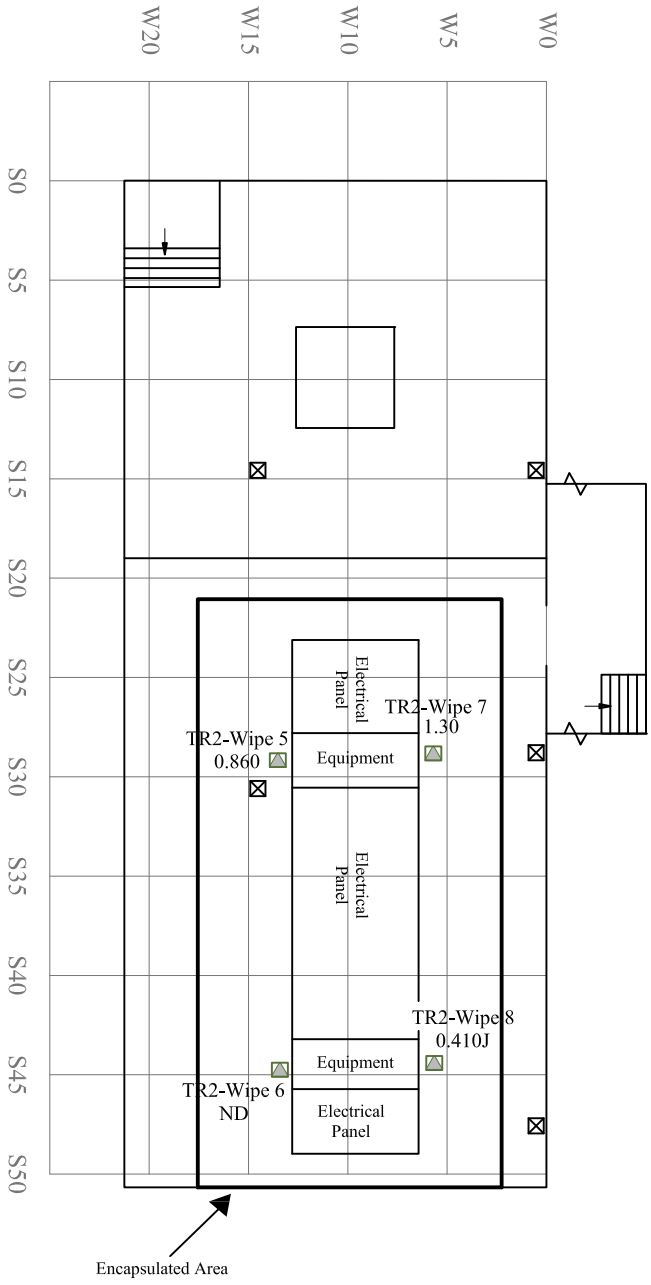
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	January 2013
Drg. Size:	Job No.:
8.5 x 11	38395143.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation,Remediation\Building 1 PCB Project\2012 December Wipe Sampl\Figure 1 - Wipe Sample Locations Room No 1 38395143 January 2013.dwg User: carrie_szczepanski Feb 01, 2013 - 2:06pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5
4.2 — Wipe Sample Location with Aroclor 1260 Concentration (ug/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

ND — Not Detected

J — Indicates an Estimated Concentration

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS DECEMBER 2012

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

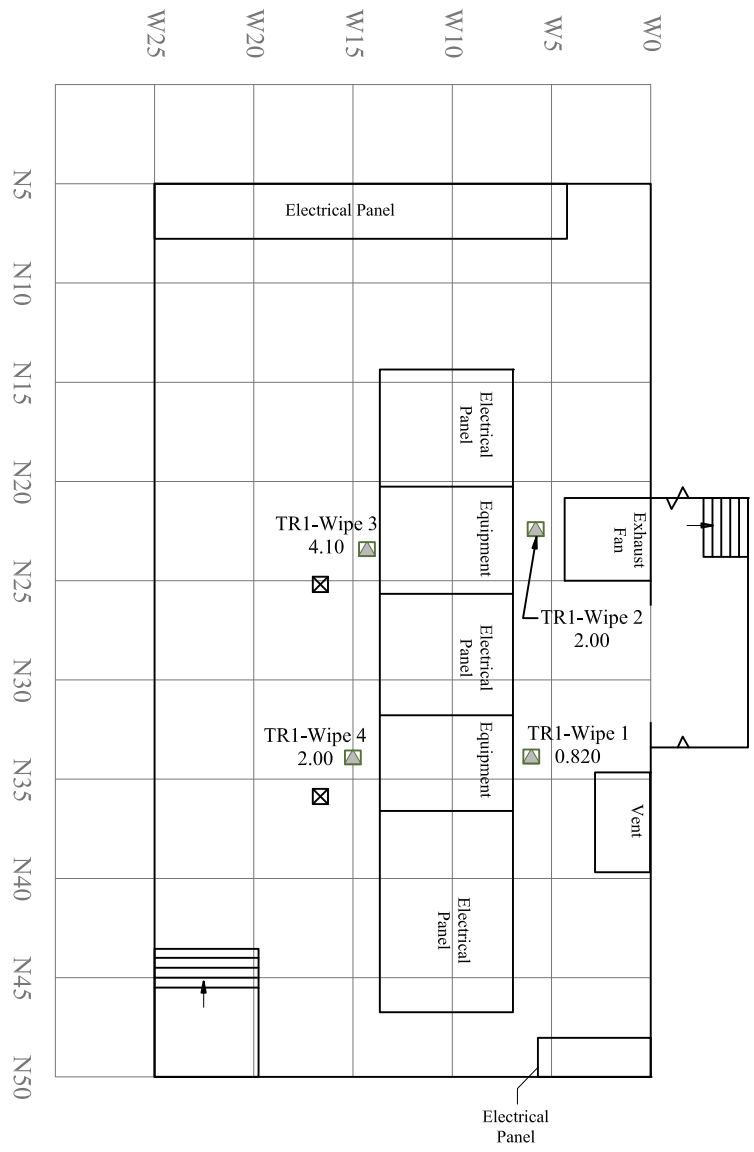
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	January 2013
Drg. Size:	Job No.:
8.5 x 11	38395143.00010

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\2012 December Wipe Sampl\Figure 2 - Wipe Sample Locations Room No. 2 38395143 January 2013.dwg User:carrie_szczepanski Feb 04, 2013 - 10:43am



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
0.820 — Wipe Sample Location with Aroclor 1260 Concentration (µg/100cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
DECEMBER 2013

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

NOTES:
All locations are approximate.

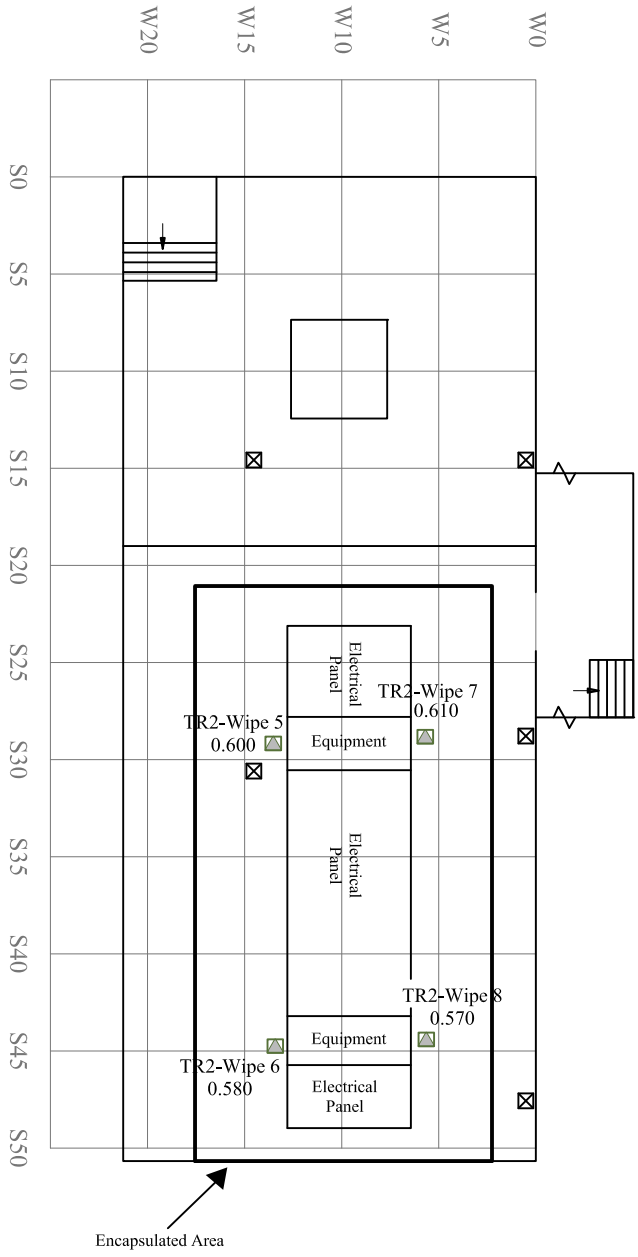
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	January 2014
Drg. Size:	Job No.:
8.5 x 11	38395286.00010

FIGURE 1

\\150SR-C35519\Newjobs\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\201Figure 1 - Wipe Sample Locations Room No 1 38395286 January 2014.dwg User: carrie_szczepanski Jan 09, 2014 - 8:57am



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5
0.600
Wipe Sample Location with Aroclor 1260 Concentration (µg/100 cm²)

Structural Column

W0 W5 S0 S5
Grid Scale and Reference

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS DECEMBER 2013

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

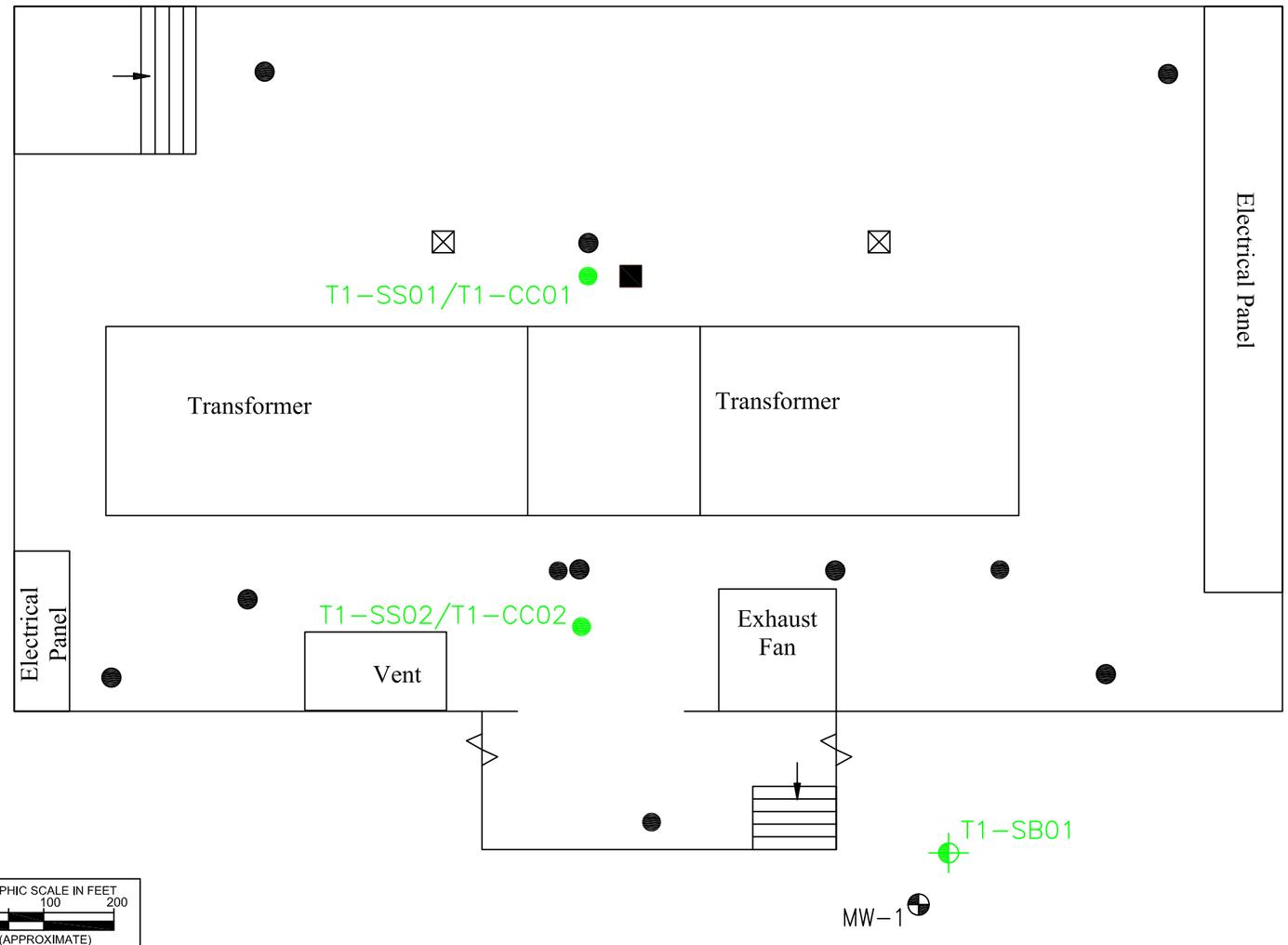
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

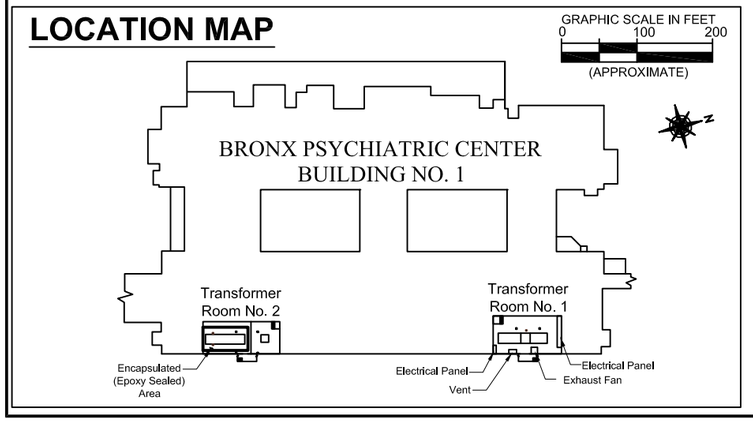
Drafter:	Date:
CLS	January 2014
Drg. Size:	Job No.:
8.5 x 11	38395286.00010

FIGURE 2

\\1508SR-C35519\Newjobs\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\201Figure 2 - Wipe Sample Locations Room No.2 38395286 January 2014.dwg User:carrie_szczepanski Jan 09, 2014 - 8:56am



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Former Drain
- Historical Soil Sample Location (2000)
- Soil Boring Location (2013)
- Soil Sample Location (2013)
- Existing Monitoring Well

NOTES:
All locations are approximate.
Concentrations are in ppm.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: SAMPLE LOCATIONS TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

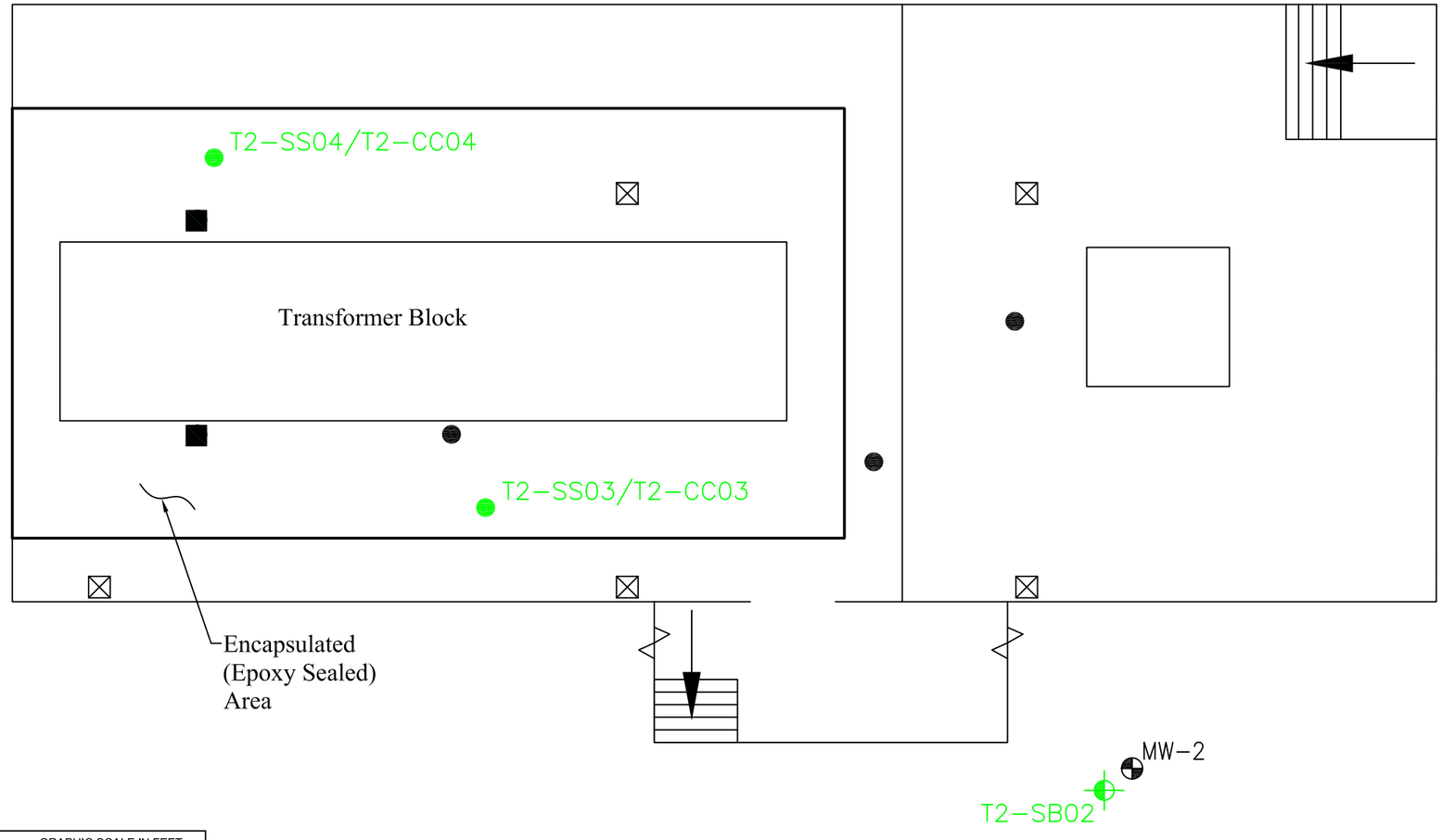
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

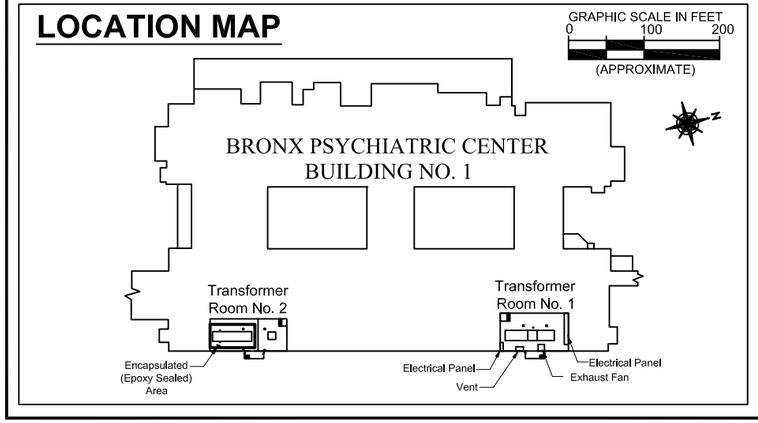
Drafter: MAW	Date: August 2013
Drg. Size: 11 x 17	Job No.: 38395252.00000

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\2013 Letter Report with Figures 1 and 2.dwg User:melissa_wasson Sep 03, 2013 - 2:19pm



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Former Drain
- Historical Soil Sample Location (2000)
- Soil Boring Location (2013)
- Soil Sample Location (2013)
- Existing Monitoring Well

NOTES:
All locations are approximate.
Concentrations are in ppm.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: SAMPLING LOCATIONS
TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

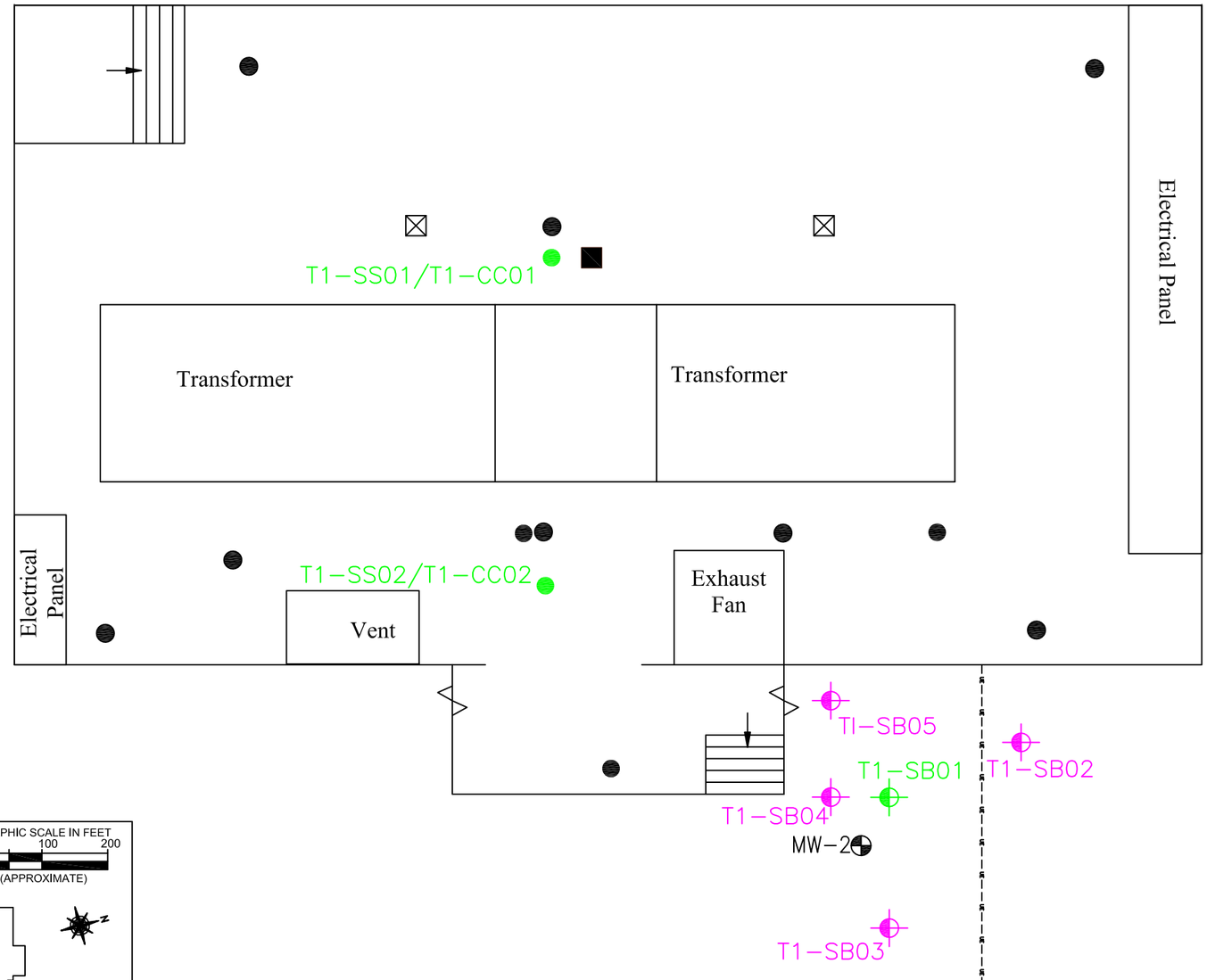
Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

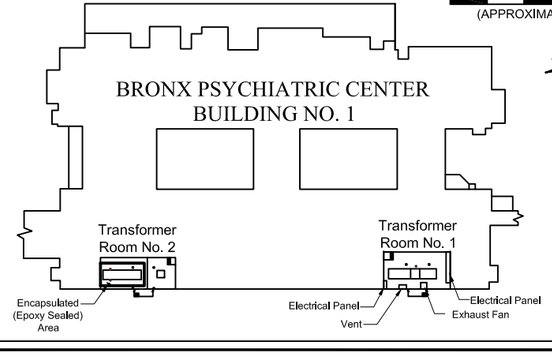
Drafter: MAW	Date: August 2013
Drg. Size: 11 x 17	Job No.: 38395252.00000

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation-Remediation\Building 1 PCB Project\2013 Letter Report with Figures 1 and 2.dwg User:melissa_wasson Sep 03, 2013 - 2:20pm



LOCATION MAP



GRAPHIC SCALE IN FEET
0 5 10
(APPROXIMATE)

LEGEND

- Structural Column
- Former Drain
- Historical Soil Sample Location (2000)
- Soil Boring Location (2013)
- Soil Sample Location (2013)
- Existing Monitoring Well
- Soil Boring Locations
- Underground Electric Line

NOTES:
All locations are approximate.
Concentrations are in ppm.

BASE MAP SOURCE:
H2M Group, 05/21/99

Title: SAMPLING LOCATIONS TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

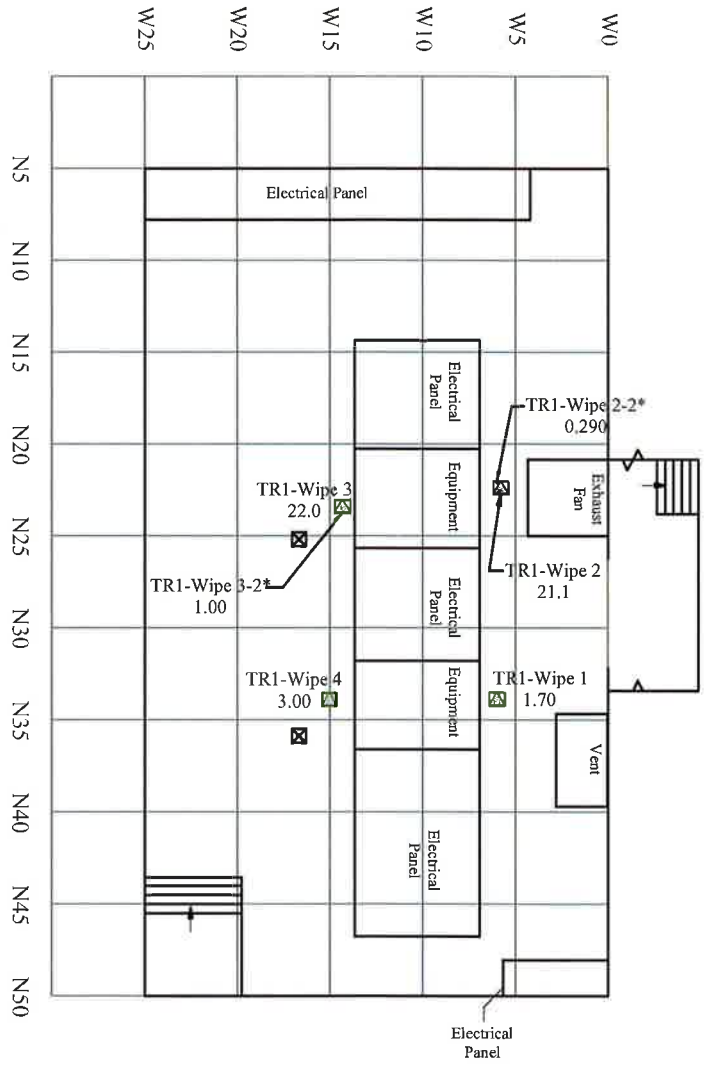
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter: MAW	Date: September 2014
Drg. Size: 11 x 17	Job No.: 38395252.00000

FIGURE 1

J:\1173717 DASNY\General Services\00010-Bronx Adult\Site Investigation.Remediation\Building 1 PCB Project\2013 Letter Report with Figures 1 and 2 093014.dwg User:carrie_szczepanski Oct 02, 2014 - 2:08pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with Total PCB Concentration (µg/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

PCB — Polychlorinated Biphenyl

* — Confirmation sample collected after floor cleaned on 1/23/15.

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
DECEMBER 2014 and JANUARY 2015

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

NOTES:
All locations are approximate.

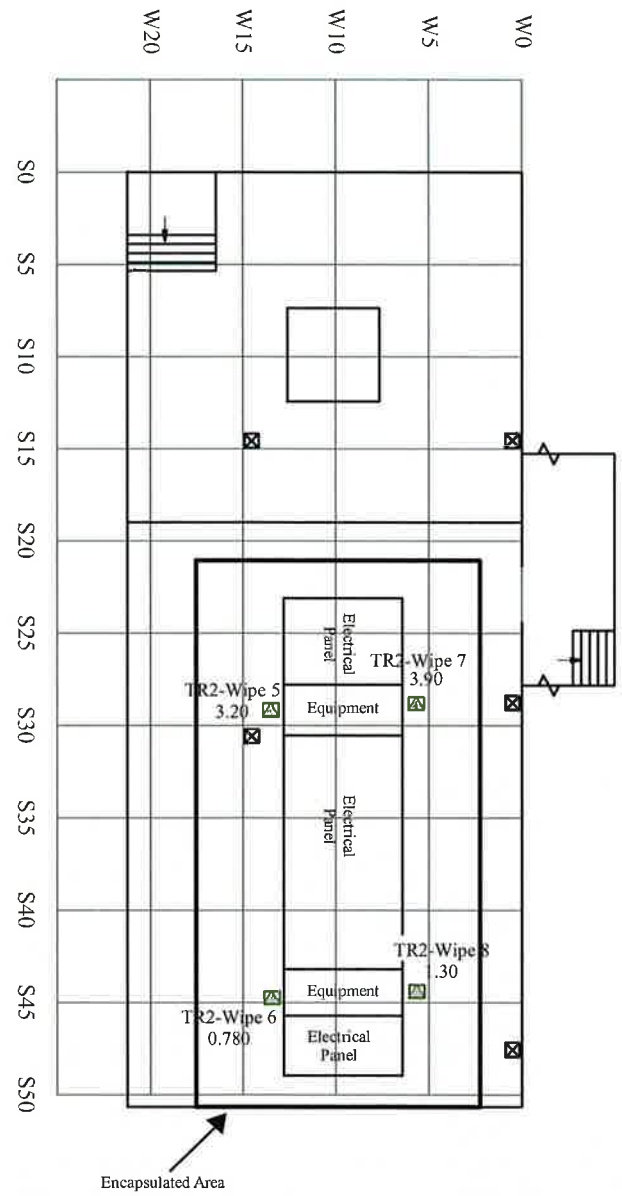
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	March 2015
Drg. Size:	Job No.:
8.5 x 11	38395390.00010

FIGURE 1

J:\11173717 DASNY\General Services\00010--Bronx Adult\Site Investigation Remediation\Building 1 PCB Project\2015 December 2014 Wipe Figure 1 - Wipe Sample Locations Room No 1 38395390 February 2015 G31415.dwg User:corrie_szczepanski Mar 04, 2015 - 1:24pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 0.600 — Wipe Sample Location with Total PCB Concentration (µg/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

PCB — Polychlorinated Biphenyl

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS DECEMBER 2014

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

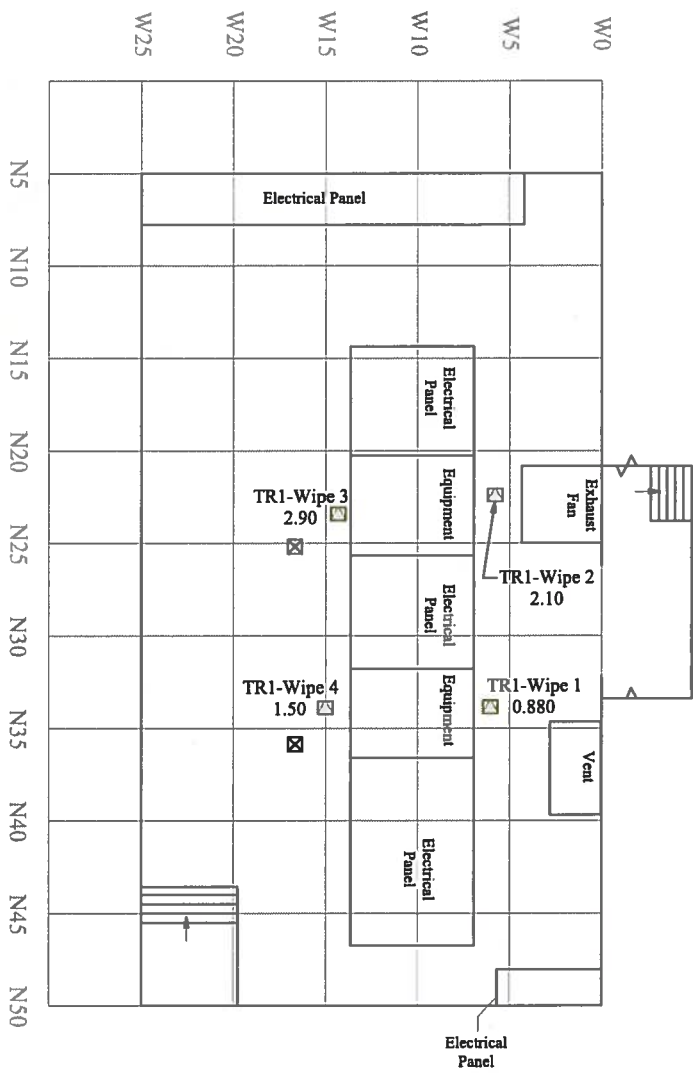
URS

URS
3 Corporate Drive, Suite 203
Clifton Park, New York 12065

Drafter:	Date:
CLS	March 2015
Drg. Size:	Job No.:
8.5 x 11	38395390.00010

FIGURE 2

J:\111737317 DASNY\General Services\00010-Bronx Adult\Site Investigation Remediation\Building 1 PCB Project\2015 December 2014 Wipe Figure 2 - Wipe Sample Locations Room No.2 38395390 February 2015 030415.dwg User:corrie_stcroponski Mar 04, 2015 - 3:30pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR1-Wipe 1
36.0 — Wipe Sample Location with Total PCB Concentration (µg/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

PCB — Polychlorinated Biphenyl

Title: TRANSFORMER ROOM NO. 1
WIPE SAMPLE LOCATIONS
DECEMBER 2015

Location: BRONX PSYCHIATRIC CENTER
BRONX, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

NOTES:
All locations are approximate.

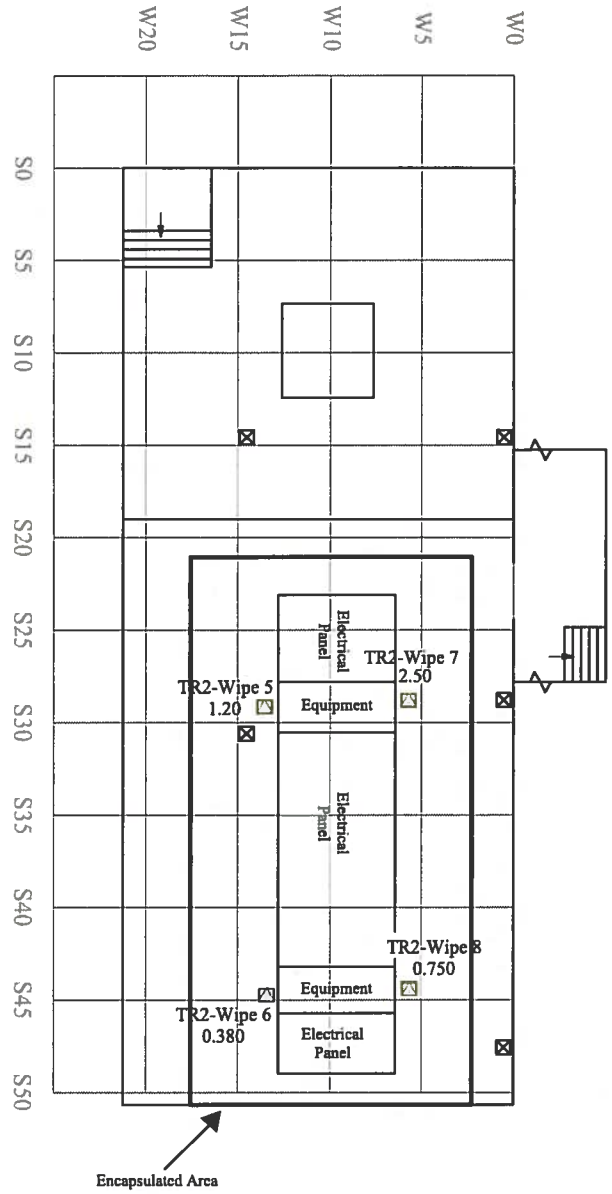
BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS
URS
40 British American Boulevard
Latham, New York 12110

Drafter:	Date:
CLS	January 2016
Drg. Size:	Job No.:
8.5 x 11	60449869.10

FIGURE 1

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation,Remediation\Building 1 PCB Project\2016 December 2015 Wipe Figure 1 - Wipe Sample Locations Room No 1 60449869.10 January 2016.dwg User:corrie_szczeponski Jan 13, 2016 - 2:57pm



GRAPHIC SCALE IN FEET

0 5 10

(APPROXIMATE)

LEGEND

TR2-Wipe5 0.600 — Wipe Sample Location with Total PCB Concentration (µg/100 cm²)

Structural Column

W0 W5 S0 S5 — Grid Scale and Reference

PCB — Polychlorinated Biphenyl

Title: TRANSFORMER ROOM NO. 2 WIPE SAMPLE LOCATIONS DECEMBER 2015

Location: BRONX PSYCHIATRIC CENTER BRONX, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Dvirka and Bartilucci Consulting Engineers, 11/21/00

URS
URS
40 British American Boulevard
Latham, New York 12110

Drafter:	Date:
CLS	January 2016
Drg. Size:	Job No.:
8.5 x 11	60449869.10

FIGURE 2

J:\11173717 DASNY\General Services\00010-Bronx Adult\Site Investigation Remediation\Building 1 PCB Project\2016 December 2015 Wipe Figure 2 – Wipe Sample Locations Room No.2 60449869.10 January 2016.dwg User:carrie_szczepanski Jan 13, 2016 – 3:08pm

APPENDIX C

AVAILABLE DATA USABILITY STUDY REPORTS

DATA USABILITY SUMMARY REPORT

BRONX PSYCHIATRIC CENTER – BUILDING 1 SITE
BRONX, NEW YORK

Analyses Performed by:

CON-TEST ANALYTICAL LABORATORY
EAST LONGMEADOW, MASSACHUSETTS

Prepared for:

DORMITORY AUTHORITY OF THE STATE OF NEW YORK

Prepared by:

URS CORPORATION
77 GOODELL STREET
BUFFALO, NY 14203

JULY 2013

TABLE OF CONTENTS

		Page No.
I.	INTRODUCTION	1
II.	ANALYTICAL METHODOLOGIES	1
III.	DATA DELIVERABLE COMPLETENESS	2
IV.	SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES	2
V.	NON-CONFORMANCES	2
VI.	SAMPLE RESULTS AND REPORTING	4
VII.	SUMMARY	4

TABLES
(Following Text)

Table 1 Summary of Data Qualifications

ATTACHMENTS

Attachment A –Validated Form 1s

Attachment B – Support Documentation

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and Development of Data Usability Summary Reports*, May 2010.

This DUSR discusses the data usability of two (2) groundwater samples plus one (1) field duplicate and one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, and eight (8) soil samples plus one (1) field duplicate and one (1) MS/MSD pair collected by URS personnel on June 11-12, 2013, as part of the sampling program at the Bronx Psychiatric Center – Building 1 Site located in Bronx, New York. This work has been performed for the Dormitory Authority of the State of New York (DASNY).

II. ANALYTICAL METHODOLOGIES

The groundwater and soil samples were sent to Con-Test Analytical Laboratory located in East Longmeadow, MA for analysis, and were analyzed for the following parameters:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C,
- Semivolatile organic compounds (SVOCs) by USEPA Method 8270D, and
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082A (soils only).

A limited data validation was performed in accordance with the following USEPA Region II guidelines:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP HW-24, Rev. 2, August 2008;
- *Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22, Rev. 4*, August 2008; and
- *Validating PCB Compounds by SW-846 Method 8082A,* HW-45, Revision 1, October 2006.

Qualifications applied to the data during the limited validation include 'U' (non-detect), 'J' (estimated concentration), 'UJ' (estimated quantitation limit) and 'R' (rejected). Definitions of USEPA data qualifiers are presented at the end of this text. A summary of data qualifications is presented in Table 1. Copies of the validated laboratory results (i.e., Form 1s) are presented in Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC Analytical Services Protocol (ASP) Category B or equivalent) were provided by the laboratory, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved and under proper chain-of-custody (COC), except for the following instance.

- For groundwater sample T2-MW2, the VOC container was unpreserved (i.e., pH=7). Since the laboratory analyzed the sample within 7 days of collection, no qualification of the data was deemed necessary.

All samples were analyzed within the required holding times.

V. NON-CONFORMANCES

- **Initial and Continuing Calibrations**

  For VOCs, the minimum relative response factors (RRFs) for the initial calibrations (ICALs) and continuing calibrations (CCALs) were less than 0.05 for one or more of the following compounds: 1,2-dibromo-3-chloropropane, 1,4-dioxane, acrylonitrile,

tert-butyl alcohol, and/or tetrahydrofuran. The associated sample results for these compounds were rejected and qualified 'R', as listed on Table 1.

For VOCs, the percent differences (%Ds) between the ICAL RRFs and the RRFs in the CCALs exceeded 20% one or more of the following compounds: 2-butanone, 2-hexanone, acetone, chloroethane, chloromethane, dichlorodifluoromethane, diethyl ether, and/or naphthalene. The associated sample results for these compounds were qualified 'J' or 'UJ', as listed on Table 1.

For SVOCs, the minimum RRFs for the ICALs and CCALs were less than 0.05 for pentachloronitrobenzene. The associated sample results for this compound were rejected and qualified 'R', as listed on Table 1.

For SVOCs, the %Ds between the ICAL RRFs and the RRFs in the CCALs exceeded 20% one or more of the following compounds: 4-nitrophenol, benzidine, benzo(b)fluoranthene, benzo(g,h,i)perylene, hexachlorocyclopentadiene, and/or pentachlorophenol. The associated sample results for these compounds were qualified 'UJ', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 5, 6, and Form 7) is presented in Attachment B.

- **Matrix Spikes and Laboratory Control Samples**

The SVOC MS/MSD analyses for soil sample T2-SB02 (0-4') exhibited zero percent recoveries (%Rs) for benzidine and hexachlorocyclopentadiene. The non-detect results for this sample were rejected and qualified 'R', as listed on Table 1. Note, the MS/MSD did exhibit low/high biased outliers for several other compounds, but the associated laboratory control samples (LCS) were within QC limits, hence, no further qualification of the data was deemed necessary.

The SVOC MS/MSD analyses for groundwater sample T1-MW1 and associated laboratory control samples (LCS) exhibited biased low percent recoveries (%R) for

benzidine. The non-detect benzidine results for all groundwater samples were qualified 'UJ', as listed on Table 1.

The VOC LCS %Rs were below QC limits for one or more of the following compounds: acetone, bromomethane, carbon disulfide, and/or chloromethane. The associated sample results for these compounds were qualified 'J' or 'UJ', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 3) is presented in Attachment B.

VI. SAMPLE RESULTS AND REPORTING

All quantitation/reporting limits were reported in accordance with method requirements and were adjusted for sample size and dilution factors.

For PCBs, the %Ds between the dual-column analyses for soil samples T2-SS03 (0-8") and T2-SS04 (12-14") were >25% for AR1260. The AR1260 results for these two samples were qualified 'J', as listed on Table 1. Documentation supporting the qualification of data (i.e., Form 10) is presented in Attachment B.

VII. SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'J' or 'UJ' are considered conditionally usable. Those results qualified 'U' are considered non-detect. Those results qualified 'R' are unusable. All other sample results are usable as reported. URS does not recommend the recollection of any samples at this time.

Prepared By: Peter R. Fairbanks, Senior Chemist PF **Date:** 7/31/13

Reviewed By: Ann Marie Kropovitch, Chemist AMK **Date:** 7/31/13

TABLE 1

SUMMARY OF DATA QUALIFICATIONS

BRONX PSYCHIATRIC CENTER – BUILDING 1 SITE

SAMPLE ID	FRACTION	ANALYTICAL DEVIATION	QUALIFICATION
All groundwater samples	VOC	ICAL and CCAL minimum RRFs < 0.05 for 1,4-dioxane, 1,2-dibromo-3-chloropropane, and/or tert-butyl alcohol.	Qualify non-detect results 'R.'
All soil samples	VOC	ICAL and CCAL minimum RRFs < 0.05 for 1,2-dibromo-3-chloropropane, 1,4-dioxane, acrylonitrile, tert-butyl alcohol, and/or tetrahydrofuran	Qualify non-detect results 'R.'
All groundwater samples	VOC	CCAL %Ds >20% for chloromethane and naphthalene.	Qualify non-detect results 'UJ.'
All soil samples	VOC	CCAL %Ds >20% for 2-butanone, 2-hexanone, acetone, chloroethane, dichlorodifluoromethane, and diethyl ether.	Qualify detected results 'J' and non-detect results 'UJ.'
All groundwater and soil samples	SVOC	ICAL and CCAL minimum RRFs < 0.05 for pentachloronitrobenzene.	Qualify non-detect results 'R.'
All groundwater samples	SVOC	CCAL %D greater than 20% for 4-nitrophenol, benzo(b)fluoranthene, benzo(g,h,i)perylene, hexachlorocyclopentadiene, and/or pentachlorophenol.	Qualify non-detect results 'UJ.'
Soil samples T1-SS01 (0-8"), T1-SB01 (0-4'), and T3-SB03 (0-4')	SVOC	CCAL %D greater than 20% for benzidine.	Qualify non-detect results 'UJ.'
Soil sample T2-SB02 (0-4')	SVOC	MS/MSD %Rs 0% for benzidine and hexachlorocyclopentadiene.	Qualify non-detect results 'R.'
All groundwater samples	SVOC	MS/MSD and LCS < QC limits for benzidine.	Qualify non-detect results 'UJ.'
All groundwater samples	VOC	LCS < QC limits for bromomethane.	Qualify non-detect results 'UJ.'
All soil samples	VOC	LCS < QC limits for acetone, carbon disulfide, and chloromethane.	Qualify detected results 'J' and non-detect results 'UJ.'
Soil samples T2-SS03 (0-8") and T2-SS04 (12-14')	PCB	%D between dual-column analyses >25%.	Qualify detected results 'J'.

ATTACHMENT A

VALIDATED FORM 1s

ATTACHMENT B

SUPPORT DOCUMENTATION

DEFINITIONS OF USEPA DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R – The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

B – (Metals only) The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the quantitation limit.

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ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW1 | Sampled: 6/11/2013 11:20

Sample ID: 13F0478-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS 7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.7	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Acrylonitrile	ND	5.0	0.58	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Bromodichloromethane	ND	0.50	0.088	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	~~L-04, MS-09~~, U J	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
2-Butanone (MEK)	ND	20	2.4	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1	~~R-06, V-16, U~~ R	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Carbon Disulfide	ND	2.0	1.0	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Carbon Tetrachloride	ND	5.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	~~MS-07A, R-06, V-03;~~ UJ U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.34	µg/L	1	U R	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	MS-07A, U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1-Dichloropropene	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
cis-1,3-Dichloropropene	ND	0.50	0.062	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
trans-1,3-Dichloropropene	ND	0.50	0.056	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW1 | Sampled: 6/11/2013 11:20

Sample ID: 13F0478-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

7/20/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,4-Dioxane	ND	50	26	µg/L	1	~~MS-09, V-16,~~ U R	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	~~V-05,~~ U J	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Tetrahydrofuran	ND	10	1.1	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 19:54	EEH

Surrogates	% Recovery	Recovery Limits	Flag		
1,2-Dichloroethane-d4	105	70-130			6/14/13 19:54
Toluene-d8	101	70-130			6/14/13 19:54
4-Bromofluorobenzene	99.2	70-130			6/14/13 19:54

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW1 | Sampled: 6/11/2013 11:20

Sample ID: 13F0478-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.2	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Acenaphthylene	ND	5.2	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Acetophenone	ND	10	3.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Aniline	ND	5.2	2.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Anthracene	ND	5.2	2.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzidine	ND	10	6.5	µg/L	1	~~R-05~~, ~~R-06~~, U J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzo(a)anthracene	ND	5.2	2.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzo(a)pyrene	ND	5.2	3.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzo(b)fluoranthene	3.6	5.2	2.2	µg/L	1	~~V-05~~, J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzo(g,h,i)perylene	ND	5.2	5.1	µg/L	1	~~V-20~~, U J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzo(k)fluoranthene	ND	5.2	3.2	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Benzoic Acid	ND	10	2.9	µg/L	1	~~MS-09~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Bis(2-chloroethoxy)methane	ND	10	3.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Bis(2-chloroethyl)ether	ND	10	4.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Bis(2-chloroisopropyl)ether	ND	10	4.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Bis(2-Ethylhexyl)phthalate	ND	10	7.3	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Bromophenylphenylether	ND	10	3.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Butylbenzylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Carbazole	ND	10	1.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Chloroaniline	ND	10	3.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Chloro-3-methylphenol	ND	10	3.0	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Chloronaphthalene	ND	10	4.1	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Chlorophenol	ND	10	3.7	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Chlorophenylphenylether	ND	10	3.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Chrysene	ND	5.2	2.8	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Dibenz(a,h)anthracene	ND	5.2	5.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Dibenzofuran	ND	5.2	2.9	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Di-n-butylphthalate	ND	10	2.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,2-Dichlorobenzene	ND	5.2	3.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,3-Dichlorobenzene	ND	5.2	4.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,4-Dichlorobenzene	ND	5.2	3.9	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
3,3-Dichlorobenzidine	ND	10	5.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4-Dichlorophenol	ND	10	3.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Diethylphthalate	ND	10	2.9	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4-Dimethylphenol	ND	10	7.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Dimethylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4,6-Dinitro-2-methylphenol	ND	10	4.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4-Dinitrophenol	ND	10	3.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4-Dinitrotoluene	ND	10	3.1	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,6-Dinitrotoluene	ND	10	2.8	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Di-n-octylphthalate	ND	10	7.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	4.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Fluoranthene	ND	5.2	2.1	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Fluorene	ND	5.2	2.4	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW1 | Sampled: 6/11/2013 11:20

Sample ID: 13F0478-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Hexachlorobutadiene	ND	10	5.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Hexachlorocyclopentadiene	ND	10	8.2	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Hexachloroethane	ND	10	4.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Indeno(1,2,3-cd)pyrene	ND	5.2	4.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Isophorone	ND	10	3.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1-Methylnaphthalene	ND	5.2	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Methylnaphthalene	ND	5.2	3.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Methylphenol	ND	10	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
3/4-Methylphenol	ND	10	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Naphthalene	ND	5.2	3.1	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Nitroaniline	ND	10	3.0	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
3-Nitroaniline	ND	10	3.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Nitroaniline	ND	10	4.0	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Nitrobenzene	ND	10	3.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2-Nitrophenol	ND	10	3.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
4-Nitrophenol	ND	10	3.9	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
N-Nitrosodimethylamine	ND	5.2	3.3	µg/L	1	~~L-04, R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
N-Nitrosodiphenylamine	ND	10	4.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
N-Nitrosodi-n-propylamine	ND	10	5.7	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Pentachloronitrobenzene	ND	10	2.4	µg/L	1	~~R-05, V-16,~~ U R	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Pentachlorophenol	ND	10	3.8	µg/L	1	~~V-20,~~ U J	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Phenanthrene	ND	5.2	2.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Phenol	ND	10	1.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Pyrene	ND	5.2	2.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
Pyridine	ND	5.2	3.1	µg/L	1	~~MS-09, R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,2,4,5-Tetrachlorobenzene	ND	10	5.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
1,2,4-Trichlorobenzene	ND	5.2	5.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4,5-Trichlorophenol	ND	10	2.8	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 15:49	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	40.9	15-110		6/19/13 15:49
Phenol-d6	27.6	15-110		6/19/13 15:49
Nitrobenzene-d5	51.7	30-130		6/19/13 15:49
2-Fluorobiphenyl	58.7	30-130		6/19/13 15:49
2,4,6-Tribromophenol	71.4	15-110		6/19/13 15:49
p-Terphenyl-d14	71.3	30-130		6/19/13 15:49

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ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 Sample Description: Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW3 Sampled: 6/11/2013 13:15

Sample ID: 13F0478-02 (Field Duplicate of T1-MW1) 7/30/13

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.7	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Acrylonitrile	ND	5.0	0.58	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Bromodichloromethane	ND	0.50	0.088	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	~~1.04~~ U J	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
2-Butanone (MEK)	ND	20	2.4	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1	~~7.16~~ U R	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Carbon Disulfide	ND	2.0	1.0	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Carbon Tetrachloride	ND	5.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	~~0.05~~ U J	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.34	µg/L	1	U R	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1-Dichloropropene	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
cis-1,3-Dichloropropene	ND	0.50	0.062	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
trans-1,3-Dichloropropene	ND	0.50	0.056	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW3 | Sampled: 6/11/2013 13:15

Sample ID: 13F0478-02 (Field Duplicate of T1-MW1)

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS 7/3/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,4-Dioxane	ND	50	26	µg/L	1	~~V-16~~ U R	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	~~V-05~~ U J	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Tetrahydrofuran	ND	10	1.1	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:20	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	102	70-130		6/14/13 20:20
Toluene-d8	103	70-130		6/14/13 20:20
4-Bromofluorobenzene	101	70-130		6/14/13 20:20

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW3 | Sampled: 6/11/2013 13:15

Sample ID: 13F0478-02 (Field Duplicate of T1-MW1)

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

7/3.1.3

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.2	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Acenaphthylene	ND	5.2	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Acetophenone	ND	10	3.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Aniline	ND	5.2	2.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Anthracene	ND	5.2	2.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzidine	ND	10	6.6	µg/L	1	~~R-05~~, U J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzo(a)anthracene	ND	5.2	2.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzo(a)pyrene	ND	5.2	3.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzo(b)fluoranthene	3.6	5.2	2.2	µg/L	1	~~V-05~~, J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzo(g,h,i)perylene	ND	5.2	5.2	µg/L	1	~~V-20~~, U J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzo(k)fluoranthene	ND	5.2	3.2	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Benzoic Acid	ND	10	2.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Bis(2-chloroethoxy)methane	ND	10	3.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Bis(2-chloroethyl)ether	ND	10	4.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Bis(2-chloroisopropyl)ether	ND	10	4.3	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Bis(2-Ethylhexyl)phthalate	ND	10	7.4	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Bromophenylphenylether	ND	10	4.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Butylbenzylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Carbazole	ND	10	1.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Chloroaniline	ND	10	3.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Chloro-3-methylphenol	ND	10	3.0	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Chloronaphthalene	ND	10	4.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Chlorophenol	ND	10	3.8	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Chlorophenylphenylether	ND	10	3.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Chrysene	ND	5.2	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Dibenz(a,h)anthracene	ND	5.2	5.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Dibenzofuran	ND	5.2	3.0	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Di-n-butylphthalate	ND	10	2.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,2-Dichlorobenzene	ND	5.2	3.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,3-Dichlorobenzene	ND	5.2	4.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,4-Dichlorobenzene	ND	5.2	3.9	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
3,3-Dichlorobenzidine	ND	10	5.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4-Dichlorophenol	ND	10	3.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Diethylphthalate	ND	10	2.9	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4-Dimethylphenol	ND	10	7.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Dimethylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4,6-Dinitro-2-methylphenol	ND	10	4.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4-Dinitrophenol	ND	10	3.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4-Dinitrotoluene	ND	10	3.1	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,6-Dinitrotoluene	ND	10	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Di-n-octylphthalate	ND	10	7.1	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	5.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Fluoranthene	ND	5.2	2.1	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Fluorene	ND	5.2	2.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-MW3 | Sampled: 6/11/2013 13:15

Sample ID: 13F0478-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.7	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Hexachlorobutadiene	ND	10	5.8	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Hexachlorocyclopentadiene	ND	10	8.2	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Hexachloroethane	ND	10	4.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Indeno(1,2,3-cd)pyrene	ND	5.2	4.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Isophorone	ND	10	3.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1-Methylnaphthalene	ND	5.2	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Methylnaphthalene	ND	5.2	3.7	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Methylphenol	ND	10	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
3/4-Methylphenol	ND	10	3.3	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Naphthalene	ND	5.2	3.1	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Nitroaniline	ND	10	3.0	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
3-Nitroaniline	ND	10	3.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Nitroaniline	ND	10	4.1	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Nitrobenzene	ND	10	3.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2-Nitrophenol	ND	10	3.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
4-Nitrophenol	ND	10	4.0	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
N-Nitrosodimethylamine	ND	5.2	3.3	µg/L	1	~~L-04, R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
N-Nitrosodiphenylamine	ND	10	4.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
N-Nitrosodi-n-propylamine	ND	10	5.7	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Pentachloronitrobenzene	ND	10	2.4	µg/L	1	~~R-05, V-16,~~ U R	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Pentachlorophenol	ND	10	3.9	µg/L	1	~~V-20,~~ U J	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Phenanthrene	ND	5.2	2.7	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Phenol	ND	10	1.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Pyrene	ND	5.2	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
Pyridine	ND	5.2	3.1	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,2,4,5-Tetrachlorobenzene	ND	10	5.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
1,2,4-Trichlorobenzene	ND	5.2	5.0	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4,5-Trichlorophenol	ND	10	2.8	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 16:27	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	39.6	15-110		6/19/13 16:27
Phenol-d6	26.4	15-110		6/19/13 16:27
Nitrobenzene-d5	52.7	30-130		6/19/13 16:27
2-Fluorobiphenyl	49.6	30-130		6/19/13 16:27
2,4,6-Tribromophenol	68.8	15-110		6/19/13 16:27
p-Terphenyl-d14	75.0	30-130		6/19/13 16:27

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-MW2 | Sampled: 6/11/2013 12:55

Sample ID: 13F0478-03

Sample Matrix: Ground Water

Sample Flags: PR-10

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.7	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Acrylonitrile	ND	5.0	0.58	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Bromodichloromethane	ND	0.50	0.088	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	~~L-04,~~ U J	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
2-Butanone (MEK)	ND	20	2.4	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1	~~V-16,~~ U R	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Carbon Disulfide	ND	2.0	1.0	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Carbon Tetrachloride	ND	5.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	~~V-05,~~ U J	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.34	µg/L	1	U R	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1-Dichloropropene	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
cis-1,3-Dichloropropene	ND	0.50	0.062	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
trans-1,3-Dichloropropene	ND	0.50	0.056	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-MW2 | Sampled: 6/11/2013 12:55

Sample ID: 13F0478-03

Sample Matrix: Ground Water

Sample Flags: PR-10

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,4-Dioxane	ND	50	26	µg/L	1	~~V-16~~, U R	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	~~V-05~~, U J	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Tetrahydrofuran	ND	10	1.1	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.14	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	6/14/13	6/14/13 20:47	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	102	70-130		6/14/13 20:47
Toluene-d8	103	70-130		6/14/13 20:47
4-Bromofluorobenzene	104	70-130		6/14/13 20:47

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-MW2 | Sampled: 6/11/2013 12:55

Sample ID: 13F0478-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Acenaphthylene	ND	5.1	2.7	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Acetophenone	ND	10	3.4	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Aniline	ND	5.1	2.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Anthracene	ND	5.1	2.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzidine	ND	10	6.5	µg/L	1	~~R-05~~, U J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzo(a)pyrene	ND	5.1	2.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzo(b)fluoranthene	3.5	5.1	2.1	µg/L	1	~~V-05~~, J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzo(g,h,i)perylene	ND	5.1	5.1	µg/L	1	V-20, U J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzo(k)fluoranthene	ND	5.1	3.2	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Benzoic Acid	ND	10	2.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Bis(2-chloroethoxy)methane	ND	10	3.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Bis(2-chloroethyl)ether	ND	10	4.6	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Bis(2-chloroisopropyl)ether	ND	10	4.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Bis(2-Ethylhexyl)phthalate	ND	10	7.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Bromophenylphenylether	ND	10	3.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Butylbenzylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Carbazole	ND	10	1.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Chloroaniline	ND	10	2.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Chloro-3-methylphenol	ND	10	3.0	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Chloronaphthalene	ND	10	4.1	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Chlorophenol	ND	10	3.7	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Chlorophenylphenylether	ND	10	3.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Chrysene	ND	5.1	2.7	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Dibenz(a,h)anthracene	ND	5.1	5.1	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Dibenzofuran	ND	5.1	2.9	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Di-n-butylphthalate	ND	10	2.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,2-Dichlorobenzene	ND	5.1	3.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,3-Dichlorobenzene	ND	5.1	4.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,4-Dichlorobenzene	ND	5.1	3.8	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
3,3-Dichlorobenzidine	ND	10	5.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4-Dichlorophenol	ND	10	3.5	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Diethylphthalate	ND	10	2.9	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4-Dimethylphenol	ND	10	7.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Dimethylphthalate	ND	10	2.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4,6-Dinitro-2-methylphenol	ND	10	4.8	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4-Dinitrophenol	ND	10	3.3	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4-Dinitrotoluene	ND	10	3.1	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,6-Dinitrotoluene	ND	10	2.7	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Di-n-octylphthalate	ND	10	6.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	4.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Fluoranthene	ND	5.1	2.1	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Fluorene	ND	5.1	2.4	µg/L	1	~~R-05~~, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-MW2 | Sampled: 6/11/2013 12:55

Sample ID: 13F0478-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Hexachlorobutadiene	ND	10	5.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Hexachlorocyclopentadiene	ND	10	8.1	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Hexachloroethane	ND	10	4.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Indeno(1,2,3-cd)pyrene	ND	5.1	4.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Isophorone	ND	10	3.2	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1-Methylnaphthalene	ND	5.1	3.2	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Methylnaphthalene	ND	5.1	3.6	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Methylphenol	ND	10	3.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
3/4-Methylphenol	ND	10	3.2	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Naphthalene	ND	5.1	3.0	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Nitroaniline	ND	10	2.9	µg/L	1	R-05, U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
3-Nitroaniline	ND	10	3.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Nitroaniline	ND	10	4.0	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Nitrobenzene	ND	10	3.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2-Nitrophenol	ND	10	3.4	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
4-Nitrophenol	ND	10	3.9	µg/L	1	~~V-05,~~ U J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
N-Nitrosodimethylamine	ND	5.1	3.2	µg/L	1	~~L-04, R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
N-Nitrosodiphenylamine	ND	10	3.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
N-Nitrosodi-n-propylamine	ND	10	5.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Pentachloronitrobenzene	ND	10	2.4	µg/L	1	~~V-16, R-05,~~ U R	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Pentachlorophenol	ND	10	3.8	µg/L	1	~~V-20,~~ U J	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Phenanthrene	ND	5.1	2.6	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Phenol	ND	10	1.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Pyrene	ND	5.1	2.6	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
Pyridine	ND	5.1	3.1	µg/L	1	~~R-05,~~ U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,2,4,5-Tetrachlorobenzene	ND	10	5.5	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
1,2,4-Trichlorobenzene	ND	5.1	4.9	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4,5-Trichlorophenol	ND	10	2.8	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1	U	SW-846 8270D	6/17/13	6/19/13 17:04	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	42.6	15-110		6/19/13 17:04
Phenol-d6	29.6	15-110		6/19/13 17:04
Nitrobenzene-d5	57.8	30-130		6/19/13 17:04
2-Fluorobiphenyl	61.9	30-130		6/19/13 17:04
2,4,6-Tribromophenol	70.6	15-110		6/19/13 17:04
p-Terphenyl-d14	75.7	30-130		6/19/13 17:04

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.46	0.11	0.027	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Acrylonitrile	ND	0.0069	0.0029	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Benzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Bromobenzene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Bromochloromethane	ND	0.0023	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Bromodichloromethane	ND	0.0023	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Bromoform	ND	0.0023	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Bromomethane	ND	0.011	0.0019	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
2-Butanone (MEK)	ND	0.046	0.020	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
tert-Butyl Alcohol (TBA)	ND	0.046	0.024	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
n-Butylbenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
sec-Butylbenzene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
tert-Butylbenzene	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Carbon Disulfide	ND	0.023	0.0038	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Carbon Tetrachloride	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Chlorobenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Chlorodibromomethane	ND	0.0046	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Chloroethane	ND	0.023	0.0017	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Chloroform	ND	0.0046	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Chloromethane	ND	0.011	0.0010	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
2-Chlorotoluene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
4-Chlorotoluene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	0.0013	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Dibromomethane	ND	0.0023	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2-Dichlorobenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,3-Dichlorobenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,4-Dichlorobenzene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
trans-1,4-Dichloro-2-butene	ND	0.0046	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	0.0015	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1-Dichloroethane	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2-Dichloroethane	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1-Dichloroethylene	ND	0.0046	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
cis-1,2-Dichloroethylene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
trans-1,2-Dichloroethylene	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2-Dichloropropane	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,3-Dichloropropane	ND	0.0011	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
2,2-Dichloropropane	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1-Dichloropropene	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Diethyl Ether	ND	0.023	0.0021	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,4-Dioxane	ND	0.11	0.066	mg/Kg dry	1	~~V-16;~~ U R	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Ethylbenzene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Hexachlorobutadiene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
2-Hexanone (MBK)	ND	0.046	0.012	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Isopropylbenzene (Cumene)	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Methylene Chloride	0.012	0.023	0.0081	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.046	0.0087	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Naphthalene	ND	0.0046	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
n-Propylbenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Styrene	ND	0.0023	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Tetrachloroethylene	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Tetrahydrofuran	ND	0.011	0.0025	mg/Kg dry	1	~~V-16;~~ U R	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Toluene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2,3-Trichlorobenzene	ND	0.0023	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2,4-Trichlorobenzene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,3,5-Trichlorobenzene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1,1-Trichloroethane	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1,2-Trichloroethane	ND	0.0023	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Trichloroethylene	ND	0.0023	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2,3-Trichloropropane	ND	0.0023	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,2,4-Trimethylbenzene	ND	0.0023	0.00091	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
1,3,5-Trimethylbenzene	ND	0.0023	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
Vinyl Chloride	ND	0.011	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
m+p Xylene	ND	0.0046	0.0019	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF
o-Xylene	ND	0.0023	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag		
1,2-Dichloroethane-d4	106	70-130			6/18/13 9:55
Toluene-d8	101	70-130			6/18/13 9:55
4-Bromofluorobenzene	101	70-130			6/18/13 9:55

7/30/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Acenaphthylene	0.099	0.20	0.095	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Acetophenone	ND	0.40	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Aniline	ND	0.40	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Anthracene	0.19	0.20	0.095	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzidine	ND	0.40	0.095	mg/Kg dry	1	~~V-20,~~ U J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzo(a)anthracene	1.0	0.20	0.095	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzo(a)pyrene	1.0	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzo(b)fluoranthene	1.4	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzo(g,h,i)perylene	0.37	0.20	0.083	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzo(k)fluoranthene	0.49	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Benzoic Acid	ND	1.2	0.18	mg/Kg dry	1	~~L-04,~~ U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Bis(2-chloroethoxy)methane	ND	0.40	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Bis(2-chloroethyl)ether	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Bis(2-chloroisopropyl)ether	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Bromophenylphenylether	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Butylbenzylphthalate	ND	0.78	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Carbazole	0.10	0.20	0.095	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Chloroaniline	ND	0.78	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Chloro-3-methylphenol	ND	0.78	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Chloronaphthalene	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Chlorophenol	ND	0.40	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Chlorophenylphenylether	ND	0.40	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Chrysene	1.0	0.20	0.095	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Dibenz(a,h)anthracene	0.11	0.20	0.083	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Dibenzofuran	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Di-n-butylphthalate	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,2-Dichlorobenzene	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,3-Dichlorobenzene	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,4-Dichlorobenzene	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
3,3-Dichlorobenzidine	ND	0.20	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4-Dichlorophenol	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Diethylphthalate	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4-Dimethylphenol	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Dimethylphthalate	ND	0.78	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4,6-Dinitro-2-methylphenol	ND	0.40	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4-Dinitrophenol	ND	0.78	0.048	mg/Kg dry	1	~~V-19,~~ U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4-Dinitrotoluene	ND	0.40	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,6-Dinitrotoluene	ND	0.40	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Di-n-octylphthalate	ND	0.78	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Fluoranthene	1.5	0.20	0.083	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Fluorene	ND	0.20	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Hexachlorobutadiene	ND	0.40	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Hexachlorocyclopentadiene	ND	0.78	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Hexachloroethane	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Indeno(1,2,3-cd)pyrene	0.45	0.20	0.083	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Isophorone	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1-Methylnaphthalene	ND	0.20	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Methylnaphthalene	ND	0.20	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Methylphenol	ND	0.40	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
3/4-Methylphenol	ND	0.40	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Naphthalene	0.088	0.20	0.083	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Nitroaniline	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
3-Nitroaniline	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Nitroaniline	ND	0.40	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Nitrobenzene	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2-Nitrophenol	ND	0.40	0.059	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
4-Nitrophenol	ND	0.78	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
N-Nitrosodimethylamine	ND	0.40	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
N-Nitrosodiphenylamine	ND	0.40	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
N-Nitrosodi-n-propylamine	ND	0.40	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Pentachloronitrobenzene	ND	0.40	0.13	mg/Kg dry	1	~~V-16~~, U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Pentachlorophenol	ND	0.40	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Phenanthrene	0.96	0.20	0.095	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Phenol	ND	0.40	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Pyrene	1.6	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 16:42	CMR
Pyridine	ND	0.40	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
1,2,4-Trichlorobenzene	ND	0.40	0.071	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4,5-Trichlorophenol	ND	0.40	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR
2,4,6-Trichlorophenol	ND	0.40	0.083	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 16:42	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	76.7	30-130		6/18/13 16:42
Phenol-d6	86.2	30-130		6/18/13 16:42
Nitrobenzene-d5	79.4	30-130		6/18/13 16:42
2-Fluorobiphenyl	78.5	30-130		6/18/13 16:42
2,4,6-Tribromophenol	53.8	30-130		6/18/13 16:42
p-Terphenyl-d14	74.8	30-130		6/18/13 16:42

7/3/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.023	0.0072	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1221 [1]	ND	0.023	0.023	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1232 [1]	ND	0.023	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1242 [1]	ND	0.023	0.012	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1248 [1]	ND	0.023	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1254 [1]	ND	0.023	0.010	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1260 [1]	0.041	0.023	0.011	mg/Kg dry	1		SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1262 [1]	ND	0.023	0.0096	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC
Aroclor-1268 [1]	ND	0.023	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:01	MJC

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	75.2	30-150		6/27/13 11:01
Decachlorobiphenyl [2]	77.6	30-150		6/27/13 11:01
Tetrachloro-m-xylene [1]	72.3	30-150		6/27/13 11:01
Tetrachloro-m-xylene [2]	77.4	30-150		6/27/13 11:01

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS01 (0-8in) | Sampled: 6/11/2013 10:30

Sample ID: 13F0478-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.1		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3-1/13 2

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	1.1	0.12	0.028	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Acrylonitrile	ND	0.0071	0.0030	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Benzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Bromobenzene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Bromochloromethane	ND	0.0024	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Bromodichloromethane	ND	0.0024	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Bromoform	ND	0.0024	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Bromomethane	ND	0.012	0.0020	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
2-Butanone (MEK)	ND	0.047	0.021	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.047	0.025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
n-Butylbenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
sec-Butylbenzene	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
tert-Butylbenzene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Carbon Disulfide	ND	0.024	0.0039	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Carbon Tetrachloride	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Chlorobenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Chlorodibromomethane	ND	0.0047	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Chloroethane	ND	0.024	0.0018	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Chloroform	ND	0.0047	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Chloromethane	ND	0.012	0.0011	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
2-Chlorotoluene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
4-Chlorotoluene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	0.0013	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Dibromomethane	ND	0.0024	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2-Dichlorobenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,3-Dichlorobenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,4-Dichlorobenzene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0047	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	0.0015	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1-Dichloroethane	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2-Dichloroethane	ND	0.0024	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1-Dichloroethylene	ND	0.0047	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
cis-1,2-Dichloroethylene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
trans-1,2-Dichloroethylene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2-Dichloropropane	ND	0.0024	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,3-Dichloropropane	ND	0.0012	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
2,2-Dichloropropane	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1-Dichloropropene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
cis-1,3-Dichloropropene	ND	0.0012	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
trans-1,3-Dichloropropene	ND	0.0012	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Diethyl Ether	ND	0.024	0.0021	mg/Kg dry	1	V-05, U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,4-Dioxane	ND	0.12	0.068	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Ethylbenzene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Hexachlorobutadiene	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
2-Hexanone (MBK)	ND	0.047	0.013	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Isopropylbenzene (Cumene)	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0047	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Methylene Chloride	ND	0.024	0.0084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.047	0.0090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Naphthalene	ND	0.0047	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
n-Propylbenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Styrene	ND	0.0024	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Tetrachloroethylene	ND	0.0024	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Tetrahydrofuran	ND	0.012	0.0026	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Toluene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2,3-Trichlorobenzene	ND	0.0024	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2,4-Trichlorobenzene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,3,5-Trichlorobenzene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1,1-Trichloroethane	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1,2-Trichloroethane	ND	0.0024	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Trichloroethylene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2,3-Trichloropropane	ND	0.0024	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,2,4-Trimethylbenzene	ND	0.0024	0.00095	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
1,3,5-Trimethylbenzene	ND	0.0024	0.00071	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
Vinyl Chloride	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
m+p Xylene	ND	0.0047	0.0020	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF
o-Xylene	ND	0.0024	0.00083	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 11:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	105	70-130		6/18/13 11:44
Toluene-d8	100	70-130		6/18/13 11:44
4-Bromofluorobenzene	101	70-130	7/30/13	6/18/13 11:44

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.15	0.21	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Acenaphthylene	ND	0.21	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Acetophenone	ND	0.41	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Aniline	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Anthracene	0.31	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzidine	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzo(a)anthracene	0.99	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzo(a)pyrene	0.97	0.21	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzo(b)fluoranthene	1.2	0.21	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzo(g,h,i)perylene	0.71	0.21	0.084	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzo(k)fluoranthene	0.49	0.21	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Benzoic Acid	ND	1.2	0.18	mg/Kg dry	1	~~L-04~~, U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Bis(2-chloroethoxy)methane	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Bis(2-chloroethyl)ether	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Bis(2-chloroisopropyl)ether	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Bromophenylphenylether	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Butylbenzylphthalate	ND	0.80	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Carbazole	0.16	0.21	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Chloroaniline	ND	0.80	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Chloro-3-methylphenol	ND	0.80	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Chloronaphthalene	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Chlorophenol	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Chlorophenylphenylether	ND	0.41	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Chrysene	0.99	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Dibenz(a,h)anthracene	0.19	0.21	0.084	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Dibenzofuran	0.12	0.41	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Di-n-butylphthalate	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,2-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,3-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,4-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
3,3-Dichlorobenzidine	ND	0.21	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4-Dichlorophenol	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Diethylphthalate	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4-Dimethylphenol	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Dimethylphthalate	ND	0.80	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4,6-Dinitro-2-methylphenol	ND	0.41	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4-Dinitrophenol	ND	0.80	0.048	mg/Kg dry	1	~~V-19~~, U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4-Dinitrotoluene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,6-Dinitrotoluene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Di-n-octylphthalate	ND	0.80	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Fluoranthene	1.8	0.21	0.084	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Fluorene	0.13	0.21	0.11	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Hexachlorobutadiene	ND	0.41	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Hexachlorocyclopentadiene	ND	0.80	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Hexachloroethane	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Indeno(1,2,3-cd)pyrene	0.79	0.21	0.084	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Isophorone	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1-Methylnaphthalene	0.14	0.21	0.12	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Methylnaphthalene	0.16	0.21	0.12	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Methylphenol	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
3/4-Methylphenol	ND	0.41	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Naphthalene	0.20	0.21	0.084	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Nitroaniline	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
3-Nitroaniline	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Nitroaniline	ND	0.41	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Nitrobenzene	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2-Nitrophenol	ND	0.41	0.060	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
4-Nitrophenol	ND	0.80	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
N-Nitrosodimethylamine	ND	0.41	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
N-Nitrosodiphenylamine	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
N-Nitrosodi-n-propylamine	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Pentachloronitrobenzene	ND	0.41	0.13	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Pentachlorophenol	ND	0.41	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Phenanthrene	1.4	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Phenol	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Pyrene	2.2	0.21	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 13:27	CMR
Pyridine	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
1,2,4-Trichlorobenzene	ND	0.41	0.072	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4,5-Trichlorophenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR
2,4,6-Trichlorophenol	ND	0.41	0.084	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 13:27	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	64.0	30-130		6/19/13 13:27
Phenol-d6	72.5	30-130		6/19/13 13:27
Nitrobenzene-d5	67.4	30-130		6/19/13 13:27
2-Fluorobiphenyl	71.5	30-130		6/19/13 13:27
2,4,6-Tribromophenol	43.6	30-130		6/19/13 13:27
p-Terphenyl-d14	97.1	30-130		6/19/13 13:27

7/30/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.024	0.0073	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1221 [1]	ND	0.024	0.023	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1232 [1]	ND	0.024	0.015	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1242 [1]	ND	0.024	0.012	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1248 [1]	ND	0.024	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1254 [1]	ND	0.024	0.010	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1260 [2]	0.11	0.024	0.011	mg/Kg dry	1	J	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1262 [1]	ND	0.024	0.0097	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC
Aroclor-1268 [1]	ND	0.024	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:14	MJC

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	68.5	30-150		6/27/13 11:14
Decachlorobiphenyl [2]	73.9	30-150		6/27/13 11:14
Tetrachloro-m-xylene [1]	72.2	30-150		6/27/13 11:14
Tetrachloro-m-xylene [2]	75.4	30-150		6/27/13 11:14

7/30/13

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS03 (0-8in) | Sampled: 6/11/2013 14:25

Sample ID: 13F0478-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.9		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (0-4in) | Sampled: 6/12/2013 08:20

Sample ID: 13F0478-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.25	0.099	0.023	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Acrylonitrile	ND	0.0059	0.0025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Benzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Bromobenzene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Bromochloromethane	ND	0.0020	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Bromodichloromethane	ND	0.0020	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Bromoform	ND	0.0020	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Bromomethane	ND	0.0099	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
2-Butanone (MEK)	ND	0.039	0.017	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	0.021	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
n-Butylbenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
sec-Butylbenzene	ND	0.0020	0.00099	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
tert-Butylbenzene	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Carbon Disulfide	ND	0.020	0.0033	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Carbon Tetrachloride	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Chlorobenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Chlorodibromomethane	ND	0.0039	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Chloroethane	ND	0.020	0.0015	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Chloroform	ND	0.0039	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Chloromethane	ND	0.0099	0.00089	mg/Kg dry	1	~~V-05~~, ~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
2-Chlorotoluene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
4-Chlorotoluene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.0011	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	0.00099	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Dibromomethane	ND	0.0020	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0013	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1-Dichloroethane	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2-Dichloroethane	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1-Dichloroethylene	ND	0.0039	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2-Dichloropropane	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,3-Dichloropropane	ND	0.00099	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
2,2-Dichloropropane	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1-Dichloropropene	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
cis-1,3-Dichloropropene	ND	0.00099	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
trans-1,3-Dichloropropene	ND	0.00099	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Diethyl Ether	ND	0.020	0.0018	mg/Kg dry	1	~~V-05~~ U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (0-4in) | Sampled: 6/12/2013 08:20

Sample ID: 13F0478-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00099	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,4-Dioxane	ND	0.099	0.057	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Ethylbenzene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Hexachlorobutadiene	ND	0.0020	0.00099	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
2-Hexanone (MBK)	ND	0.039	0.011	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Methylene Chloride	0.010	0.020	0.0070	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.039	0.0075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Naphthalene	ND	0.0039	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
n-Propylbenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Styrene	ND	0.0020	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Tetrachloroethylene	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Tetrahydrofuran	ND	0.0099	0.0022	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Toluene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00099	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1,2-Trichloroethane	ND	0.0020	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Trichloroethylene	ND	0.0020	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2,3-Trichloropropane	ND	0.0020	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0099	0.00089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00059	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
Vinyl Chloride	ND	0.0099	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
m+p Xylene	ND	0.0039	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF
o-Xylene	ND	0.0020	0.00069	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:12	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	111	70-130		6/18/13 12:12
Toluene-d8	101	70-130		6/18/13 12:12
4-Bromofluorobenzene	99.4	70-130		6/18/13 12:12

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (0-4in) | Sampled: 6/12/2013 08:20

Sample ID: 13F0478-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Acenaphthylene	ND	0.19	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Acetophenone	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Aniline	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Anthracene	ND	0.19	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzidine	ND	0.39	0.091	mg/Kg dry	1	~~V-20;~~ U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzo(a)anthracene	0.37	0.19	0.091	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzo(a)pyrene	0.45	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzo(b)fluoranthene	0.58	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzo(g,h,i)perylene	0.21	0.19	0.080	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzo(k)fluoranthene	0.21	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Benzoic Acid	ND	1.1	0.17	mg/Kg dry	1	~~L-04;~~ U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Bis(2-chloroethoxy)methane	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Bis(2-chloroethyl)ether	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Bromophenylphenylether	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Butylbenzylphthalate	ND	0.75	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Carbazole	ND	0.19	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Chloroaniline	ND	0.75	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Chloro-3-methylphenol	ND	0.75	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Chloronaphthalene	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Chlorophenol	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Chrysene	0.38	0.19	0.091	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Dibenz(a,h)anthracene	ND	0.19	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Dibenzofuran	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Di-n-butylphthalate	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,2-Dichlorobenzene	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,3-Dichlorobenzene	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,4-Dichlorobenzene	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
3,3-Dichlorobenzidine	ND	0.19	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4-Dichlorophenol	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Diethylphthalate	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4-Dimethylphenol	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Dimethylphthalate	ND	0.75	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.046	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4-Dinitrophenol	ND	0.75	0.046	mg/Kg dry	1	~~V-19;~~ U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4-Dinitrotoluene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,6-Dinitrotoluene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Di-n-octylphthalate	ND	0.75	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Fluoranthene	0.58	0.19	0.080	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Fluorene	ND	0.19	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (0-4in) | Sampled: 6/12/2013 08:20

Sample ID: 13F0478-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Hexachlorobutadiene	ND	0.39	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Hexachlorocyclopentadiene	ND	0.75	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Hexachloroethane	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Indeno(1,2,3-cd)pyrene	0.24	0.19	0.080	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Isophorone	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1-Methylnaphthalene	ND	0.19	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Methylnaphthalene	ND	0.19	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
3/4-Methylphenol	ND	0.39	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Naphthalene	ND	0.19	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Nitroaniline	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
3-Nitroaniline	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Nitroaniline	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Nitrobenzene	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2-Nitrophenol	ND	0.39	0.057	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
4-Nitrophenol	ND	0.75	0.046	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
N-Nitrosodimethylamine	ND	0.39	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
N-Nitrosodiphenylamine	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
N-Nitrosodi-n-propylamine	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Pentachloronitrobenzene	ND	0.39	0.13	mg/Kg dry	1	~~V-16~~, U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Pentachlorophenol	ND	0.39	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Phenanthrene	0.38	0.19	0.091	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Phenol	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Pyrene	0.65	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 17:52	CMR
Pyridine	ND	0.39	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
1,2,4-Trichlorobenzene	ND	0.39	0.068	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4,5-Trichlorophenol	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR
2,4,6-Trichlorophenol	ND	0.39	0.080	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 17:52	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	84.5	30-130		6/18/13 17:52
Phenol-d6	96.3	30-130		6/18/13 17:52
Nitrobenzene-d5	81.5	30-130		6/18/13 17:52
2-Fluorobiphenyl	82.6	30-130		6/18/13 17:52
2,4,6-Tribromophenol	62.7	30-130		6/18/13 17:52
p-Terphenyl-d14	84.9	30-130		6/18/13 17:52

7/30/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (0-4in) | Sampled: 6/12/2013 08:20

Sample ID: 13F0478-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.5		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (5-10ft) | Sampled: 6/12/2013 08:25

Sample ID: 13F0478-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	1.9	0.12	0.028	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Acrylonitrile	ND	0.0073	0.0030	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Benzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Bromobenzene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Bromochloromethane	ND	0.0024	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Bromodichloromethane	ND	0.0024	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Bromoform	ND	0.0024	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Bromomethane	ND	0.012	0.0021	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
2-Butanone (MEK)	ND	0.049	0.021	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
tert-Butyl Alcohol (TBA)	ND	0.049	0.025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
n-Butylbenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
sec-Butylbenzene	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
tert-Butylbenzene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Carbon Disulfide	ND	0.024	0.0040	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Carbon Tetrachloride	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Chlorobenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Chlorodibromomethane	ND	0.0049	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Chloroethane	ND	0.024	0.0018	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Chloroform	ND	0.0049	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Chloromethane	ND	0.012	0.0011	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
2-Chlorotoluene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
4-Chlorotoluene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	0.0013	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Dibromomethane	ND	0.0024	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2-Dichlorobenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,3-Dichlorobenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,4-Dichlorobenzene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
trans-1,4-Dichloro-2-butene	ND	0.0049	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	0.0016	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1-Dichloroethane	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2-Dichloroethane	ND	0.0024	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1-Dichloroethylene	ND	0.0049	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
cis-1,2-Dichloroethylene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
trans-1,2-Dichloroethylene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2-Dichloropropane	ND	0.0024	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,3-Dichloropropane	ND	0.0012	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
2,2-Dichloropropane	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1-Dichloropropene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
cis-1,3-Dichloropropene	ND	0.0012	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
trans-1,3-Dichloropropene	ND	0.0012	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Diethyl Ether	ND	0.024	0.0022	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (5-10ft) | Sampled: 6/12/2013 08:25

Sample ID: 13F0478-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3-1/3

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,4-Dioxane	ND	0.12	0.070	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Ethylbenzene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Hexachlorobutadiene	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
2-Hexanone (MBK)	ND	0.049	0.013	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Isopropylbenzene (Cumene)	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0049	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Methylene Chloride	0.020	0.024	0.0086	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.049	0.0092	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Naphthalene	0.010	0.0049	0.00085	mg/Kg dry	1		SW-846 8260C	6/18/13	6/18/13 12:39	MFF
n-Propylbenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Styrene	0.0049	0.0024	0.00073	mg/Kg dry	1		SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Tetrachloroethylene	ND	0.0024	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Tetrahydrofuran	ND	0.012	0.0027	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Toluene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2,3-Trichlorobenzene	ND	0.0024	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2,4-Trichlorobenzene	ND	0.0024	0.00097	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,3,5-Trichlorobenzene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1,1-Trichloroethane	ND	0.0024	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1,2-Trichloroethane	ND	0.0024	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Trichloroethylene	ND	0.0024	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2,3-Trichloropropane	ND	0.0024	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,2,4-Trimethylbenzene	0.0016	0.0024	0.00097	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
1,3,5-Trimethylbenzene	ND	0.0024	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
Vinyl Chloride	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
m+p Xylene	ND	0.0049	0.0021	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF
o-Xylene	ND	0.0024	0.00085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 12:39	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	108	70-130		6/18/13 12:39
Toluene-d8	102	70-130		6/18/13 12:39
4-Bromofluorobenzene	103	70-130		6/18/13 12:39

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (5-10ft) | Sampled: 6/12/2013 08:25

Sample ID: 13F0478-07

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/3-1/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	21	2.0	1.0	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Acenaphthylene	1.4	2.0	0.98	mg/Kg dry	10	J	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Acetophenone	ND	4.0	0.98	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Aniline	ND	4.0	3.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Anthracene	29	2.0	1.2	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Benzidine	ND	7.9	5.5	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Benzo(a)anthracene	70	20	9.2	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Benzo(a)pyrene	70	20	7.1	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Benzo(b)fluoranthene	77	20	18	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Benzo(g,h,i)perylene	25	2.0	1.6	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Benzo(k)fluoranthene	23	2.0	1.8	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Benzoic Acid	ND	12	11	mg/Kg dry	10	~~L-04~~, U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Bis(2-chloroethoxy)methane	ND	4.0	1.5	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Bis(2-chloroethyl)ether	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Bis(2-chloroisopropyl)ether	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Bis(2-Ethylhexyl)phthalate	ND	4.0	0.90	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Bromophenylphenylether	ND	4.0	1.0	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Butylbenzylphthalate	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Carbazole	10	2.0	1.5	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Chloroaniline	ND	7.9	2.0	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Chloro-3-methylphenol	ND	7.9	1.7	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Chloronaphthalene	ND	4.0	1.3	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Chlorophenol	ND	4.0	1.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Chlorophenylphenylether	ND	4.0	1.4	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Chrysene	62	20	13	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Dibenz(a,h)anthracene	8.1	2.0	1.1	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Dibenzofuran	8.5	4.0	0.94	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Di-n-butylphthalate	ND	4.0	1.7	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,2-Dichlorobenzene	ND	4.0	0.81	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,3-Dichlorobenzene	ND	4.0	0.95	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,4-Dichlorobenzene	ND	4.0	1.0	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
3,3-Dichlorobenzidine	ND	2.0	1.9	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4-Dichlorophenol	ND	4.0	1.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Diethylphthalate	ND	4.0	1.4	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4-Dimethylphenol	ND	4.0	1.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Dimethylphthalate	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4,6-Dinitro-2-methylphenol	ND	4.0	1.7	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4-Dinitrophenol	ND	7.9	4.0	mg/Kg dry	10	~~V-19~~, U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4-Dinitrotoluene	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,6-Dinitrotoluene	ND	4.0	1.3	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Di-n-octylphthalate	ND	8.0	5.5	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	4.0	1.9	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Fluoranthene	130	20	18	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Fluorene	18	2.0	1.6	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (5-10ft) | Sampled: 6/12/2013 08:25

Sample ID: 13F0478-07

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	4.0	1.8	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Hexachlorobutadiene	ND	4.0	1.3	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Hexachlorocyclopentadiene	ND	4.0	2.7	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Hexachloroethane	ND	4.0	1.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Indeno(1,2,3-cd)pyrene	32	2.0	1.3	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Isophorone	ND	4.0	1.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1-Methylnaphthalene	14	2.0	0.77	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Methylnaphthalene	13	2.0	1.1	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Methylphenol	ND	4.0	1.3	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
3/4-Methylphenol	ND	4.0	2.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Naphthalene	16	2.0	0.89	mg/Kg dry	10		SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Nitroaniline	ND	4.0	2.8	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
3-Nitroaniline	ND	4.0	1.8	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Nitroaniline	ND	4.0	2.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Nitrobenzene	ND	4.0	1.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2-Nitrophenol	ND	4.0	1.2	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
4-Nitrophenol	ND	7.9	7.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
N-Nitrosodimethylamine	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
N-Nitrosodiphenylamine	ND	4.0	1.9	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
N-Nitrosodi-n-propylamine	ND	4.0	1.3	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Pentachloronitrobenzene	ND	4.0	0.95	mg/Kg dry	10	~~V-16~~ U R	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Pentachlorophenol	ND	4.0	1.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Phenanthrene	130	20	11	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Phenol	ND	4.0	1.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
Pyrene	130	20	14	mg/Kg dry	100		SW-846 8270D	6/17/13	6/20/13 15:48	CMR
Pyridine	ND	4.0	1.7	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,2,4,5-Tetrachlorobenzene	ND	4.0	2.4	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
1,2,4-Trichlorobenzene	ND	4.0	0.98	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4,5-Trichlorophenol	ND	4.0	2.1	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR
2,4,6-Trichlorophenol	ND	4.0	2.6	mg/Kg dry	10	U	SW-846 8270D	6/17/13	6/19/13 16:24	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	47.0	30-130		6/20/13 15:48
2-Fluorophenol	49.4	30-130		6/19/13 16:24
Phenol-d6	57.8	30-130		6/19/13 16:24
Phenol-d6	46.5	30-130		6/20/13 15:48
Nitrobenzene-d5	43.0	30-130		6/20/13 15:48
Nitrobenzene-d5	47.4	30-130		6/19/13 16:24
2-Fluorobiphenyl	56.0	30-130		6/20/13 15:48
2-Fluorobiphenyl	49.0	30-130		6/19/13 16:24
2,4,6-Tribromophenol	**12.0** *	30-130	S-07	6/20/13 15:48
2,4,6-Tribromophenol	30.7	30-130		6/19/13 16:24
p-Terphenyl-d14	69.0	30-130		6/19/13 16:24
p-Terphenyl-d14	75.0	30-130		6/20/13 15:48

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SB01 (5-10ft) | Sampled: 6/12/2013 08:25

Sample ID: 13F0478-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.0		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (0-4ft) | Sampled: 6/12/2013 09:20

Sample ID: 13F0478-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3-1/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	2.0	0.11	0.026	mg/Kg dry	1	~~L-04, MS-09~~ J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Acrylonitrile	ND	0.0067	0.0028	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Benzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Bromobenzene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Bromochloromethane	ND	0.0022	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Bromodichloromethane	ND	0.0022	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Bromoform	ND	0.0022	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Bromomethane	ND	0.011	0.0019	mg/Kg dry	1	~~MS-07A,~~ U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
2-Butanone (MEK)	ND	0.045	0.020	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
tert-Butyl Alcohol (TBA)	ND	0.045	0.024	mg/Kg dry	1	~~MS-07A, V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
n-Butylbenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
sec-Butylbenzene	ND	0.0022	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
tert-Butylbenzene	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Carbon Disulfide	ND	0.022	0.0037	mg/Kg dry	1	~~L-04, MS-09,~~ U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Carbon Tetrachloride	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Chlorobenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Chlorodibromomethane	ND	0.0045	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Chloroethane	ND	0.022	0.0017	mg/Kg dry	1	~~MS-07A,~~ U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Chloroform	ND	0.0045	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Chloromethane	ND	0.011	0.0010	mg/Kg dry	1	~~L-04, MS-09, V-05~~ U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
2-Chlorotoluene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
4-Chlorotoluene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	0.0012	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Dibromomethane	ND	0.0022	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2-Dichlorobenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,3-Dichlorobenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,4-Dichlorobenzene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
trans-1,4-Dichloro-2-butene	ND	0.0045	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.022	0.0015	mg/Kg dry	1	~~MS-07A, V-05,~~ U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1-Dichloroethane	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2-Dichloroethane	ND	0.0022	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1-Dichloroethylene	ND	0.0045	0.0012	mg/Kg dry	1	~~MS-07A,~~ U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
cis-1,2-Dichloroethylene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
trans-1,2-Dichloroethylene	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2-Dichloropropane	ND	0.0022	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,3-Dichloropropane	ND	0.0011	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
2,2-Dichloropropane	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1-Dichloropropene	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF

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ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (0-4ft) | Sampled: 6/12/2013 09:20

Sample ID: 13F0478-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3-1/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	0.022	0.0020	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,4-Dioxane	ND	0.11	0.065	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Ethylbenzene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Hexachlorobutadiene	ND	0.0022	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
2-Hexanone (MBK)	ND	0.045	0.012	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Isopropylbenzene (Cumene)	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0045	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Methylene Chloride	0.021	0.022	0.0080	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.045	0.0085	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Naphthalene	ND	0.0045	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
n-Propylbenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Styrene	ND	0.0022	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Tetrachloroethylene	ND	0.0022	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Tetrahydrofuran	ND	0.011	0.0025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Toluene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2,3-Trichlorobenzene	ND	0.0022	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2,4-Trichlorobenzene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,3,5-Trichlorobenzene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1,1-Trichloroethane	ND	0.0022	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1,2-Trichloroethane	ND	0.0022	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Trichloroethylene	ND	0.0022	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.0012	mg/Kg dry	1	~~MS-07A~~, U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2,3-Trichloropropane	ND	0.0022	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,2,4-Trimethylbenzene	ND	0.0022	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
1,3,5-Trimethylbenzene	ND	0.0022	0.00067	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
Vinyl Chloride	ND	0.011	0.0012	mg/Kg dry	1	~~MS-07A~~, U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
m+p Xylene	ND	0.0045	0.0019	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF
o-Xylene	ND	0.0022	0.00079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 9:28	MFF

Surrogates	% Recovery	Recovery Limits	Flag		
1,2-Dichloroethane-d4	106	70-130			6/18/13 9:28
Toluene-d8	102	70-130			6/18/13 9:28
4-Bromofluorobenzene	99.2	70-130			6/18/13 9:28

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (0-4ft) | Sampled: 6/12/2013 09:20

Sample ID: 13F0478-08

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.67	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Acenaphthylene	0.21	0.40	0.19	mg/Kg dry	2	J	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Acetophenone	ND	0.81	0.28	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Aniline	ND	0.81	0.26	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Anthracene	1.3	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzidine	ND	0.81	0.19	mg/Kg dry	2	U R	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzo(a)anthracene	3.8	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzo(a)pyrene	3.7	0.40	0.21	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzo(b)fluoranthene	4.2	0.40	0.21	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzo(g,h,i)perylene	2.3	0.40	0.17	mg/Kg dry	2	~~MS-09~~	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzo(k)fluoranthene	1.6	0.40	0.24	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Benzoic Acid	ND	2.4	0.36	mg/Kg dry	2	~~L-04~~, U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Bis(2-chloroethoxy)methane	ND	0.81	0.21	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Bis(2-chloroethyl)ether	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Bis(2-chloroisopropyl)ether	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Bis(2-Ethylhexyl)phthalate	0.46	0.81	0.24	mg/Kg dry	2	~~R-06~~, J	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Bromophenylphenylether	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Butylbenzylphthalate	ND	1.6	0.26	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Carbazole	0.58	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Chloroaniline	ND	1.6	0.21	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Chloro-3-methylphenol	ND	1.6	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Chloronaphthalene	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Chlorophenol	ND	0.81	0.21	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Chlorophenylphenylether	ND	0.81	0.28	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Chrysene	3.6	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Dibenz(a,h)anthracene	0.61	0.40	0.17	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Dibenzofuran	0.41	0.81	0.19	mg/Kg dry	2	J	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Di-n-butylphthalate	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,2-Dichlorobenzene	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,3-Dichlorobenzene	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,4-Dichlorobenzene	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
3,3-Dichlorobenzidine	ND	0.40	0.14	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4-Dichlorophenol	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Diethylphthalate	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4-Dimethylphenol	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Dimethylphthalate	ND	1.6	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4,6-Dinitro-2-methylphenol	ND	0.81	0.095	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4-Dinitrophenol	ND	1.6	0.095	mg/Kg dry	2	~~V-19~~, U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4-Dinitrotoluene	ND	0.81	0.26	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,6-Dinitrotoluene	ND	0.81	0.26	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Di-n-octylphthalate	ND	1.6	0.31	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Fluoranthene	6.1	0.40	0.17	mg/Kg dry	2	~~MS-09~~	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Fluorene	0.61	0.40	0.21	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (0-4ft) | Sampled: 6/12/2013 09:20

Sample ID: 13F0478-08

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Hexachlorobutadiene	ND	0.81	0.14	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Hexachlorocyclopentadiene	ND	1.6	0.14	mg/Kg dry	2	~~MS-09,~~ U R	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Hexachloroethane	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Indeno(1,2,3-cd)pyrene	2.5	0.40	0.17	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Isophorone	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1-Methylnaphthalene	ND	0.40	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Methylnaphthalene	0.28	0.40	0.24	mg/Kg dry	2	J	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Methylphenol	ND	0.81	0.31	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
3/4-Methylphenol	ND	0.81	0.38	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Naphthalene	0.85	0.40	0.17	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Nitroaniline	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
3-Nitroaniline	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Nitroaniline	ND	0.81	0.28	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Nitrobenzene	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2-Nitrophenol	ND	0.81	0.12	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
4-Nitrophenol	ND	1.6	0.095	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
N-Nitrosodimethylamine	ND	0.81	0.14	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
N-Nitrosodiphenylamine	ND	0.81	0.26	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
N-Nitrosodi-n-propylamine	ND	0.81	0.31	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Pentachloronitrobenzene	ND	0.81	0.26	mg/Kg dry	2	~~V-16,~~ U R	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Pentachlorophenol	ND	0.81	0.14	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Phenanthrene	5.5	0.40	0.19	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Phenol	ND	0.81	0.21	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Pyrene	8.4	0.40	0.24	mg/Kg dry	2	~~MS-09~~	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
Pyridine	ND	0.81	0.19	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
1,2,4-Trichlorobenzene	ND	0.81	0.14	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4,5-Trichlorophenol	ND	0.81	0.24	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR
2,4,6-Trichlorophenol	ND	0.81	0.17	mg/Kg dry	2	U	SW-846 8270D	6/17/13	6/19/13 15:48	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	72.3	30-130		6/19/13 15:48
Phenol-d6	76.9	30-130		6/19/13 15:48
Nitrobenzene-d5	65.1	30-130		6/19/13 15:48
2-Fluorobiphenyl	66.6	30-130		6/19/13 15:48
2,4,6-Tribromophenol	41.9	30-130		6/19/13 15:48
p-Terphenyl-d14	89.1	30-130		6/19/13 15:48

7/30/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (0-4ft) | Sampled: 6/12/2013 09:20

Sample ID: 13F0478-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.9		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T3-SB03 (0-4ft) | Sampled: 6/12/2013 09:25

Sample ID: 13F0478-09 [Field Duplicate of T2-SB02 (0-4')]

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.31	0.12	0.027	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Acrylonitrile	ND	0.0070	0.0029	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Benzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Bromobenzene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Bromochloromethane	ND	0.0023	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Bromodichloromethane	ND	0.0023	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Bromoform	ND	0.0023	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Bromomethane	ND	0.012	0.0020	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
2-Butanone (MEK)	ND	0.047	0.021	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
tert-Butyl Alcohol (TBA)	ND	0.047	0.025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
n-Butylbenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
sec-Butylbenzene	ND	0.0023	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
tert-Butylbenzene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Carbon Disulfide	ND	0.023	0.0039	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Carbon Tetrachloride	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Chlorobenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Chlorodibromomethane	ND	0.0047	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Chloroethane	ND	0.023	0.0018	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Chloroform	ND	0.0047	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Chloromethane	ND	0.012	0.0011	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
2-Chlorotoluene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
4-Chlorotoluene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	0.0013	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Dibromomethane	ND	0.0023	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2-Dichlorobenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,3-Dichlorobenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,4-Dichlorobenzene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
trans-1,4-Dichloro-2-butene	ND	0.0047	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	0.0015	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1-Dichloroethane	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2-Dichloroethane	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1-Dichloroethylene	ND	0.0047	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
cis-1,2-Dichloroethylene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
trans-1,2-Dichloroethylene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2-Dichloropropane	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,3-Dichloropropane	ND	0.0012	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
2,2-Dichloropropane	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1-Dichloropropene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
cis-1,3-Dichloropropene	ND	0.0012	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
trans-1,3-Dichloropropene	ND	0.0012	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Diethyl Ether	ND	0.023	0.0021	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 Sample Description: Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T3-SB03 (0-4ft) Sampled: 6/12/2013 09:25

Sample ID: 13F0478-09 [Field Duplicate of T2-SB02(0-4')]

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS 7/3/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,4-Dioxane	ND	0.12	0.068	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Ethylbenzene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Hexachlorobutadiene	ND	0.0023	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
2-Hexanone (MBK)	ND	0.047	0.013	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Isopropylbenzene (Cumene)	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0047	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Methylene Chloride	0.021	0.023	0.0083	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.047	0.0089	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Naphthalene	0.0056	0.0047	0.00082	mg/Kg dry	1		SW-846 8260C	6/18/13	6/18/13 13:07	MFF
n-Propylbenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Styrene	ND	0.0023	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Tetrachloroethylene	ND	0.0023	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Tetrahydrofuran	ND	0.012	0.0026	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Toluene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2,3-Trichlorobenzene	ND	0.0023	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2,4-Trichlorobenzene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,3,5-Trichlorobenzene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1,1-Trichloroethane	ND	0.0023	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1,2-Trichloroethane	ND	0.0023	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Trichloroethylene	ND	0.0023	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2,3-Trichloropropane	ND	0.0023	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,2,4-Trimethylbenzene	ND	0.0023	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
1,3,5-Trimethylbenzene	ND	0.0023	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
Vinyl Chloride	ND	0.012	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
m+p Xylene	ND	0.0047	0.0020	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF
o-Xylene	ND	0.0023	0.00082	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:07	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	113	70-130		6/18/13 13:07
Toluene-d8	99.8	70-130		6/18/13 13:07
4-Bromofluorobenzene	100	70-130		6/18/13 13:07

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T3-SB03 (0-4ft) | Sampled: 6/12/2013 09:25

Sample ID: 13F0478-09 [Field Duplicate of T2-SB02(0-4')]

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/3-1/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	1.7	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Acenaphthylene	0.16	0.20	0.098	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Acetophenone	ND	0.41	0.098	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Aniline	ND	0.41	0.31	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Anthracene	3.8	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Benzidine	ND	0.79	0.55	mg/Kg dry	1	~~V-20~~, U J	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Benzo(a)anthracene	7.9	1.0	0.46	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Benzo(a)pyrene	7.0	1.0	0.36	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Benzo(b)fluoranthene	8.3	1.0	0.89	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Benzo(g,h,i)perylene	2.2	0.20	0.16	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Benzo(k)fluoranthene	3.3	0.20	0.18	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Benzoic Acid	ND	1.2	1.1	mg/Kg dry	1	~~L-04~~, U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Bis(2-chloroethoxy)methane	ND	0.41	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Bis(2-chloroethyl)ether	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Bis(2-chloroisopropyl)ether	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.41	0.091	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Bromophenylphenylether	ND	0.41	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Butylbenzylphthalate	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Carbazole	1.3	0.20	0.15	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Chloroaniline	ND	0.79	0.20	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Chloro-3-methylphenol	ND	0.79	0.17	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Chloronaphthalene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Chlorophenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Chlorophenylphenylether	ND	0.41	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Chrysene	7.2	1.0	0.66	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Dibenz(a,h)anthracene	0.74	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Dibenzofuran	1.1	0.41	0.094	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Di-n-butylphthalate	ND	0.41	0.17	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,2-Dichlorobenzene	ND	0.41	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,3-Dichlorobenzene	ND	0.41	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,4-Dichlorobenzene	ND	0.41	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
3,3-Dichlorobenzidine	ND	0.20	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4-Dichlorophenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Diethylphthalate	ND	0.41	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4-Dimethylphenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Dimethylphthalate	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4,6-Dinitro-2-methylphenol	ND	0.41	0.17	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4-Dinitrophenol	ND	0.79	0.40	mg/Kg dry	1	~~V-19~~, U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4-Dinitrotoluene	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,6-Dinitrotoluene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Di-n-octylphthalate	ND	0.80	0.55	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.41	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Fluoranthene	15	1.0	0.91	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Fluorene	1.7	0.20	0.16	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T3-SB03 (0-4ft) | Sampled: 6/12/2013 09:25

Sample ID: 13F0478-09 [Field Duplicate of T2-SB02(0-4')]

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/3-5/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.41	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Hexachlorobutadiene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Hexachlorocyclopentadiene	ND	0.41	0.27	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Hexachloroethane	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Indeno(1,2,3-cd)pyrene	2.8	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Isophorone	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1-Methylnaphthalene	0.28	0.20	0.077	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Methylnaphthalene	0.38	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Methylphenol	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
3/4-Methylphenol	ND	0.41	0.23	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Naphthalene	0.76	0.20	0.089	mg/Kg dry	1		SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Nitroaniline	ND	0.41	0.28	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
3-Nitroaniline	ND	0.41	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Nitroaniline	ND	0.41	0.21	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Nitrobenzene	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2-Nitrophenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
4-Nitrophenol	ND	0.79	0.71	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
N-Nitrosodimethylamine	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
N-Nitrosodiphenylamine	ND	0.41	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
N-Nitrosodi-n-propylamine	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Pentachloronitrobenzene	ND	0.41	0.095	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Pentachlorophenol	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Phenanthrene	14	1.0	0.54	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Phenol	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
Pyrene	16	1.0	0.70	mg/Kg dry	5		SW-846 8270D	6/17/13	6/19/13 15:13	CMR
Pyridine	ND	0.41	0.17	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.41	0.24	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
1,2,4-Trichlorobenzene	ND	0.41	0.098	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4,5-Trichlorophenol	ND	0.41	0.21	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR
2,4,6-Trichlorophenol	ND	0.41	0.26	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/18/13 19:35	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	77.8	30-130		6/19/13 15:13
2-Fluorophenol	70.1	30-130		6/18/13 19:35
Phenol-d6	79.0	30-130		6/18/13 19:35
Phenol-d6	85.8	30-130		6/19/13 15:13
Nitrobenzene-d5	74.0	30-130		6/18/13 19:35
Nitrobenzene-d5	69.2	30-130		6/19/13 15:13
2-Fluorobiphenyl	75.1	30-130		6/19/13 15:13
2-Fluorobiphenyl	79.4	30-130		6/18/13 19:35
2,4,6-Tribromophenol	70.7	30-130		6/19/13 15:13
2,4,6-Tribromophenol	55.5	30-130		6/18/13 19:35
p-Terphenyl-d14	56.3	30-130		6/18/13 19:35
p-Terphenyl-d14	96.0	30-130		6/19/13 15:13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T3-SB03 (0-4ft) | Sampled: 6/12/2013 09:25

Sample ID: 13F0478-09

Sample Matrix: Soil [Field Duplicate of T2-SB02 (0-4')]

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.6		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (5-10ft) | Sampled: 6/12/2013 09:28

Sample ID: 13F0478-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.51	0.10	0.023	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Acrylonitrile	ND	0.0060	0.0025	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Benzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Bromobenzene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Bromochloromethane	ND	0.0020	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Bromodichloromethane	ND	0.0020	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Bromoform	ND	0.0020	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Bromomethane	ND	0.010	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
2-Butanone (MEK)	ND	0.040	0.017	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	0.021	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
n-Butylbenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
sec-Butylbenzene	ND	0.0020	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
tert-Butylbenzene	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Carbon Disulfide	ND	0.020	0.0033	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Carbon Tetrachloride	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Chlorobenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Chlorodibromomethane	ND	0.0040	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Chloroethane	ND	0.020	0.0015	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Chloroform	ND	0.0040	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Chloromethane	ND	0.010	0.00090	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
2-Chlorotoluene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
4-Chlorotoluene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.0011	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Dibromomethane	ND	0.0020	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0013	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1-Dichloroethane	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2-Dichloroethane	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1-Dichloroethylene	ND	0.0040	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2-Dichloropropane	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,3-Dichloropropane	ND	0.0010	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
2,2-Dichloropropane	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1-Dichloropropene	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Diethyl Ether	ND	0.020	0.0018	mg/Kg dry	1	~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (5-10ft) | Sampled: 6/12/2013 09:28

Sample ID: 13F0478-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,4-Dioxane	ND	0.10	0.058	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Ethylbenzene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Hexachlorobutadiene	ND	0.0020	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
2-Hexanone (MBK)	ND	0.040	0.011	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Methylene Chloride	0.013	0.020	0.0071	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.040	0.0076	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Naphthalene	0.026	0.0040	0.00070	mg/Kg dry	1		SW-846 8260C	6/18/13	6/18/13 13:34	MFF
n-Propylbenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Styrene	ND	0.0020	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Tetrachloroethylene	ND	0.0020	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Tetrahydrofuran	ND	0.010	0.0022	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Toluene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1,1-Trichloroethane	ND	0.0020	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1,2-Trichloroethane	ND	0.0020	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Trichloroethylene	ND	0.0020	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2,3-Trichloropropane	ND	0.0020	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00090	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00080	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00060	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
Vinyl Chloride	ND	0.010	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
m+p Xylene	ND	0.0040	0.0017	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF
o-Xylene	ND	0.0020	0.00070	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 13:34	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	107	70-130		6/18/13 13:34
Toluene-d8	102	70-130		6/18/13 13:34
4-Bromofluorobenzene	101	70-130		6/18/13 13:34

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (5-10ft) | Sampled: 6/12/2013 09:28

Sample ID: 13F0478-10

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/3-/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.39	0.20	0.098	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Acenaphthylene	0.13	0.20	0.095	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Acetophenone	ND	0.39	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Aniline	ND	0.39	0.30	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Anthracene	1.0	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzidine	ND	0.76	0.53	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzo(a)anthracene	3.1	0.20	0.089	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzo(a)pyrene	2.9	0.20	0.069	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzo(b)fluoranthene	3.3	0.20	0.17	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzo(g,h,i)perylene	1.9	0.20	0.16	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzo(k)fluoranthene	1.3	0.20	0.18	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Benzoic Acid	ND	1.2	1.1	mg/Kg dry	1	~~B-07~~, U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Bis(2-chloroethoxy)methane	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Bis(2-chloroethyl)ether	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.088	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Bromophenylphenylether	ND	0.39	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Butylbenzylphthalate	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Carbazole	0.38	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Chloroaniline	ND	0.76	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Chloro-3-methylphenol	ND	0.76	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Chloronaphthalene	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Chlorophenol	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Chlorophenylphenylether	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Chrysene	2.8	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Dibenz(a,h)anthracene	0.50	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Dibenzofuran	0.20	0.39	0.091	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Di-n-butylphthalate	ND	0.39	0.17	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,2-Dichlorobenzene	ND	0.39	0.079	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,3-Dichlorobenzene	ND	0.39	0.092	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,4-Dichlorobenzene	ND	0.39	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
3,3-Dichlorobenzidine	ND	0.20	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4-Dichlorophenol	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Diethylphthalate	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4-Dimethylphenol	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Dimethylphthalate	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4-Dinitrophenol	ND	0.76	0.39	mg/Kg dry	1	~~V-19~~, U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4-Dinitrotoluene	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,6-Dinitrotoluene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Di-n-octylphthalate	ND	0.77	0.54	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Fluoranthene	5.2	0.39	0.35	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 14:37	CMR
Fluorene	0.35	0.20	0.15	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (5-10ft) | Sampled: 6/12/2013 09:28

Sample ID: 13F0478-10

Sample Matrix: Soil

Sample Flags: DL-03

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Hexachlorobutadiene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Hexachlorocyclopentadiene	ND	0.39	0.26	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Hexachloroethane	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Indeno(1,2,3-cd)pyrene	2.2	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Isophorone	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1-Methylnaphthalene	0.10	0.20	0.075	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Methylnaphthalene	0.12	0.20	0.10	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Methylphenol	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
3/4-Methylphenol	ND	0.39	0.22	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Naphthalene	0.39	0.20	0.087	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Nitroaniline	ND	0.39	0.27	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
3-Nitroaniline	ND	0.39	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Nitroaniline	ND	0.39	0.20	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Nitrobenzene	ND	0.39	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2-Nitrophenol	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
4-Nitrophenol	ND	0.76	0.69	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
N-Nitrosodimethylamine	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
N-Nitrosodiphenylamine	ND	0.39	0.18	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
N-Nitrosodi-n-propylamine	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Pentachloronitrobenzene	ND	0.39	0.092	mg/Kg dry	1	~~V-16~~, U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Pentachlorophenol	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Phenanthrene	3.5	0.20	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Phenol	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
Pyrene	6.7	0.39	0.27	mg/Kg dry	2		SW-846 8270D	6/17/13	6/19/13 14:37	CMR
Pyridine	ND	0.39	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.23	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
1,2,4-Trichlorobenzene	ND	0.39	0.095	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4,5-Trichlorophenol	ND	0.39	0.20	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR
2,4,6-Trichlorophenol	ND	0.39	0.25	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 11:38	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	76.8	30-130		6/19/13 14:37
2-Fluorophenol	73.0	30-130		6/19/13 11:38
Phenol-d6	84.5	30-130		6/19/13 14:37
Phenol-d6	84.0	30-130		6/19/13 11:38
Nitrobenzene-d5	77.2	30-130		6/19/13 11:38
Nitrobenzene-d5	70.8	30-130		6/19/13 14:37
2-Fluorobiphenyl	75.9	30-130		6/19/13 14:37
2-Fluorobiphenyl	79.6	30-130		6/19/13 11:38
2,4,6-Tribromophenol	50.6	30-130		6/19/13 14:37
2,4,6-Tribromophenol	48.3	30-130		6/19/13 11:38
p-Terphenyl-d14	101	30-130		6/19/13 11:38
p-Terphenyl-d14	103	30-130		6/19/13 14:37

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SB02 (5-10ft) | Sampled: 6/12/2013 09:28

Sample ID: 13F0478-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.3		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	1.3	0.11	0.025	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Acrylonitrile	ND	0.0064	0.0027	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Benzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Bromobenzene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Bromochloromethane	ND	0.0021	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Bromodichloromethane	ND	0.0021	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Bromoform	ND	0.0021	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Bromomethane	ND	0.011	0.0018	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
2-Butanone (MEK)	ND	0.043	0.019	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	0.022	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
n-Butylbenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
sec-Butylbenzene	ND	0.0021	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
tert-Butylbenzene	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Carbon Disulfide	ND	0.021	0.0035	mg/Kg dry	1	~~L-04~~, U J	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Carbon Tetrachloride	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Chlorobenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Chlorodibromomethane	ND	0.0043	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Chloroethane	ND	0.021	0.0016	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Chloroform	ND	0.0043	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Chloromethane	ND	0.011	0.00096	mg/Kg dry	1	~~L-04~~, ~~V-05~~, U J	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
2-Chlorotoluene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
4-Chlorotoluene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0012	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Dibromomethane	ND	0.0021	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0014	mg/Kg dry	1	~~V-05~~, U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1-Dichloroethane	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2-Dichloroethane	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1-Dichloroethylene	ND	0.0043	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2-Dichloropropane	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,3-Dichloropropane	ND	0.0011	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
2,2-Dichloropropane	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1-Dichloropropene	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Diethyl Ether	ND	0.021	0.0019	mg/Kg dry	1	~~V-05~~, U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,4-Dioxane	ND	0.11	0.062	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Ethylbenzene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Hexachlorobutadiene	ND	0.0021	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
2-Hexanone (MBK)	ND	0.043	0.012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Methylene Chloride	0.012	0.021	0.0076	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.043	0.0081	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Naphthalene	ND	0.0043	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
n-Propylbenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Styrene	ND	0.0021	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Tetrachloroethylene	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Tetrahydrofuran	ND	0.011	0.0024	mg/Kg dry	1	~~V-16~~, U R	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Toluene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1,1-Trichloroethane	ND	0.0021	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1,2-Trichloroethane	ND	0.0021	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Trichloroethylene	ND	0.0021	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2,3-Trichloropropane	ND	0.0021	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00096	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00086	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00064	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
Vinyl Chloride	ND	0.011	0.0012	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
m+p Xylene	ND	0.0043	0.0018	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF
o-Xylene	ND	0.0021	0.00075	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	109	70-130		6/18/13 14:02
Toluene-d8	101	70-130		6/18/13 14:02
4-Bromofluorobenzene	100	70-130		6/18/13 14:02

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Acenaphthylene	0.14	0.20	0.093	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Acetophenone	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Aniline	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Anthracene	0.23	0.20	0.093	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzidine	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzo(a)anthracene	0.94	0.20	0.093	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzo(a)pyrene	1.0	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzo(b)fluoranthene	1.2	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzo(g,h,i)perylene	0.99	0.20	0.081	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzo(k)fluoranthene	0.49	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Benzoic Acid	ND	1.2	0.17	mg/Kg dry	1	~~L-04~~, U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Bis(2-chloroethoxy)methane	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Bis(2-chloroethyl)ether	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Bromophenylphenylether	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Butylbenzylphthalate	ND	0.76	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Carbazole	0.15	0.20	0.093	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Chloroaniline	ND	0.76	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Chloro-3-methylphenol	ND	0.76	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Chloronaphthalene	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Chlorophenol	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Chrysene	0.98	0.20	0.093	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Dibenz(a,h)anthracene	0.23	0.20	0.081	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Dibenzofuran	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Di-n-butylphthalate	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,2-Dichlorobenzene	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,3-Dichlorobenzene	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,4-Dichlorobenzene	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
3,3-Dichlorobenzidine	ND	0.20	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4-Dichlorophenol	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Diethylphthalate	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4-Dimethylphenol	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Dimethylphthalate	ND	0.76	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.046	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4-Dinitrophenol	ND	0.76	0.046	mg/Kg dry	1	~~V-19~~, U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4-Dinitrotoluene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,6-Dinitrotoluene	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Di-n-octylphthalate	ND	0.76	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Fluoranthene	1.6	0.20	0.081	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Fluorene	ND	0.20	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Hexachlorobutadiene	ND	0.39	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Hexachlorocyclopentadiene	ND	0.76	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Hexachloroethane	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Indeno(1,2,3-cd)pyrene	0.97	0.20	0.081	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Isophorone	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1-Methylnaphthalene	ND	0.20	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Methylnaphthalene	ND	0.20	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
3/4-Methylphenol	ND	0.39	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Naphthalene	0.22	0.20	0.081	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Nitroaniline	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
3-Nitroaniline	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Nitroaniline	ND	0.39	0.14	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Nitrobenzene	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2-Nitrophenol	ND	0.39	0.058	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
4-Nitrophenol	ND	0.76	0.046	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
N-Nitrosodimethylamine	ND	0.39	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
N-Nitrosodiphenylamine	ND	0.39	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
N-Nitrosodi-n-propylamine	ND	0.39	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Pentachloronitrobenzene	ND	0.39	0.13	mg/Kg dry	1	~~V-16~~, U R	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Pentachlorophenol	ND	0.39	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Phenanthrene	1.3	0.20	0.093	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Phenol	ND	0.39	0.10	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Pyrene	2.0	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 12:13	CMR
Pyridine	ND	0.39	0.093	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
1,2,4-Trichlorobenzene	ND	0.39	0.069	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4,5-Trichlorophenol	ND	0.39	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR
2,4,6-Trichlorophenol	ND	0.39	0.081	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 12:13	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	63.4	30-130		6/19/13 12:13
Phenol-d6	73.6	30-130	7/30/13	6/19/13 12:13
Nitrobenzene-d5	63.8	30-130		6/19/13 12:13
2-Fluorobiphenyl	70.2	30-130		6/19/13 12:13
2,4,6-Tribromophenol	43.5	30-130		6/19/13 12:13
p-Terphenyl-d14	88.3	30-130		6/19/13 12:13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.023	0.0072	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1221 [1]	ND	0.023	0.023	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1232 [1]	ND	0.023	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1242 [1]	ND	0.023	0.012	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1248 [1]	ND	0.023	0.013	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1254 [1]	ND	0.023	0.010	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1260 [2]	0.045	0.023	0.011	mg/Kg dry	1	J	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1262 [1]	ND	0.023	0.0095	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC
Aroclor-1268 [1]	ND	0.023	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:27	MJC

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	80.1	30-150		6/27/13 11:27
Decachlorobiphenyl [2]	89.7	30-150		6/27/13 11:27
Tetrachloro-m-xylene [1]	82.7	30-150	7/30/13	6/27/13 11:27
Tetrachloro-m-xylene [2]	90.3	30-150		6/27/13 11:27

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T2-SS04 12-14 | Sampled: 6/12/2013 10:25

Sample ID: 13F0478-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.4		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/3c/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	1.2	0.10	0.024	mg/Kg dry	1	~~L-04~~ J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Acrylonitrile	ND	0.0063	0.0026	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Benzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Bromobenzene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Bromochloromethane	ND	0.0021	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Bromodichloromethane	ND	0.0021	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Bromoform	ND	0.0021	0.0015	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Bromomethane	ND	0.010	0.0018	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
2-Butanone (MEK)	ND	0.042	0.018	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
tert-Butyl Alcohol (TBA)	ND	0.042	0.022	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
n-Butylbenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
sec-Butylbenzene	ND	0.0021	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
tert-Butylbenzene	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Carbon Disulfide	ND	0.021	0.0034	mg/Kg dry	1	~~L-04,~~ U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Carbon Tetrachloride	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Chlorobenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Chlorodibromomethane	ND	0.0042	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Chloroethane	ND	0.021	0.0016	mg/Kg dry	1	U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Chloroform	ND	0.0042	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Chloromethane	ND	0.010	0.00094	mg/Kg dry	1	~~L-04, V-05,~~ U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
2-Chlorotoluene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
4-Chlorotoluene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0011	mg/Kg dry	1	~~V-16,~~ U R	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Dibromomethane	ND	0.0021	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
trans-1,4-Dichloro-2-butene	ND	0.0042	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0014	mg/Kg dry	1	~~V-05,~~ U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1-Dichloroethane	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2-Dichloroethane	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1-Dichloroethylene	ND	0.0042	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2-Dichloropropane	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,3-Dichloropropane	ND	0.0010	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
2,2-Dichloropropane	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1-Dichloropropene	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Diethyl Ether	ND	0.021	0.0019	mg/Kg dry	1	~~V-05~~ U J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0010	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,4-Dioxane	ND	0.10	0.060	mg/Kg dry	1	~~V-16~~, U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Ethylbenzene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Hexachlorobutadiene	ND	0.0021	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
2-Hexanone (MBK)	ND	0.042	0.011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Methylene Chloride	0.016	0.021	0.0074	mg/Kg dry	1	J	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.042	0.0079	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Naphthalene	ND	0.0042	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
n-Propylbenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Styrene	ND	0.0021	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Tetrachloroethylene	ND	0.0021	0.0014	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Tetrahydrofuran	ND	0.010	0.0023	mg/Kg dry	1	~~V-16~~, U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Toluene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1,1-Trichloroethane	ND	0.0021	0.0010	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1,2-Trichloroethane	ND	0.0021	0.0013	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Trichloroethylene	ND	0.0021	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2,3-Trichloropropane	ND	0.0021	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00094	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00084	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00063	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
Vinyl Chloride	ND	0.010	0.0011	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
m+p Xylene	ND	0.0042	0.0018	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF
o-Xylene	ND	0.0021	0.00073	mg/Kg dry	1	U	SW-846 8260C	6/18/13	6/18/13 14:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	111	70-130		6/18/13 14:29
Toluene-d8	103	70-130		6/18/13 14:29
4-Bromofluorobenzene	98.6	70-130		6/18/13 14:29

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

7/30/13

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.14	0.21	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Acenaphthylene	ND	0.21	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Acetophenone	ND	0.41	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Aniline	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Anthracene	0.40	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzidine	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzo(a)anthracene	1.2	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzo(a)pyrene	0.96	0.21	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzo(b)fluoranthene	1.2	0.21	0.11	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzo(g,h,i)perylene	0.67	0.21	0.085	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzo(k)fluoranthene	0.49	0.21	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Benzoic Acid	ND	1.2	0.18	mg/Kg dry	1	~~L-04,~~U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Bis(2-chloroethoxy)methane	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Bis(2-chloroethyl)ether	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Bis(2-chloroisopropyl)ether	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Bromophenylphenylether	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Butylbenzylphthalate	ND	0.80	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Carbazole	0.19	0.21	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Chloroaniline	ND	0.80	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Chloro-3-methylphenol	ND	0.80	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Chloronaphthalene	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Chlorophenol	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Chlorophenylphenylether	ND	0.41	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Chrysene	1.3	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Dibenz(a,h)anthracene	0.21	0.21	0.085	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Dibenzofuran	0.16	0.41	0.097	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Di-n-butylphthalate	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,2-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,3-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,4-Dichlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
3,3-Dichlorobenzidine	ND	0.21	0.073	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4-Dichlorophenol	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Diethylphthalate	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4-Dimethylphenol	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Dimethylphthalate	ND	0.80	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4,6-Dinitro-2-methylphenol	ND	0.41	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4-Dinitrophenol	ND	0.80	0.048	mg/Kg dry	1	~~V-19,~~U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4-Dinitrotoluene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,6-Dinitrotoluene	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Di-n-octylphthalate	ND	0.80	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Fluoranthene	2.4	0.21	0.085	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Fluorene	ND	0.21	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Hexachlorobutadiene	ND	0.41	0.073	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Hexachlorocyclopentadiene	ND	0.80	0.073	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Hexachloroethane	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Indeno(1,2,3-cd)pyrene	0.81	0.21	0.085	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Isophorone	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1-Methylnaphthalene	0.17	0.21	0.12	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Methylnaphthalene	0.18	0.21	0.12	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Methylphenol	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
3/4-Methylphenol	ND	0.41	0.19	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Naphthalene	0.20	0.21	0.085	mg/Kg dry	1	J	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Nitroaniline	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
3-Nitroaniline	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Nitroaniline	ND	0.41	0.15	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Nitrobenzene	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2-Nitrophenol	ND	0.41	0.061	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
4-Nitrophenol	ND	0.80	0.048	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
N-Nitrosodimethylamine	ND	0.41	0.073	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
N-Nitrosodiphenylamine	ND	0.41	0.13	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
N-Nitrosodi-n-propylamine	ND	0.41	0.16	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Pentachloronitrobenzene	ND	0.41	0.13	mg/Kg dry	1	~~V-16~~, U R	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Pentachlorophenol	ND	0.41	0.073	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Phenanthrene	2.3	0.21	0.097	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Phenol	ND	0.41	0.11	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Pyrene	2.8	0.21	0.12	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
Pyridine	ND	0.41	0.097	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,2,4,5-Tetrachlorobenzene	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
1,2,4-Trichlorobenzene	1.8	0.41	0.073	mg/Kg dry	1		SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4,5-Trichlorophenol	ND	0.41	0.12	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR
2,4,6-Trichlorophenol	ND	0.41	0.085	mg/Kg dry	1	U	SW-846 8270D	6/17/13	6/19/13 14:02	CMR

Surrogates	% Recovery	Recovery Limits	Flag	
2-Fluorophenol	52.1	30-130		6/19/13 14:02
Phenol-d6	62.2	30-130		6/19/13 14:02
Nitrobenzene-d5	73.4	30-130		6/19/13 14:02
2-Fluorobiphenyl	74.0	30-130		6/19/13 14:02
2,4,6-Tribromophenol	**26.7** *	30-130	S-07	6/19/13 14:02
p-Terphenyl-d14	101	30-130		6/19/13 14:02

7/30/13

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.024	0.0075	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1221 [1]	ND	0.024	0.024	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1232 [1]	ND	0.024	0.015	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1242 [1]	ND	0.024	0.012	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1248 [1]	ND	0.024	0.014	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1254 [1]	ND	0.024	0.010	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1260 [2]	0.055	0.024	0.012	mg/Kg dry	1		SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1262 [1]	ND	0.024	0.0099	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC
Aroclor-1268 [1]	ND	0.024	0.015	mg/Kg dry	1	U	SW-846 8082A	6/17/13	6/27/13 11:40	MJC

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	64.9	30-150		6/27/13 11:40
Decachlorobiphenyl [2]	73.1	30-150		6/27/13 11:40
Tetrachloro-m-xylene [1]	69.4	30-150		6/27/13 11:40
Tetrachloro-m-xylene [2]	75.5	30-150		6/27/13 11:40

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Project Location: Bronx PC Bldg 1 | Sample Description: | Work Order: 13F0478

Date Received: 6/13/2013

Field Sample #: T1-SS02 0-6 | Sampled: 6/12/2013 11:10

Sample ID: 13F0478-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.5		% Wt	1		SM 2540G	6/17/13	6/18/13 9:32	MLA

ATTACHMENT B

SUPPORT DOCUMENTATION

CHAIN OF CUSTODY RECORD

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Rev 04.05.12

13F0478

Company Name: URS
Address: 3 Corporate Drive Suite 203
Clifton Park, NY 12065
Attention: J. Gillies
Project Location: Bronx PC Bldg 1
Sampled By: Jenn Gillies

Telephone: 518-688-0015
Project #: 3839
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ⊘ EMAIL ○ WEBSITE
Fax #:
Email: jennifer.gillies@urs.com
Format: ⊘ PDF ⊘ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
⊘ yes ____ proposal date

ANALYSIS REQUESTED

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code	VOCs - 8260B/5035	SVOCs - 8270C	VOCs-8260B/5035	PCBs-8082
01	T1-MW1	6/11/13	1120		X	GW	L	3	H	V	X	X		
02	T1-MW3 (DUP)	6/11/13	1315		X	GW	L	3	H	V	X	X		
01	MS061113	6/11/13	1120		X	GW	L	3	H	V	X	X		
1	MSD061113	6/11/13	1120		X	GW	L	3	H	V	X	X		
03	T2-MW2	6/11/13	1255		X	GW	L	3	H	V	X	X		
04	T1-SS01 (0-8")	6/11/13	1030		X	S	U	1	I	A			X	X
05	T2-SS03 (0-8")	6/11/13	1425		X	S	U	1	I	A			X	X
06	T1-SB01 (0-4')	6/12/13	820		X	S	U	1	I	A			X	
07	T1-SB01 (5'-10')	6/12/13	825		X	S	U	1	I	A			X	
* 08	T2-SB02 (0-4')	6/12/13	920		X	S	U	1	I	A			X	

Comments: * - 1 jar submitted for soil. Please extract VOC portion first and then SVOC. ASP Cat B deliverable

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
U - No PID readings
H - High; M - Medium; L - Low; C - Clean; U - Unknown

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfat
X = Na hydroxide
T = Na thiosulfate
O = Other____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other____

Dissolved Metals
○ Field Filtered
○ Lab to Filter

Relinquished by: (signature)	Date/Time:
	6/13/13 1250
Received by: (signature)	Date/Time:
	6/13/13 1255
Relinquished by: (signature)	Date/Time:
	6/13/13 1615
Received by: (signature)	Date/Time:
4.9°	6/17/13 1615

Turnaround ††
☐ 7-Day
☑ 10-Day (normal)
☐ Other ____
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Page 114 of 116 13F0478 Page 115 of 1197 B075050_01 06/28/13 16:54:10

CHAIN OF CUSTODY RECORD

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
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39 Spruce Street
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Rev 04.05.12

13F0478

Company Name: URS
Address: 3 Corporate Drive Suite 203
Clifton Park, NY 12065
Attention: J. Gillies
Project Location: Boxx PC Bldg 1
Sampled By: J. Gillies

Telephone: 518-688-0015
Project #
Client PO#

Project Proposal Provided? (for billing purposes)
yes _____ proposal date

DATA DELIVERY (check all that apply)
O FAX O EMAIL O WEBSITE
Fax #
Email: jennifer.gillies@urs.com
Format: O PDF O EXCEL O GIS
O OTHER
O "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	VOCs-8260B, SVOCs 8270C	RCRA
(08) 09	T3-SB03 (0-4') DUP	6/12/13	925		X	S	U	X	
10	T2-SB02 (5-10')	6/12/13	928		X	S	U	X	
08 11	~~T2-SS06~~ MS061213	6/12/13	930		X	S	U	X	
08 12	MSD061213	6/12/13	935		X	S	U	X	
11 13	T2-SS04 (12"-14")	6/12/13	1025		X	S	U	X	X
12 14	T1-SS02 (0-6")	6/12/13	1110		X	S	U	X	X

ANALYSIS REQUESTED

# of Containers
** Preservation
***Container Code

Dissolved Metals
O Field Filtered
O Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL= sludge
O = other

Comments:
- 1 jar submitted for soil. extract VOC first and then SVOCs. ASP Cat B Deliverables., U-no PID readings

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
	6/13/13
Received by: (signature)	Date/Time:
	6/13/13 1255
Relinquished by: (signature)	Date/Time:
	6/13/13 1615
Received by: (signature) 4.9°	Date/Time:
	6/13/13 1615

Turnaround ††
- ☐ 7-Day
- ☑ 10-Day (normal)
- ☐ Other ____

RUSH †
- ☐ †24-Hr ☐ †48-Hr
- ☐ †72-Hr ☐ †4-Day

† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
- O MCP Form Required
- O RCP Form Required
- O MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Page 115 of 116 13F0478 Page 116 of 1197 B075050_01 06/28/13 16:54:10

con-test®
ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISE REPORT 07/25/13 - Results reported to the MDL.

REVISED REPORT 06/28/13 - Reporting limit for 8082 lowered by running the extract at less of a dilution per client request.

SW-846 8260C

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Acetone, Bromomethane, Carbon Disulfide, Chloromethane

13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B075154-BLK1, B075154-BS1, B075154-BSD1, B075154-MS1, B075154-MSD1, 13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B074954-BLK1, B074954-BS1, B074954-BSD1, B074954-MS1, B074954-MSD1

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possiblity of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

1,1-Dichloroethylene, Bromomethane, Chloroethane, Chloromethane, Dichlorodifluoromethane (Freon 12), tert-Butyl Alcohol (TBA), Trichlorofluoromethane (Freon 11), Vinyl Chloride

13F0478-08[T2-SB02 (0-4ft)], B075154-MS1, B075154-MSD1, 13F0478-01[T1-MW1], B074954-MS1, B074954-MSD1

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

1,4-Dioxane, Acetone, Bromomethane, Carbon Disulfide, Chloromethane

13F0478-01[T1-MW1], B074954-MS1, B074954-MSD1, 13F0478-08[T2-SB02 (0-4ft)], B075154-MS1, B075154-MSD1

Either matrix spike or matrix spike duplicate is outside of control limits, but the other is within limits. Analysis is in control based on laboratory fortified blank recovery.

Analyte & Samples(s) Qualified:

Diethyl Ether

B075154-MSD1

pH of sample (pH 7) is outside of method specified preservation criteria.

Analyte & Samples(s) Qualified:

13F0478-03[T2-MW2]

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

Chloromethane, tert-Butyl Alcohol (TBA)

13F0478-01[T1-MW1], B074954-MS1, B074954-MSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Chloromethane, Dichlorodifluoromethane (Freon 12), Diethyl Ether, Naphthalene

13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], 13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B074954-BLK1, B074954-BS1, B074954-BSD1, B074954-MS1, B074954-MSD1, B075154-BLK1, B075154-BS1, B075154-BSD1, B075154-MS1, B075154-MSD1, S004324-CCV1, S004325-CCV1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Acetone

B075154-BS1, B075154-BSD1, S004325-CCV1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

1,2-Dibromo-3-chloropropane (DBCP), 1,4-Dioxane, Acrylonitrile, tert-Butyl Alcohol (TBA), Tetrahydrofuran

13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B075154-BLK1, B075154-BS1, B075154-BSD1, B075154-MS1, B075154-MSD1, 13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B074954-BLK1, B074954-BS1, B074954-BSD1, B074954-MS1, B074954-MSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2-Butanone (MEK), 2-Hexanone (MBK), Chloroethane

B075154-BS1, B075154-BSD1, S004325-CCV1

SW-846 8270D

Qualifications:

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)]

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

3/4-Methylphenol

B075072-BS1, B075072-BSD1

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzoic Acid, N-Nitrosodimethylamine

13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B075072-BLK1, B075072-BS1, B075072-BSD1, 13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B075096-BLK1, B075096-BS1, B075096-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

3/4-Methylphenol, Benzidine

B075096-BSD1, B075096-BS1

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Benzo(g,h,i)perylene, Benzoic Acid, Fluoranthene, Hexachlorocyclopentadiene, Pyrene, Pyridine

13F0478-08[T2-SB02 (0-4ft)], B075072-MS1, B075072-MSD1, 13F0478-01[T1-MW1], B075096-MS1, B075096-MSD1

Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.

Analyte & Samples(s) Qualified:

3/4-Methylphenol

B075072-MS1, B075072-MSD1, B075096-MS1, B075096-MSD1

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Benzo(a)anthracene, Benzo(b)fluoranthene, Chrysene, Indeno(1,2,3-cd)pyrene, Phenanthrene

B075072-MSD1, B075072-MS1

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Benzidine, Bis(2-Ethylhexyl)phthalate

B075096-MS1, B075072-MS1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1-Methylnaphthalene, 2,4-Dichlorophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Chloronaphthalene, 2-Chlorophenol, 2-Methylnaphthalene, 2-Methylphenol, 2-Nitroaniline, 3/4-Methylphenol, 4-Chloro-3-methylphenol, 4-Chlorophenylphenylether, 4-Nitroaniline, Acenaphthene, Acenaphthylene, Acetophenone, Benzidine, Benzo(k)fluoranthene, Bis(2-chloroethyl)ether, Bis(2-chloroisopropyl)ether, Bis(2-Ethylhexyl)phthalate, Carbazole, Chrysene, Dibenzofuran, Diethylphthalate, Fluorene, Hexachlorobenzene, Naphthalene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, Pentachloronitrobenzene, Phenanthrene, Pyridine

13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B075096-BLK1, B075096-BS1, B075096-BSD1

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

Benzidine, Bis(2-Ethylhexyl)phthalate

13F0478-01[T1-MW1], B075096-MSD1, 13F0478-08[T2-SB02 (0-4ft)], B075072-MSD1

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol

13F0478-12[T1-SS02 0-6]

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

Benzidine

B075072-BLK1, B075072-BS1, B075072-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

4-Nitrophenol, Benzo(b)fluoranthene, Hexachlorocyclopentadiene

13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B075096-BLK1, B075096-BS1, B075096-BSD1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,2,4,5-Tetrachlorobenzene, 3,3-Dichlorobenzidine, 4,6-Dinitro-2-methylphenol, Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Pentachlorophenol

B075072-BS1, B075072-BSD1, B075096-BS1, B075096-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], 13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B075072-BLK1, B075072-BS1, B075072-BSD1, B075072-MS1, B075072-MSD1, B075096-BLK1, B075096-BS1, B075096-BSD1

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol, Benzoic Acid

13F0478-04[T1-SS01 (0-8in)], 13F0478-05[T2-SS03 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-07[T1-SB01 (5-10ft)], 13F0478-08[T2-SB02 (0-4ft)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-10[T2-SB02 (5-10ft)], 13F0478-11[T2-SS04 12-14], 13F0478-12[T1-SS02 0-6], B075072-MS1, B075072-MSD1, B075072-BLK1, B075072-BS1, B075072-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

1,2,4,5-Tetrachlorobenzene, 3,3-Dichlorobenzidine, 4,6-Dinitro-2-methylphenol, Benzidine, Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Pentachlorophenol

B075072-BLK1, 13F0478-04[T1-SS01 (0-8in)], 13F0478-06[T1-SB01 (0-4in)], 13F0478-09[T3-SB03 (0-4ft)], 13F0478-01[T1-MW1], 13F0478-02[T1-MW3], 13F0478-03[T2-MW2], B075096-BLK1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson
Laboratory Director

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T1-MW1

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Analysis:	SW-846 8260C
Batch:	B074954	Preparation:	SW-846 5035
% Solids:		Laboratory ID:	B074954-MS1
Initial/Final:	5 mL / 5 mL	Sample Lab ID:	13F0478-01
Column:			

ANALYTE	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC.		QC LIMITS REC.
Acetone	100	ND	89.0	89.0		70 - 130
Acrylonitrile	10.0	ND	11.7	117		70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	ND	10.2	102		70 - 130
Benzene	10.0	ND	9.20	92.0		70 - 130
Bromobenzene	10.0	ND	9.82	98.2		70 - 130
Bromochloromethane	10.0	ND	10.5	105		70 - 130
Bromodichloromethane	10.0	ND	9.18	91.8		70 - 130
Bromoform	10.0	ND	8.84	88.4		70 - 130
Bromomethane	10.0	ND	3.80	38.0	*	70 - 130
2-Butanone (MEK)	100	ND	112	112		70 - 130
tert-Butyl Alcohol (TBA)	100	ND	116	116		70 - 130
n-Butylbenzene	10.0	ND	10.2	102		70 - 130
sec-Butylbenzene	10.0	ND	11.1	111		70 - 130
tert-Butylbenzene	10.0	ND	10.5	105		70 - 130
tert-Butyl Ethyl Ether (TBEE)	10.0	ND	10.4	104		70 - 130
Carbon Disulfide	10.0	ND	8.94	89.4		70 - 130
Carbon Tetrachloride	10.0	ND	9.69	96.9		70 - 130
Chlorobenzene	10.0	ND	10.3	103		70 - 130
Chlorodibromomethane	10.0	ND	9.44	94.4		70 - 130
Chloroethane	10.0	ND	8.01	80.1		70 - 130
Chloroform	10.0	ND	9.83	98.3		70 - 130
Chloromethane	10.0	ND	2.71	27.1	*	70 - 130
2-Chlorotoluene	10.0	ND	10.6	106		70 - 130
4-Chlorotoluene	10.0	ND	10.4	104		70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	10.0	ND	10.8	108		70 - 130

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T1-MW1

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Analysis:	SW-846 8260C
Batch:	B074954	Preparation:	SW-846 5035
% Solids:		Laboratory ID:	B074954-MSD1
Initial/Final:	5 mL / 5 mL	Sample Lab ID:	13F0478-01
Column:			

ANALYTE	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC. #	% RPD	QC LIMITS RPD	QC LIMITS REC.
Acetone	100	73.5	73.5	19.1	30	70 - 130
Acrylonitrile	10.0	10.0	100	15.7	30	70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	10.0	100	1.38	30	70 - 130
Benzene	10.0	9.58	95.8	4.05	30	70 - 130
Bromobenzene	10.0	9.78	97.8	0.408	30	70 - 130
Bromochloromethane	10.0	10.4	104	1.15	30	70 - 130
Bromodichloromethane	10.0	9.56	95.6	4.06	30	70 - 130
Bromoform	10.0	8.30	83.0	6.30	30	70 - 130
Bromomethane	10.0	4.64	46.4 *	19.9	30	70 - 130
2-Butanone (MEK)	100	84.3	84.3	28.5	30	70 - 130
tert-Butyl Alcohol (TBA)	100	80.0	80.0	36.7 *	30	70 - 130
n-Butylbenzene	10.0	10.1	101	1.08	30	70 - 130
sec-Butylbenzene	10.0	10.6	106	4.50	30	70 - 130
tert-Butylbenzene	10.0	10.4	104	1.05	30	70 - 130
tert-Butyl Ethyl Ether (TBEE)	10.0	10.5	105	1.24	30	70 - 130
Carbon Disulfide	10.0	8.79	87.9	1.69	30	70 - 130
Carbon Tetrachloride	10.0	9.99	99.9	3.05	30	70 - 130
Chlorobenzene	10.0	9.97	99.7	3.55	30	70 - 130
Chlorodibromomethane	10.0	9.43	94.3	0.106	30	70 - 130
Chloroethane	10.0	9.96	99.6	21.7	30	70 - 130
Chloroform	10.0	9.92	99.2	0.911	30	70 - 130
Chloromethane	10.0	5.94	59.4 *	74.7 *	30	70 - 130
2-Chlorotoluene	10.0	10.6	106	0.0944	30	70 - 130
4-Chlorotoluene	10.0	10.8	108	3.60	30	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	10.0	8.29	82.9	26.0	30	70 - 130

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Preparation:	SW-846 5035
Batch:	B074954	Laboratory ID:	B074954-BS1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
Acetone	100	101	101	70 - 160
Acrylonitrile	10.0	11.2	112	70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	11.1	111	70 - 130
Benzene	10.0	9.91	99.1	70 - 130
Bromobenzene	10.0	10.5	105	70 - 130
Bromochloromethane	10.0	10.9	109	70 - 130
Bromodichloromethane	10.0	9.92	99.2	70 - 130
Bromoform	10.0	9.18	91.8	70 - 130
Bromomethane	10.0	3.05	30.5 *	40 - 160
2-Butanone (MEK)	100	110	110	40 - 160
tert-Butyl Alcohol (TBA)	100	105	105	40 - 160
n-Butylbenzene	10.0	10.8	108	70 - 130
sec-Butylbenzene	10.0	11.0	110	70 - 130
tert-Butylbenzene	10.0	10.7	107	70 - 130
tert-Butyl Ethyl Ether (TBEE)	10.0	11.8	118	70 - 130
Carbon Disulfide	10.0	10.3	103	70 - 130
Carbon Tetrachloride	10.0	9.94	99.4	70 - 130
Chlorobenzene	10.0	10.8	108	70 - 130
Chlorodibromomethane	10.0	10.3	103	70 - 130
Chloroethane	10.0	9.88	98.8	70 - 130
Chloroform	10.0	10.3	103	70 - 130
Chloromethane	10.0	5.42	54.2	40 - 160
2-Chlorotoluene	10.0	11.2	112	70 - 130
4-Chlorotoluene	10.0	11.4	114	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	10.0	10.3	103	70 - 130
1,2-Dibromoethane (EDB)	10.0	10.8	108	70 - 130
Dibromomethane	10.0	10.3	103	70 - 130
1,2-Dichlorobenzene	10.0	10.6	106	70 - 130
1,3-Dichlorobenzene	10.0	10.6	106	70 - 130
1,4-Dichlorobenzene	10.0	9.97	99.7	70 - 130
trans-1,4-Dichloro-2-butene	10.0	10.3	103	70 - 130

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Preparation:	SW-846 5035
Batch:	B074954	Laboratory ID:	B074954-BS1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
1,2,3-Trichlorobenzene	10.0	10.3	103	70 - 130
1,2,4-Trichlorobenzene	10.0	10.4	104	70 - 130
1,3,5-Trichlorobenzene	10.0	10.2	102	70 - 130
1,1,1-Trichloroethane	10.0	10.2	102	70 - 130
1,1,2-Trichloroethane	10.0	9.89	98.9	70 - 130
Trichloroethylene	10.0	9.89	98.9	70 - 130
Trichlorofluoromethane (Freon 11)	10.0	8.95	89.5	70 - 130
1,2,3-Trichloropropane	10.0	10.7	107	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.0	10.9	109	70 - 130
1,2,4-Trimethylbenzene	10.0	10.1	101	70 - 130
1,3,5-Trimethylbenzene	10.0	9.93	99.3	70 - 130
Vinyl Chloride	10.0	7.63	76.3	40 - 160
m+p Xylene	20.0	20.8	104	70 - 130
o-Xylene	10.0	11.0	110	70 - 130

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #		% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetone	100	98.4	98.4		2.13	25	70 - 160
Acrylonitrile	10.0	11.0	110		1.26	25	70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	11.3	113		1.87	25	70 - 130
Benzene	10.0	10.0	100		1.10	25	70 - 130
Bromobenzene	10.0	10.6	106		0.379	25	70 - 130
Bromochloromethane	10.0	11.2	112		2.98	25	70 - 130
Bromodichloromethane	10.0	9.96	99.6		0.402	25	70 - 130
Bromoform	10.0	9.20	92.0		0.218	25	70 - 130
Bromomethane	10.0	3.52	35.2	*	14.3	25	40 - 160
2-Butanone (MEK)	100	105	105		4.81	25	40 - 160
tert-Butyl Alcohol (TBA)	100	106	106		1.07	25	40 - 160
n-Butylbenzene	10.0	10.5	105		2.54	25	70 - 130

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8260C
Batch:	B075154	Preparation:	SW-846 5035
% Solids:	83.90	Laboratory ID:	B075154-MS1
Initial/Final:	5.4 g / 10 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	SAMPLE CONCENTRATION (mg/Kg dry)	MS CONCENTRATION (mg/Kg dry)	MS % REC.		QC LIMITS REC.
Acetone	0.221	1.95	1.48	-215	*	70 - 130
Acrylonitrile	0.0221	ND	0.0191	86.7		70 - 130
tert-Amyl Methyl Ether (TAME)	0.0221	ND	0.0224	102		70 - 130
Benzene	0.0221	ND	0.0199	90.3		70 - 130
Bromobenzene	0.0221	ND	0.0208	94.3		70 - 130
Bromochloromethane	0.0221	ND	0.0220	99.7		70 - 130
Bromodichloromethane	0.0221	ND	0.0198	89.8		70 - 130
Bromoform	0.0221	ND	0.0164	74.4		70 - 130
Bromomethane	0.0221	ND	0.0111	50.4	*	70 - 130
2-Butanone (MEK)	0.221	ND	0.205	93.0		70 - 130
tert-Butyl Alcohol (TBA)	0.221	ND	0.145	65.8	*	70 - 130
n-Butylbenzene	0.0221	ND	0.0181	81.9		70 - 130
sec-Butylbenzene	0.0221	ND	0.0196	88.6		70 - 130
tert-Butylbenzene	0.0221	ND	0.0198	89.7		70 - 130
tert-Butyl Ethyl Ether (TBEE)	0.0221	ND	0.0217	98.4		70 - 130
Carbon Disulfide	0.0221	ND	0.0124	56.1	*	70 - 130
Carbon Tetrachloride	0.0221	ND	0.0210	95.2		70 - 130
Chlorobenzene	0.0221	ND	0.0205	92.8		70 - 130
Chlorodibromomethane	0.0221	ND	0.0202	91.7		70 - 130
Chloroethane	0.0221	ND	0.0151	68.6	*	70 - 130
Chloroform	0.0221	ND	0.0217	98.5		70 - 130
Chloromethane	0.0221	ND	0.0122	55.4	*	70 - 130
2-Chlorotoluene	0.0221	ND	0.0218	98.9		70 - 130
4-Chlorotoluene	0.0221	ND	0.0224	101		70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0221	ND	0.0162	73.5		70 - 130

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8260C
Batch:	B075154	Preparation:	SW-846 5035
% Solids:	83.90	Laboratory ID:	B075154-MSD1
Initial/Final:	5.2 g / 10 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	MSD CONCENTRATION (mg/Kg dry)	MSD % REC. #		% RPD	QC LIMITS RPD	QC LIMITS REC.
Acetone	0.229	1.68	-120	*	12.7	30	70 - 130
Acrylonitrile	0.0229	0.0171	74.8		11.0	30	70 - 130
tert-Amyl Methyl Ether (TAME)	0.0229	0.0242	106		7.73	30	70 - 130
Benzene	0.0229	0.0206	90.0		3.44	30	70 - 130
Bromobenzene	0.0229	0.0196	85.6		5.90	30	70 - 130
Bromochloromethane	0.0229	0.0228	99.5		3.57	30	70 - 130
Bromodichloromethane	0.0229	0.0198	86.5		0.0300	30	70 - 130
Bromoform	0.0229	0.0170	74.3		3.64	30	70 - 130
Bromomethane	0.0229	0.0103	44.8	*	8.00	30	70 - 130
2-Butanone (MEK)	0.229	0.206	90.1		0.605	30	70 - 130
tert-Butyl Alcohol (TBA)	0.229	0.155	67.4	*	6.26	30	70 - 130
n-Butylbenzene	0.0229	0.0182	79.5		0.800	30	70 - 130
sec-Butylbenzene	0.0229	0.0197	86.1		0.912	30	70 - 130
tert-Butylbenzene	0.0229	0.0202	88.2		2.09	30	70 - 130
tert-Butyl Ethyl Ether (TBEE)	0.0229	0.0219	95.7		0.992	30	70 - 130
Carbon Disulfide	0.0229	0.0120	52.4	*	3.05	30	70 - 130
Carbon Tetrachloride	0.0229	0.0202	88.1		3.98	30	70 - 130
Chlorobenzene	0.0229	0.0203	88.5		0.970	30	70 - 130
Chlorodibromomethane	0.0229	0.0197	86.0		2.64	30	70 - 130
Chloroethane	0.0229	0.0149	64.9	*	1.77	30	70 - 130
Chloroform	0.0229	0.0212	92.3		2.73	30	70 - 130
Chloromethane	0.0229	0.0126	55.1	*	3.23	30	70 - 130
2-Chlorotoluene	0.0229	0.0218	94.9		0.355	30	70 - 130
4-Chlorotoluene	0.0229	0.0220	95.9		1.70	30	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0229	0.0173	75.4		6.32	30	70 - 130

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B075154	Laboratory ID:	B075154-BS1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
Acetone	0.200	0.130	65.2 *	70 - 160
Acrylonitrile	0.0200	0.0189	94.3	70 - 130
tert-Amyl Methyl Ether (TAME)	0.0200	0.0218	109	70 - 130
Benzene	0.0200	0.0205	102	70 - 130
Bromobenzene	0.0200	0.0209	104	70 - 130
Bromochloromethane	0.0200	0.0210	105	70 - 130
Bromodichloromethane	0.0200	0.0201	100	70 - 130
Bromoform	0.0200	0.0172	86.1	70 - 130
Bromomethane	0.0200	0.0122	61.2	40 - 130
2-Butanone (MEK)	0.200	0.189	94.4	70 - 160
tert-Butyl Alcohol (TBA)	0.200	0.154	77.2	40 - 130
n-Butylbenzene	0.0200	0.0197	98.7	70 - 130
sec-Butylbenzene	0.0200	0.0212	106	70 - 130
tert-Butylbenzene	0.0200	0.0207	103	70 - 160
tert-Butyl Ethyl Ether (TBEE)	0.0200	0.0213	106	70 - 130
Carbon Disulfide	0.0200	0.0134	66.9 *	70 - 130
Carbon Tetrachloride	0.0200	0.0212	106	70 - 130
Chlorobenzene	0.0200	0.0221	110	70 - 130
Chlorodibromomethane	0.0200	0.0201	100	70 - 130
Chloroethane	0.0200	0.0150	75.0	70 - 130
Chloroform	0.0200	0.0206	103	70 - 130
Chloromethane	0.0200	0.0129	64.3 *	70 - 130
2-Chlorotoluene	0.0200	0.0231	115	70 - 130
4-Chlorotoluene	0.0200	0.0233	116	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0200	0.0170	85.2	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.0227	113	70 - 130
Dibromomethane	0.0200	0.0213	107	70 - 130
1,2-Dichlorobenzene	0.0200	0.0221	110	70 - 130
1,3-Dichlorobenzene	0.0200	0.0231	116	70 - 130
1,4-Dichlorobenzene	0.0200	0.0200	100	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.0213	106	70 - 130

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B075154	Laboratory ID:	B075154-BS1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
1,2,3-Trichlorobenzene	0.0200	0.0190	94.9	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.0228	114	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.0204	102	70 - 130
1,1,1-Trichloroethane	0.0200	0.0217	109	70 - 130
1,1,2-Trichloroethane	0.0200	0.0199	99.4	70 - 130
Trichloroethylene	0.0200	0.0201	100	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.0155	77.7	70 - 130
1,2,3-Trichloropropane	0.0200	0.0198	98.8	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0200	0.0166	82.8	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.0198	99.0	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.0207	104	70 - 130
Vinyl Chloride	0.0200	0.0128	64.2	40 - 130
m+p Xylene	0.0400	0.0438	110	70 - 130
o-Xylene	0.0200	0.0208	104	70 - 130

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetone	0.200	0.134	67.0 *	2.78	25	70 - 160
Acrylonitrile	0.0200	0.0183	91.7	2.80	25	70 - 130
tert-Amyl Methyl Ether (TAME)	0.0200	0.0228	114	4.13	25	70 - 130
Benzene	0.0200	0.0208	104	1.55	25	70 - 130
Bromobenzene	0.0200	0.0212	106	1.71	25	70 - 130
Bromochloromethane	0.0200	0.0221	110	4.92	25	70 - 130
Bromodichloromethane	0.0200	0.0202	101	0.794	25	70 - 130
Bromoform	0.0200	0.0169	84.3	2.11	25	70 - 130
Bromomethane	0.0200	0.0133	66.6	8.45	25	40 - 130
2-Butanone (MEK)	0.200	0.190	95.0	0.560	25	70 - 160
tert-Butyl Alcohol (TBA)	0.200	0.163	81.5	5.41	25	40 - 130
n-Butylbenzene	0.0200	0.0197	98.6	0.101	25	70 - 130

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B075154	Laboratory ID:	B075154-BSD1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
sec-Butylbenzene	0.0200	0.0213	106	0.566	25	70 - 130
tert-Butylbenzene	0.0200	0.0208	104	0.771	25	70 - 160
tert-Butyl Ethyl Ether (TBEE)	0.0200	0.0216	108	1.58	25	70 - 130
Carbon Disulfide	0.0200	0.0132	66.2 *	1.05	25	70 - 130
Carbon Tetrachloride	0.0200	0.0217	108	2.34	25	70 - 130
Chlorobenzene	0.0200	0.0220	110	0.454	25	70 - 130
Chlorodibromomethane	0.0200	0.0204	102	1.58	25	70 - 130
Chloroethane	0.0200	0.0151	75.7	0.929	25	70 - 130
Chloroform	0.0200	0.0213	107	3.33	25	70 - 130
Chloromethane	0.0200	0.0134	67.2 *	4.41	25	70 - 130
2-Chlorotoluene	0.0200	0.0231	116	0.173	25	70 - 130
4-Chlorotoluene	0.0200	0.0231	116	0.604	25	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0200	0.0171	85.7	0.585	25	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.0229	115	1.05	25	70 - 130
Dibromomethane	0.0200	0.0218	109	2.41	25	70 - 130
1,2-Dichlorobenzene	0.0200	0.0217	108	1.74	25	70 - 130
1,3-Dichlorobenzene	0.0200	0.0230	115	0.608	25	70 - 130
1,4-Dichlorobenzene	0.0200	0.0203	101	1.39	25	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.0204	102	4.23	25	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.00974	48.7	0.614	25	40 - 160
1,1-Dichloroethane	0.0200	0.0200	100	1.61	25	70 - 130
1,2-Dichloroethane	0.0200	0.0205	102	1.18	25	70 - 130
1,1-Dichloroethylene	0.0200	0.0160	79.8	2.15	25	70 - 130
cis-1,2-Dichloroethylene	0.0200	0.0199	99.6	1.62	25	70 - 130
trans-1,2-Dichloroethylene	0.0200	0.0203	101	6.41	25	70 - 130
1,2-Dichloropropane	0.0200	0.0206	103	2.30	25	70 - 130
1,3-Dichloropropane	0.0200	0.0219	110	0.365	25	70 - 130
2,2-Dichloropropane	0.0200	0.0206	103	0.00	25	70 - 130
1,1-Dichloropropene	0.0200	0.0217	108	1.30	25	70 - 130

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5 - FORM V
INSTRUMENT PERFORMANCE CHECK

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Lab File ID:	ve165003.D	Injection Date:	06/14/13
Instrument ID:	GCMSVOA5	Injection Time:	10:20
Sequence:	S004324	Lab Sample ID:	S004324-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	PASS/FAIL
50	15 - 40% of 95	20.2	PASS
75	30 - 60% of 95	47.4	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.52	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	94.5	PASS
175	5 - 9% of 174	8.32	PASS
176	95 - 101% of 174	96.5	PASS
177	5 - 9% of 176	6.98	PASS

Client ID	Sample ID	File ID	Date Analyzed	Time Analyzed
	S004324-CCV1	ve165003.D	06/14/2013	10:20:00
LCS	B074954-BS1	ve165005.D	06/14/2013	11:12:00
LCS Dup	B074954-BSD1	ve165006.D	06/14/2013	11:38:00
Blank	B074954-BLK1	ve165009.D	06/14/2013	12:56:00
T1-MW1	13F0478-01	ve165025.D	06/14/2013	19:54:00
T1-MW3	13F0478-02	ve165026.D	06/14/2013	20:20:00
T2-MW2	13F0478-03	ve165027.D	06/14/2013	20:47:00
Matrix Spike	B074954-MS1	ve165028.D	06/14/2013	21:13:00
Matrix Spike Dup	B074954-MSD1	ve165029.D	06/14/2013	21:39:00

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5 - FORM V
INSTRUMENT PERFORMANCE CHECK

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Lab File ID:	VD169004.D	Injection Date:	06/18/13
Instrument ID:	GCMSVOA4	Injection Time:	06:18
Sequence:	S004325	Lab Sample ID:	S004325-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	PASS/FAIL
50	15 - 40% of 95	22.7	PASS
75	30 - 60% of 95	53.3	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.7	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	89.2	PASS
175	5 - 9% of 174	7.72	PASS
176	95 - 101% of 174	96.1	PASS
177	5 - 9% of 176	6.33	PASS

Client ID	Sample ID	File ID	Date Analyzed	Time Analyzed
Calibration Check	S004325-CCV1	VD169004.D	06/18/2013	6:18:00
LCS	B075154-BS1	VD169006.D	06/18/2013	7:12:00
LCS Dup	B075154-BSD1	VD169007.D	06/18/2013	7:39:00
Blank	B075154-BLK1	VD169009.D	06/18/2013	8:34:00
T2-SB02 (0-4ft)	13F0478-08	VD169011.D	06/18/2013	9:28:00
T1-SS01 (0-8in)	13F0478-04	VD169012.D	06/18/2013	9:55:00
Matrix Spike	B075154-MS1	VD169013.D	06/18/2013	10:23:00
Matrix Spike Dup	B075154-MSD1	VD169014.D	06/18/2013	10:50:00
T2-SS03 (0-8in)	13F0478-05	VD169016.D	06/18/2013	11:44:00
T1-SB01 (0-4in)	13F0478-06	VD169017.D	06/18/2013	12:12:00
T1-SB01 (5-10ft)	13F0478-07	VD169018.D	06/18/2013	12:39:00
T3-SB03 (0-4ft)	13F0478-09	VD169019.D	06/18/2013	13:07:00
T2-SB02 (5-10ft)	13F0478-10	VD169020.D	06/18/2013	13:34:00
T2-SS04 12-14	13F0478-11	VD169021.D	06/18/2013	14:02:00
T1-SS02 0-6	13F0478-12	VD169022.D	06/18/2013	14:29:00

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300053	Instrument:	GCMSVOA5
		Calibration Date:	5/17/2013 12:00:36AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Acetone	7.134968E-02	8.7			15	
Acrolein	4.465998E-02	7.8	Not target compound		15	
Acrylonitrile	8.087693E-02	13.0			15	
tert-Amyl Methyl Ether (TAME)	0.5583237	12.2			15	
Benzene	1.120585	5.4			15	
Bromobenzene	0.7003925	4.5			15	
Bromochloromethane	0.2134845	9.1			15	
Bromodichloromethane	0.2646878	9.9			15	
Bromoform	0.3134229	12.2			15	
Bromomethane	0.2111494	14.1			15	
2-Butanone (MEK)	9.527142E-02	14.0			15	
tert-Butyl Alcohol (TBA)	0.0157114	14.7			15	
n-Butylbenzene	1.473402	12.8			15	
sec-Butylbenzene	1.967151	7.4			15	
tert-Butylbenzene	1.354244	5.9			15	
tert-Butyl Ethyl Ether (TBEE)	0.6215235	11.6			15	
Carbon Disulfide	0.8954041	5.7			15	
Carbon Tetrachloride	0.3949352	7.6			15	
Chlorobenzene	1.127694	6.4			15	
Chlorodibromomethane	0.1999028	13.2			15	
Chloroethane	0.1663037	7.4			15	
2-Chloroethyl Vinyl Ether	0.1087374	13.4			15	
Chloroform	0.4850183	7.2			15	
Chloromethane	0.3410179	12.3			15	
2-Chlorotoluene	1.218465	7.9			15	
4-Chlorotoluene	1.271738	6.1			15	
Cyclohexane	0.4652329	6.1			15	

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300053	Instrument:	GCMSVOA5
		Calibration Date:	5/17/2013 12:00:36AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dibromo-3-chloropropane (DBCP)	5.172919E-02	12.9			15	
1,2-Dibromoethane (EDB)	0.1713981	13.4			15	
Dibromomethane	0.115482	13.3			15	
1,2-Dichlorobenzene	0.7781515	6.8			15	
1,3-Dichlorobenzene	0.8552778	6.9			15	
1,4-Dichlorobenzene	0.9458815	3.8			15	
cis-1,4-Dichloro-2-butene	0.116817	9.7			15	
trans-1,4-Dichloro-2-butene	0.1061309	12.8			15	
Dichlorodifluoromethane (Freon 12)	0.3316602	7.3			15	
1,1-Dichloroethane	0.485378	5.9			15	
1,2-Dichloroethane	0.2699794	14.7			15	
1,1-Dichloroethylene	0.4242032	5.1			15	
cis-1,2-Dichloroethylene	0.4016163	6.6			15	
trans-1,2-Dichloroethylene	0.3737704	9.1			15	
Dichlorofluoromethane (Freon 21)	0.5124733	6.9			15	
1,2-Dichloropropane	0.2082147	4.8			15	
1,3-Dichloropropane	0.2667256	8.6			15	
2,2-Dichloropropane	0.3921449	6.1			15	
1,1-Dichloropropene	0.4063944	7.3			15	
cis-1,3-Dichloropropene	0.3075397	11.8			15	
trans-1,3-Dichloropropene	0.2465436	12.2			15	
Diethyl Ether	0.1820586	5.9			15	
Diisopropyl Ether (DIPE)	0.7107587	8.0			15	
1,4-Dioxane	1.659301E-03	10.9			15	
Ethyl Acetate	0.1796933	14.9			15	
Ethylbenzene	2.065389	5.2			15	
Ethyl Methacrylate	0.203145	13.1			15	

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300064	Instrument:	GCMSVOA4
		Calibration Date:	6/11/2013 12:00:48AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Acetone	6.405913E-02	11.0			15	
Acrylonitrile	4.418477E-02	15.0			15	
tert-Amyl Methyl Ether (TAME)	0.2257886	14.9			15	
Benzene	0.5139863	8.8			15	
Bromobenzene	0.4444968	8.5			15	
Bromochloromethane	8.094392E-02	8.7			15	
Bromodichloromethane	0.1625026	14.1			15	
Bromoform	0.1586799	22.4	0.9991493		0.99	
Bromomethane	0.1961787	74.1	0.9898394	rounds to 0.99	0.99	*
2-Butanone (MEK)	6.087598E-02	11.3			15	
tert-Butyl Alcohol (TBA)	2.482539E-02	74.2	0.9995822		0.99	
n-Butylbenzene	0.8309814	25.6	0.9997507		0.99	
sec-Butylbenzene	0.221167	25.4	0.9997262		0.99	
tert-Butylbenzene	0.7389451	26.0	0.999612		0.99	
tert-Butyl Ethyl Ether (TBEE)	0.3331292	13.1			15	
Carbon Disulfide	0.5266202	14.7			15	
Carbon Tetrachloride	0.2834974	15.0			15	
Chlorobenzene	0.7320293	7.4			15	
Chlorodibromomethane	0.1268853	14.9			15	
Chloroethane	0.1111831	11.5			15	
Chloroform	0.3031986	7.5			15	
Chloromethane	0.1806022	14.4			15	
2-Chlorotoluene	0.846981	14.2			15	
4-Chlorotoluene	1.008169	15.0			15	
Cyclohexane	0.7537843	125.6	0.9984457		0.99	
1,2-Dibromo-3-chloropropane (DBCP)	4.418306E-02	13.4			15	
1,2-Dibromoethane (EDB)	9.161219E-02	14.5			15	

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300064	Instrument:	GCMSVOA4
		Calibration Date:	6/11/2013 12:00:48AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Dibromomethane	6.407493E-02	12.6			15	
1,2-Dichlorobenzene	0.5219378	8.6			15	
1,3-Dichlorobenzene	0.5597864	10.3			15	
1,4-Dichlorobenzene	0.6488216	3.6			15	
trans-1,4-Dichloro-2-butene	8.133543E-02	12.0			15	
Dichlorodifluoromethane (Freon 12)	0.1742583	20.5	0.9960583		0.99	
1,1-Dichloroethane	0.2634834	9.7			15	
1,2-Dichloroethane	0.2112149	6.3			15	
1,1-Dichloroethylene	0.3041896	11.3			15	
cis-1,2-Dichloroethylene	0.2626513	10.4			15	
trans-1,2-Dichloroethylene	0.2379352	13.0			15	
1,2-Dichloropropane	8.791625E-02	8.7			15	
1,3-Dichloropropane	0.134154	12.8			15	
2,2-Dichloropropane	0.2295567	14.1			15	
1,1-Dichloropropene	6.300162E-02	11.1			15	
cis-1,3-Dichloropropene	0.1190508	16.6	0.9897667	rounds to 0.99	0.99	*
trans-1,3-Dichloropropene	9.880777E-02	15.9	0.9935134		0.99	
Diethyl Ether	9.113194E-02	11.8			15	
Diisopropyl Ether (DIPE)	0.4026051	13.3			15	
1,4-Dioxane	1.003986E-03	9.3			15	
Ethylbenzene	1.220737	14.8			15	
Hexachlorobutadiene	0.259037	9.7			15	
2-Hexanone (MBK)	6.548896E-02	11.6			15	
Isopropylbenzene (Cumene)	0.278075	30.4	0.9997019		0.99	
p-Isopropyltoluene (p-Cymene)	1.044579	13.0			15	
Methyl Acetate	0.1185445	14.3			15	
Methyl tert-Butyl Ether (MTBE)	0.3244629	13.7			15	

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300064	Instrument:	GCMSVOA4
		Calibration Date:	6/11/2013 12:00:48AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Methyl Cyclohexane	0.1286425	14.8			15	
Methylene Chloride	0.2441136	14.7			15	
4-Methyl-2-pentanone (MIBK)	8.972315E-02	11.7			15	
Naphthalene	0.6278087	45.5	0.9986042		0.99	
n-Propylbenzene	1.339448	14.7			15	
Styrene	0.707284	24.7	0.9997026		0.99	
1,1,1,2-Tetrachloroethane	0.3114684	13.7			15	
1,1,2,2-Tetrachloroethane	0.2406839	9.1			15	
Tetrachloroethylene	0.139036	12.9			15	
Tetrahydrofuran	1.147056E-02	31.8	0.9974453		0.99	
Toluene	0.455838	11.5			15	
1,2,3-Trichlorobenzene	0.3400749	21.4	0.9992371		0.99	
1,2,4-Trichlorobenzene	0.3199823	14.5			15	
1,3,5-Trichlorobenzene	0.4380937	11.5			15	
1,1,1-Trichloroethane	0.2954245	13.8			15	
1,1,2-Trichloroethane	6.881607E-02	11.6			15	
Trichloroethylene	0.1250057	12.2			15	
Trichlorofluoromethane (Freon 11)	0.3465255	13.1			15	
1,2,3-Trichloropropane	9.426592E-02	13.5			15	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1	0.1799465	11.4			15	
1,2,4-Trimethylbenzene	0.9315302	24.9	0.9998027		0.99	
1,3,5-Trimethylbenzene	1.207139	14.4			15	
Vinyl Chloride	0.1932285	14.7			15	
m+p Xylene	1.005262	11.4			15	
o-Xylene	0.874262	21.4	0.9996678		0.99	
1,2-Dichloroethane-d4	0.5359981	2.0			15	
Toluene-d8	1.086502	11.0			15	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA5	Calibration:	1300053
Lab File ID:	ve165003.D	Calibration Date:	05/17/13 00:00
Sequence:	S004324	Injection Date:	06/14/13
Lab Sample ID:	S004324-CCV1	Injection Time:	10:20

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	86.1	7.134968E-02	6.142277E-02		-13.9	20	
Acrylonitrile	A	10.0	10.2	8.087693E-02	8.231752E-02		1.8	20	
tert-Amyl Methyl Ether (TAME)	A	10.0	10.2	0.5583237	0.5674472		1.6	20	
Benzene	A	10.0	9.62	1.120585	1.078435		-3.8	20	
Bromobenzene	A	10.0	10.2	0.7003925	0.7114592		1.6	20	
Bromochloromethane	A	10.0	10.5	0.2134845	0.224756		5.3	20	
Bromodichloromethane	A	10.0	9.73	0.2646878	0.2575118		-2.7	20	
Bromoform	A	10.0	9.08	0.3134229	0.284695		-9.2	20	
Bromomethane	A	10.0	8.12	0.2111494	0.1714747		-18.8	20	
2-Butanone (MEK)	A	100	103	9.527142E-02	9.774217E-02		2.6	20	
tert-Butyl Alcohol (TBA)	A	100	97.5	0.0157114	1.531496E-02		-2.5	20	
n-Butylbenzene	A	10.0	10.0	1.473402	1.479504		0.4	20	
sec-Butylbenzene	A	10.0	9.96	1.967151	1.959975		-0.4	20	
tert-Butylbenzene	A	10.0	9.47	1.354244	1.282931		-5.3	20	
tert-Butyl Ethyl Ether (TBEE)	A	10.0	10.0	0.6215235	0.6215352		0.002	20	
Carbon Disulfide	A	100	99.0	0.8954041	0.8861933		-1.0	20	
Carbon Tetrachloride	A	10.0	9.78	0.3949352	0.3862455		-2.2	20	
Chlorobenzene	A	10.0	9.88	1.127694	1.114263		-1.2	20	
Chlorodibromomethane	A	10.0	9.61	0.1999028	0.1920598		-3.9	20	
Chloroethane	A	10.0	8.00	0.1663037	0.1330179		-20.0	20	
Chloroform	A	10.0	10.0	0.4850183	0.4875817		0.5	20	
Chloromethane	A	10.0	5.19	0.3410179	0.1769754		-48.1	20	*
2-Chlorotoluene	A	10.0	10.3	1.218465	1.25957		3.4	20	
4-Chlorotoluene	A	10.0	10.1	1.271738	1.289907		1.4	20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA5	Calibration:	1300053
Lab File ID:	ve165003.D	Calibration Date:	05/17/13 00:00
Sequence:	S004324	Injection Date:	06/14/13
Lab Sample ID:	S004324-CCV1	Injection Time:	10:20

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	9.20	5.172919E-02	4.760086E-02		-8.0	20
1,2-Dibromoethane (EDB)	A	10.0	9.85	0.1713981	0.1687635		-1.5	20
Dibromomethane	A	10.0	10.2	0.115482	0.1178628		2.1	20
1,2-Dichlorobenzene	A	10.0	9.47	0.7781515	0.7370817		-5.3	20
1,3-Dichlorobenzene	A	10.0	9.68	0.8552778	0.8282354		-3.2	20
1,4-Dichlorobenzene	A	10.0	9.53	0.9458815	0.9018558		-4.7	20
trans-1,4-Dichloro-2-butene	A	10.0	10.7	0.1061309	0.11363		7.1	20
Dichlorodifluoromethane (Freon 12)	A	10.0	8.96	0.3316602	0.2970238		-10.4	20
1,1-Dichloroethane	A	10.0	9.78	0.485378	0.4747251		-2.2	20
1,2-Dichloroethane	A	10.0	9.02	0.2699794	0.2435106		-9.8	20
1,1-Dichloroethylene	A	10.0	9.83	0.4242032	0.4169915		-1.7	20
cis-1,2-Dichloroethylene	A	10.0	9.70	0.4016163	0.389391		-3.0	20
trans-1,2-Dichloroethylene	A	10.0	10.0	0.3737704	0.3737438		-0.007	20
1,2-Dichloropropane	A	10.0	9.77	0.2082147	0.2033333		-2.3	20
1,3-Dichloropropane	A	10.0	9.85	0.2667256	0.2628266		-1.5	20
2,2-Dichloropropane	A	10.0	10.1	0.3921449	0.3945692		0.6	20
1,1-Dichloropropene	A	10.0	9.76	0.4063944	0.3967791		-2.4	20
cis-1,3-Dichloropropene	A	10.0	10.2	0.3075397	0.312381		1.6	20
trans-1,3-Dichloropropene	A	10.0	10.1	0.2465436	0.2494576		1.2	20
Diethyl Ether	A	10.0	8.59	0.1820586	0.1563113		-14.1	20
Diisopropyl Ether (DIPE)	A	10.0	10.4	0.7107587	0.7401801		4.1	20
1,4-Dioxane	A	100	95.3	1.659301E-03	1.581572E-03		-4.7	20
Ethylbenzene	A	10.0	10.2	2.065389	2.108671		2.1	20
Hexachlorobutadiene	A	10.0	9.31	0.2752574	0.2563911		-6.9	20
2-Hexanone (MBK)	A	100	106	0.1076445	0.1137889		5.7	20

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA5	Calibration:	1300053
Lab File ID:	ve165003.D	Calibration Date:	05/17/13 00:00
Sequence:	S004324	Injection Date:	06/14/13
Lab Sample ID:	S004324-CCV1	Injection Time:	10:20

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Isopropylbenzene (Cumene)	A	10.0	9.98	1.96985	1.966121		-0.2	20
p-Isopropyltoluene (p-Cymene)	A	10.0	9.86	1.593628	1.570706		-1.4	20
Methyl tert-Butyl Ether (MTBE)	A	10.0	10.4	0.5403094	0.5631402		4.2	20
Methylene Chloride	A	10.0	11.2	0.344631	0.3868584		12.3	20
4-Methyl-2-pentanone (MIBK)	A	100	105	0.1571706	0.1656682		5.4	20
Naphthalene	A	10.0	7.48	0.7173134	0.5363143		-25.2	20 *
n-Propylbenzene	A	10.0	10.1	2.168905	2.198062		1.3	20
Styrene	A	10.0	10.2	1.18214	1.199352		1.5	20
1,1,1,2-Tetrachloroethane	A	10.0	9.57	0.4217188	0.4035878		-4.3	20
1,1,2,2-Tetrachloroethane	A	10.0	10.2	0.4256722	0.4335703		1.9	20
Tetrachloroethylene	A	10.0	10.1	0.2579545	0.2595956		0.6	20
Tetrahydrofuran	A	10.0	10.3	5.649186E-02	5.805619E-02		2.8	20
Toluene	A	10.0	10.1	0.8549861	0.8637772		1.0	20
1,2,3-Trichlorobenzene	A	10.0	8.09	0.2717194	0.2198613		-19.1	20
1,2,4-Trichlorobenzene	A	10.0	8.91	0.4263482	0.3798802		-10.9	20
1,3,5-Trichlorobenzene	A	10.0	9.36	0.5442242	0.5094169		-6.4	20
1,1,1-Trichloroethane	A	10.0	9.75	0.4359259	0.42517		-2.5	20
1,1,2-Trichloroethane	A	10.0	9.68	0.164519	0.1592693		-3.2	20
Trichloroethylene	A	10.0	9.68	0.2220355	0.2149229		-3.2	20
Trichlorofluoromethane (Freon 11)	A	10.0	9.02	0.424814	0.3829708		-9.8	20
1,2,3-Trichloropropane	A	10.0	10.6	0.3235542	0.3434456		6.1	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	10.1	0.256276	0.2596317		1.3	20
1,2,4-Trimethylbenzene	A	10.0	9.76	1.564829	1.527763		-2.4	20

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA4	Calibration:	1300064
Lab File ID:	VD169004.D	Calibration Date:	06/11/13 00:00
Sequence:	S004325	Injection Date:	06/18/13
Lab Sample ID:	S004325-CCV1	Injection Time:	06:18

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	129	6.405913E-02	8.247153E-02		28.7	20	*
Acrylonitrile	A	10.0	9.58	4.418477E-02	4.235163E-02		-4.1	20	
tert-Amyl Methyl Ether (TAME)	A	10.0	11.0	0.2257886	0.2487359		10.2	20	
Benzene	A	10.0	10.3	0.5139863	0.5293368		3.0	20	
Bromobenzene	A	10.0	10.4	0.4444968	0.4611689		3.8	20	
Bromochloromethane	A	10.0	11.0	8.094392E-02	8.923044E-02		10.2	20	
Bromodichloromethane	A	10.0	10.6	0.1625026	0.1720265		5.9	20	
Bromoform	L	10.0	9.10	0.1586799	0.1639686		-9.0	20	
Bromomethane	L	10.0	10.1	0.1961787	0.1059626		0.5	20	
2-Butanone (MEK)	A	100	133	6.087598E-02	8.106884E-02		33.2	20	*
tert-Butyl Alcohol (TBA)	L	100	90.9	2.482539E-02	1.383114E-02		-9.1	20	
n-Butylbenzene	L	10.0	10.2	0.8309814	0.999534		1.7	20	
sec-Butylbenzene	L	10.0	9.80	0.221167	0.2546725		-2.0	20	
tert-Butylbenzene	L	10.0	9.96	0.7389451	0.8683636		-0.4	20	
tert-Butyl Ethyl Ether (TBEE)	A	10.0	10.5	0.3331292	0.3505764		5.2	20	
Carbon Disulfide	A	100	86.7	0.5266202	0.4568156		-13.3	20	
Carbon Tetrachloride	A	10.0	11.1	0.2834974	0.3147141		11.0	20	
Chlorobenzene	A	10.0	10.1	0.7320293	0.7424665		1.4	20	
Chlorodibromomethane	A	10.0	10.3	0.1268853	0.1310503		3.3	20	
Chloroethane	A	10.0	7.88	0.1111831	8.762346E-02		-21.2	20	*
Chloroform	A	10.0	10.9	0.3031986	0.329367		8.6	20	
Chloromethane	A	10.0	8.09	0.1806022	0.1460756		-19.1	20	
2-Chlorotoluene	A	10.0	11.3	0.846981	0.954448		12.7	20	
4-Chlorotoluene	A	10.0	11.3	1.008169	1.139574		13.0	20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA4	Calibration:	1300064
Lab File ID:	VD169004.D	Calibration Date:	06/11/13 00:00
Sequence:	S004325	Injection Date:	06/18/13
Lab Sample ID:	S004325-CCV1	Injection Time:	06:18

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	9.30	4.418306E-02	4.110536E-02		-7.0	20	
1,2-Dibromoethane (EDB)	A	10.0	11.9	9.161219E-02	0.1089417		18.9	20	
Dibromomethane	A	10.0	11.2	6.407493E-02	7.145545E-02		11.5	20	
1,2-Dichlorobenzene	A	10.0	10.3	0.5219378	0.5375087		3.0	20	
1,3-Dichlorobenzene	A	10.0	10.9	0.5597864	0.6082423		8.7	20	
1,4-Dichlorobenzene	A	10.0	10.2	0.6488216	0.6614733		1.9	20	
trans-1,4-Dichloro-2-butene	A	10.0	10.9	8.133543E-02	8.825467E-02		8.5	20	
Dichlorodifluoromethane (Freon 12)	L	10.0	7.64	0.1742583	0.1514763		-23.6	20	*
1,1-Dichloroethane	A	10.0	10.3	0.2634834	0.2714947		3.0	20	
1,2-Dichloroethane	A	10.0	10.7	0.2112149	0.2253217		6.7	20	
1,1-Dichloroethylene	A	10.0	8.27	0.3041896	0.2516407		-17.3	20	
cis-1,2-Dichloroethylene	A	10.0	10.6	0.2626513	0.2778516		5.8	20	
trans-1,2-Dichloroethylene	A	10.0	9.56	0.2379352	0.2275553		-4.4	20	
1,2-Dichloropropane	A	10.0	10.3	8.791625E-02	9.083124E-02		3.3	20	
1,3-Dichloropropane	A	10.0	11.0	0.134154	0.1469275		9.5	20	
2,2-Dichloropropane	A	10.0	10.7	0.2295567	0.2451552		6.8	20	
1,1-Dichloropropene	A	10.0	11.6	6.300162E-02	7.336802E-02		16.5	20	
cis-1,3-Dichloropropene	L	10.0	11.6	0.1190508	0.1493885		15.9	20	
trans-1,3-Dichloropropene	L	10.0	11.3	9.880777E-02	0.1246126		13.0	20	
Diethyl Ether	A	10.0	7.59	9.113194E-02	6.919602E-02		-24.1	20	*
Diisopropyl Ether (DIPE)	A	10.0	10.8	0.4026051	0.4341143		7.8	20	
1,4-Dioxane	A	100	96.2	1.003986E-03	9.603209E-04		-4.3	20	
Ethylbenzene	A	10.0	10.8	1.220737	1.318507		8.0	20	
Hexachlorobutadiene	A	10.0	10.6	0.259037	0.2743945		5.9	20	
2-Hexanone (MBK)	A	100	124	6.548896E-02	0.0812972		24.1	20	*

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSVOA4	Calibration:	1300064
Lab File ID:	VD169004.D	Calibration Date:	06/11/13 00:00
Sequence:	S004325	Injection Date:	06/18/13
Lab Sample ID:	S004325-CCV1	Injection Time:	06:18

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Isopropylbenzene (Cumene)	L	10.0	9.68	0.278075	0.3254327		-3.2	20
p-Isopropyltoluene (p-Cymene)	A	10.0	11.2	1.044579	1.173048		12.3	20
Methyl tert-Butyl Ether (MTBE)	A	10.0	9.66	0.3244629	0.3135122		-3.4	20
Methylene Chloride	A	10.0	9.51	0.2441136	0.2320786		-4.9	20
4-Methyl-2-pentanone (MIBK)	A	100	114	8.972315E-02	0.1019615		13.6	20
Naphthalene	L	10.0	8.37	0.6278087	0.6642615		-16.3	20
n-Propylbenzene	A	10.0	11.0	1.339448	1.46716		9.5	20
Styrene	L	10.0	9.84	0.707284	0.8197464		-1.6	20
1,1,1,2-Tetrachloroethane	A	10.0	10.3	0.3114684	0.3209893		3.1	20
1,1,2,2-Tetrachloroethane	A	10.0	10.3	0.2406839	0.2472113		2.7	20
Tetrachloroethylene	A	10.0	11.6	0.139036	0.161454		16.1	20
Tetrahydrofuran	L	10.0	8.47	1.147056E-02	1.046167E-02		-15.3	20
Toluene	A	10.0	10.8	0.455838	0.4922943		8.0	20
1,2,3-Trichlorobenzene	L	10.0	9.30	0.3400749	0.3499178		-7.0	20
1,2,4-Trichlorobenzene	A	10.0	11.2	0.3199823	0.3572006		11.6	20
1,3,5-Trichlorobenzene	A	10.0	10.3	0.4380937	0.4516061		3.1	20
1,1,1-Trichloroethane	A	10.0	11.6	0.2954245	0.3438067		16.4	20
1,1,2-Trichloroethane	A	10.0	10.5	6.881607E-02	7.259553E-02		5.5	20
Trichloroethylene	A	10.0	10.5	0.1250057	0.1310005		4.8	20
Trichlorofluoromethane (Freon 11)	A	10.0	8.31	0.3465255	0.287912		-16.9	20
1,2,3-Trichloropropane	A	10.0	10.0	9.426592E-02	9.470839E-02		0.5	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	8.49	0.1799465	0.1527608		-15.1	20
1,2,4-Trimethylbenzene	L	10.0	10.3	0.9315302	1.117011		2.8	20

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8270D
Batch:	B075072	Preparation:	SW-846 3546
% Solids:	83.90	Laboratory ID:	B075072-MS1
Initial/Final:	30 g / 1 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	SAMPLE CONCENTRATION (mg/Kg dry)	MS CONCENTRATION (mg/Kg dry)	MS % REC.		QC LIMITS REC.
Acenaphthene	1.99	0.666	2.22	78.4		40 - 140
Acenaphthylene	1.99	0.210	1.83	81.6		40 - 140
Acetophenone	1.99	ND	1.80	90.5		40 - 140
Aniline	1.99	ND	1.20	60.6		40 - 140
Anthracene	1.99	1.27	2.81	77.3		40 - 140
Benzidine	1.99	ND	0.81 U	0	*	40 - 140
Benzo(a)anthracene	1.99	3.83	4.83	50.4		40 - 140
Benzo(a)pyrene	1.99	3.68	4.98	65.4		40 - 140
Benzo(b)fluoranthene	1.99	4.18	5.64	73.8		40 - 140
Benzo(g,h,i)perylene	1.99	2.31	2.77	23.3	*	40 - 140
Benzo(k)fluoranthene	1.99	1.57	3.08	76.0		40 - 140
Benzoic Acid	1.99	ND	0.867	43.6		40 - 140
Bis(2-chloroethoxy)methane	1.99	ND	1.66	83.7		40 - 140
Bis(2-chloroethyl)ether	1.99	ND	1.78	89.5		40 - 140
Bis(2-chloroisopropyl)ether	1.99	ND	1.69	85.3		40 - 140
Bis(2-Ethylhexyl)phthalate	1.99	0.460	3.64	160	*	40 - 140
4-Bromophenylphenylether	1.99	ND	1.70	85.6		40 - 140
Butylbenzylphthalate	1.99	ND	1.67	84.2		40 - 140
Carbazole	1.99	0.579	2.03	73.0		40 - 140
4-Chloroaniline	1.99	ND	1.36	68.2		40 - 140
4-Chloro-3-methylphenol	1.99	ND	1.90	95.6		30 - 130
2-Chloronaphthalene	1.99	ND	1.37	69.0		40 - 140
2-Chlorophenol	1.99	ND	1.67	83.9		30 - 130
4-Chlorophenylphenylether	1.99	ND	1.56	78.3		40 - 140
Chrysene	1.99	3.58	4.50	46.2		40 - 140

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8270D
Batch:	B075072	Preparation:	SW-846 3546
% Solids:	83.90	Laboratory ID:	B075072-MS1
Initial/Final:	30 g / 1 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	SAMPLE CONCENTRATION (mg/Kg dry)	MS CONCENTRATION (mg/Kg dry)	MS % REC.		QC LIMITS REC.
Dibenz(a,h)anthracene	1.99	0.605	1.53	46.4		40 - 140
Dibenzofuran	1.99	0.406	1.94	77.3		40 - 140
Di-n-butylphthalate	1.99	ND	1.63	82.1		40 - 140
1,2-Dichlorobenzene	1.99	ND	1.40	70.4		40 - 140
1,3-Dichlorobenzene	1.99	ND	1.34	67.2		40 - 140
1,4-Dichlorobenzene	1.99	ND	1.35	68.1		40 - 140
3,3-Dichlorobenzidine	1.99	ND	1.08	54.5		40 - 140
2,4-Dichlorophenol	1.99	ND	1.65	83.0		30 - 130
Diethylphthalate	1.99	ND	1.66	83.6		40 - 140
2,4-Dimethylphenol	1.99	ND	1.66	83.4		30 - 130
Dimethylphthalate	1.99	ND	1.63	82.0		40 - 140
4,6-Dinitro-2-methylphenol	1.99	ND	1.37	68.7		30 - 130
2,4-Dinitrophenol	1.99	ND	1.31	65.8		30 - 130
2,4-Dinitrotoluene	1.99	ND	1.51	76.0		40 - 140
2,6-Dinitrotoluene	1.99	ND	1.71	85.9		40 - 140
Di-n-octylphthalate	1.99	ND	1.51	76.1		40 - 140
1,2-Diphenylhydrazine (as Azobenzene)	1.99	ND	2.03	102		40 - 140
Fluoranthene	1.99	6.10	6.36	12.8	*	40 - 140
Fluorene	1.99	0.610	2.14	76.9		40 - 140
Hexachlorobenzene	1.99	ND	1.63	82.0		40 - 140
Hexachlorobutadiene	1.99	ND	1.26	63.6		40 - 140
Hexachlorocyclopentadiene	1.99	ND	1.6 U	0	*	30 - 130
Hexachloroethane	1.99	ND	1.10	55.3		40 - 140
Indeno(1,2,3-cd)pyrene	1.99	2.47	3.09	31.2	*	40 - 140
Isophorone	1.99	ND	1.63	82.2		40 - 140

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8270D
Batch:	B075072	Preparation:	SW-846 3546
% Solids:	83.90	Laboratory ID:	B075072-MSD1
Initial/Final:	30.2 g / 1 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	MSD CONCENTRATION (mg/Kg dry)	MSD % REC. #		% RPD		QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.97	2.08	71.8		6.51		30	40 - 140
Acenaphthylene	1.97	1.82	81.8		0.274		30	40 - 140
Acetophenone	1.97	1.81	91.6		0.565		30	40 - 140
Aniline	1.97	1.13	57.2		6.44		30	40 - 140
Anthracene	1.97	2.59	66.6		8.24		30	40 - 140
Benzidine	1.97	0.81 U	0	*			30	40 - 140
Benzo(a)anthracene	1.97	4.47	32.5	*	7.74		30	40 - 140
Benzo(a)pyrene	1.97	4.52	42.4		9.74		30	40 - 140
Benzo(b)fluoranthene	1.97	4.87	35.2	*	14.6		30	40 - 140
Benzo(g,h,i)perylene	1.97	3.09	39.5	*	10.9		30	40 - 140
Benzo(k)fluoranthene	1.97	2.87	65.6		7.22		30	40 - 140
Benzoic Acid	1.97	0.843	42.7		2.79		30	40 - 140
Bis(2-chloroethoxy)methane	1.97	1.64	83.0		1.53		30	40 - 140
Bis(2-chloroethyl)ether	1.97	1.71	86.6		3.94		30	40 - 140
Bis(2-chloroisopropyl)ether	1.97	1.62	81.9		4.78		30	40 - 140
Bis(2-Ethylhexyl)phthalate	1.97	1.91	73.7		62.2	*	30	40 - 140
4-Bromophenylphenylether	1.97	1.68	85.1		1.18		30	40 - 140
Butylbenzylphthalate	1.97	1.87	94.8		11.2		30	40 - 140
Carbazole	1.97	1.92	67.8		5.68		30	40 - 140
4-Chloroaniline	1.97	1.30	66.0		4.00		30	40 - 140
4-Chloro-3-methylphenol	1.97	1.86	94.2		2.18		30	30 - 130
2-Chloronaphthalene	1.97	1.34	67.8		2.48		30	40 - 140
2-Chlorophenol	1.97	1.53	77.5		8.54		30	30 - 130
4-Chlorophenylphenylether	1.97	1.57	79.7		1.11		30	40 - 140
Chrysene	1.97	4.16	29.1	*	7.93		30	40 - 140

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T2-SB02 (0-4ft)

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Soil	Analysis:	SW-846 8270D
Batch:	B075072	Preparation:	SW-846 3546
% Solids:	83.90	Laboratory ID:	B075072-MSD1
Initial/Final:	30.2 g / 1 mL	Sample Lab ID:	13F0478-08
Column:			

ANALYTE	SPIKE ADDED (mg/Kg dry)	MSD CONCENTRATION (mg/Kg dry)	MSD % REC. #		% RPD	QC LIMITS RPD	QC LIMITS REC.
Dibenz(a,h)anthracene	1.97	1.68	54.6		9.80	30	40 - 140
Dibenzofuran	1.97	1.91	76.0		1.86	30	40 - 140
Di-n-butylphthalate	1.97	1.62	82.3		0.421	30	40 - 140
1,2-Dichlorobenzene	1.97	1.33	67.2		5.20	30	40 - 140
1,3-Dichlorobenzene	1.97	1.30	65.6		3.07	30	40 - 140
1,4-Dichlorobenzene	1.97	1.29	65.5		4.50	30	40 - 140
3,3-Dichlorobenzidine	1.97	1.24	63.0		13.8	30	40 - 140
2,4-Dichlorophenol	1.97	1.55	78.6		6.16	30	30 - 130
Diethylphthalate	1.97	1.70	86.1		2.35	30	40 - 140
2,4-Dimethylphenol	1.97	1.64	83.0		1.24	30	30 - 130
Dimethylphthalate	1.97	1.65	83.4		1.03	30	40 - 140
4,6-Dinitro-2-methylphenol	1.97	1.26	63.6		8.34	30	30 - 130
2,4-Dinitrophenol	1.97	1.31	66.2		0.00199	30	30 - 130
2,4-Dinitrotoluene	1.97	1.59	80.5		5.01	30	40 - 140
2,6-Dinitrotoluene	1.97	1.71	86.7		0.216	30	40 - 140
Di-n-octylphthalate	1.97	1.55	78.5		2.44	30	40 - 140
1,2-Diphenylhydrazine (as Azobenzene)	1.97	1.89	95.7		7.41	30	40 - 140
Fluoranthene	1.97	5.31	-40.1	*	17.9	30	40 - 140
Fluorene	1.97	2.16	78.4		0.958	30	40 - 140
Hexachlorobenzene	1.97	1.61	81.7		1.01	30	40 - 140
Hexachlorobutadiene	1.97	1.30	65.7		2.55	30	40 - 140
Hexachlorocyclopentadiene	1.97	1.6 U	0	*		30	30 - 130
Hexachloroethane	1.97	1.05	53.2		4.65	30	40 - 140
Indeno(1,2,3-cd)pyrene	1.97	3.34	43.8		7.61	30	40 - 140
Isophorone	1.97	1.62	82.3		0.567	30	40 - 140

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T1-MW1

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Analysis:	SW-846 8270D
Batch:	B075096	Preparation:	SW-846 3510C
% Solids:		Laboratory ID:	B075096-MS1
Initial/Final:	940 mL / 1 mL	Sample Lab ID:	13F0478-01
Column:			

ANALYTE	SPIKE ADDED (µg/L)	SAMPLE CONCENTRATION (µg/L)	MS CONCENTRATION (µg/L)	MS % REC.		QC LIMITS REC.
Acenaphthene	53.2	ND	42.1	79.1		40 - 140
Acenaphthylene	53.2	ND	43.1	81.1		40 - 140
Acetophenone	53.2	ND	40.9	76.9		40 - 140
Aniline	53.2	ND	36.7	69.1		40 - 140
Anthracene	53.2	ND	43.6	81.9		40 - 140
Benzidine	53.2	ND	20.6	38.7	*	40 - 140
Benzo(a)anthracene	53.2	ND	46.8	88.1		40 - 140
Benzo(a)pyrene	53.2	ND	48.9	91.9		40 - 140
Benzo(b)fluoranthene	53.2	3.59	47.1	81.7		40 - 140
Benzo(g,h,i)perylene	53.2	ND	55.3	104		40 - 140
Benzo(k)fluoranthene	53.2	ND	45.9	86.2		40 - 140
Benzoic Acid	53.2	ND	16.2	30.5	*	40 - 140
Bis(2-chloroethoxy)methane	53.2	ND	46.7	87.8		40 - 140
Bis(2-chloroethyl)ether	53.2	ND	44.3	83.3		40 - 140
Bis(2-chloroisopropyl)ether	53.2	ND	39.8	74.7		40 - 140
Bis(2-Ethylhexyl)phthalate	53.2	ND	44.6	83.9		40 - 140
4-Bromophenylphenylether	53.2	ND	38.8	72.9		40 - 140
Butylbenzylphthalate	53.2	ND	47.3	88.9		40 - 140
Carbazole	53.2	ND	48.1	90.4		40 - 140
4-Chloroaniline	53.2	ND	45.9	86.2		40 - 140
4-Chloro-3-methylphenol	53.2	ND	48.1	90.4		30 - 130
2-Chloronaphthalene	53.2	ND	35.7	67.1		40 - 140
2-Chlorophenol	53.2	ND	41.3	77.6		30 - 130
4-Chlorophenylphenylether	53.2	ND	46.2	86.8		40 - 140
Chrysene	53.2	ND	42.0	78.9		40 - 140

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3 - FORM III

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

T1-MW1

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Analysis:	SW-846 8270D
Batch:	B075096	Preparation:	SW-846 3510C
% Solids:		Laboratory ID:	B075096-MSD1
Initial/Final:	920 mL / 1 mL	Sample Lab ID:	13F0478-01
Column:			

ANALYTE	SPIKE ADDED (µg/L)	MSD CONCENTRATION (µg/L)	MSD % REC. #	% RPD	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	54.3	45.4	83.5	7.51	30	40 - 140
Acenaphthylene	54.3	47.2	86.9	9.10	30	40 - 140
Acetophenone	54.3	42.4	78.0	3.57	30	40 - 140
Aniline	54.3	37.4	68.9	1.83	30	40 - 140
Anthracene	54.3	48.2	88.7	10.1	30	40 - 140
Benzidine	54.3	37.9	69.8	59.1 *	30	40 - 140
Benzo(a)anthracene	54.3	52.1	95.8	10.5	30	40 - 140
Benzo(a)pyrene	54.3	50.8	93.5	3.81	30	40 - 140
Benzo(b)fluoranthene	54.3	45.0	76.3	4.39	30	40 - 140
Benzo(g,h,i)perylene	54.3	56.5	104	2.11	30	40 - 140
Benzo(k)fluoranthene	54.3	47.1	86.6	2.57	30	40 - 140
Benzoic Acid	54.3	13.4	24.7 *	18.8	30	40 - 140
Bis(2-chloroethoxy)methane	54.3	44.1	81.1	5.71	30	40 - 140
Bis(2-chloroethyl)ether	54.3	43.8	80.6	1.14	30	40 - 140
Bis(2-chloroisopropyl)ether	54.3	40.6	74.7	2.07	30	40 - 140
Bis(2-Ethylhexyl)phthalate	54.3	49.1	90.3	9.47	30	40 - 140
4-Bromophenylphenylether	54.3	48.4	89.0	22.0	30	40 - 140
Butylbenzylphthalate	54.3	52.3	96.2	10.0	30	40 - 140
Carbazole	54.3	52.2	96.0	8.18	30	40 - 140
4-Chloroaniline	54.3	43.6	80.2	5.09	30	40 - 140
4-Chloro-3-methylphenol	54.3	47.1	86.6	2.05	30	30 - 130
2-Chloronaphthalene	54.3	40.5	74.6	12.7	30	40 - 140
2-Chlorophenol	54.3	41.3	76.0	0.0157	30	30 - 130
4-Chlorophenylphenylether	54.3	45.5	83.6	1.58	30	40 - 140
Chrysene	54.3	48.3	88.8	14.0	30	40 - 140

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3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B075096	Laboratory ID:	B075096-BS1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	50.0	31.2	62.5	40 - 140
Acenaphthylene	50.0	29.7	59.3	40 - 140
Acetophenone	50.0	29.1	58.1	40 - 140
Aniline	50.0	22.0	44.0	40 - 140
Anthracene	50.0	35.0	69.9	40 - 140
Benzidine	50.0	7.68	15.4 *	40 - 140
Benzo(a)anthracene	50.0	36.3	72.7	40 - 140
Benzo(a)pyrene	50.0	36.8	73.6	40 - 140
Benzo(b)fluoranthene	50.0	30.7	61.5	40 - 140
Benzo(g,h,i)perylene	50.0	36.4	72.8	40 - 140
Benzo(k)fluoranthene	50.0	32.3	64.6	40 - 140
Benzoic Acid	50.0	11.6	23.2	10 - 130
Bis(2-chloroethoxy)methane	50.0	33.4	66.7	40 - 140
Bis(2-chloroethyl)ether	50.0	29.1	58.3	40 - 140
Bis(2-chloroisopropyl)ether	50.0	26.0	51.9	40 - 140
Bis(2-Ethylhexyl)phthalate	50.0	33.8	67.6	40 - 140
4-Bromophenylphenylether	50.0	34.6	69.2	40 - 140
Butylbenzylphthalate	50.0	35.7	71.5	40 - 140
Carbazole	50.0	35.1	70.3	40 - 140
4-Chloroaniline	50.0	31.7	63.4	40 - 140
4-Chloro-3-methylphenol	50.0	30.9	61.7	30 - 130
2-Chloronaphthalene	50.0	25.7	51.4	40 - 140
2-Chlorophenol	50.0	27.3	54.6	30 - 130
4-Chlorophenylphenylether	50.0	32.1	64.2	40 - 140
Chrysene	50.0	33.8	67.6	40 - 140
Dibenz(a,h)anthracene	50.0	34.9	69.8	40 - 140
Dibenzofuran	50.0	31.3	62.5	40 - 140
Di-n-butylphthalate	50.0	35.1	70.1	40 - 140
1,2-Dichlorobenzene	50.0	26.2	52.5	40 - 140
1,3-Dichlorobenzene	50.0	26.5	53.0	40 - 140
1,4-Dichlorobenzene	50.0	26.2	52.3	40 - 140

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5 - FORM V
INSTRUMENT PERFORMANCE CHECK

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Lab File ID:	C061901.D	Injection Date:	06/19/13
Instrument ID:	GMMSSV3	Injection Time:	12:03
Sequence:	S004333	Lab Sample ID:	S004333-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	PASS/FAIL
51	10 - 80% of 198	46.1	PASS
68	Less than 2% of 69	1.38	PASS
69	Base peak, 100% relative abundance	100	PASS
70	Less than 2% of 69	0	PASS
127	10 - 80% of 198	53.3	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.03	PASS
275	10 - 60% of 198	22.5	PASS
365	1 - 100% of 198	2.99	PASS
441	Less than 24% of 442	16.1	PASS
442	50 - 100% of 198	62.3	PASS
443	15 - 24% of 442	18.9	PASS

Client ID	Sample ID	File ID	Date Analyzed	Time Analyzed
Calibration Check	S004333-CCV1	C061903.D	06/19/2013	13:08:00
Blank	B075096-BLK1	C061904.D	06/19/2013	13:55:00
LCS	B075096-BS1	C061905.D	06/19/2013	14:33:00
LCS Dup	B075096-BSD1	C061906.D	06/19/2013	15:11:00
T1-MW1	13F0478-01	C061907.D	06/19/2013	15:49:00
T1-MW3	13F0478-02	C061908.D	06/19/2013	16:27:00
T2-MW2	13F0478-03	C061909.D	06/19/2013	17:04:00
Matrix Spike	B075096-MS1	C061916.D	06/19/2013	21:18:00
Matrix Spike Dup	B075096-MSD1	C061917.D	06/19/2013	21:54:00

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5 - FORM V
INSTRUMENT PERFORMANCE CHECK

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Lab File ID:	B061801.D	Injection Date:	06/18/13
Instrument ID:	GCMSSV2	Injection Time:	09:09
Sequence:	S004334	Lab Sample ID:	S004334-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	PASS/FAIL
51	10 - 80% of 198	54.7	PASS
68	Less than 2% of 69	0	PASS
69	Base peak, 100% relative abundance	100	PASS
70	Less than 2% of 69	0.973	PASS
127	10 - 80% of 198	58.4	PASS
197	Less than 2% of 198	0.366	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.05	PASS
275	10 - 60% of 198	19.3	PASS
365	1 - 100% of 198	2.3	PASS
441	Less than 24% of 442	15.3	PASS
442	50 - 100% of 198	63.9	PASS
443	15 - 24% of 442	18.5	PASS

Client ID	Sample ID	File ID	Date Analyzed	Time Analyzed
Calibration Check	S004334-CCV1	B061802.D	06/18/2013	9:30:00
T1-SS01 (0-8in)	13F0478-04	B061814.D	06/18/2013	16:42:00
T1-SB01 (0-4in)	13F0478-06	B061816.D	06/18/2013	17:52:00
T3-SB03 (0-4ft) (5x)	13F0478-09	B061911.D	06/19/2013	~~19:35:00~~ 15:13
T3-SB03 (0-4ft)	13F0478-09	B061819.D	06/18/2013	19:35:00

FALLS UNDER TUNE B061901.D

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5 - FORM V
INSTRUMENT PERFORMANCE CHECK

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Lab File ID:	B061901.D	Injection Date:	06/19/13
Instrument ID:	GCMSSV2	Injection Time:	09:19
Sequence:	S004335	Lab Sample ID:	S004335-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	PASS/FAIL
51	10 - 80% of 198	49.3	PASS
68	Less than 2% of 69	0	PASS
69	Base peak, 100% relative abundance	100	PASS
70	Less than 2% of 69	0.852	PASS
127	10 - 80% of 198	56.6	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.94	PASS
275	10 - 60% of 198	20.3	PASS
365	1 - 100% of 198	2.25	PASS
441	Less than 24% of 442	15.2	PASS
442	50 - 100% of 198	73.6	PASS
443	15 - 24% of 442	20.3	PASS

Client ID	Sample ID	File ID	Date Analyzed	Time Analyzed
Calibration Check	S004335-CCV1	B061903.D	06/19/2013	10:19:00
T2-SB02 (5-10ft)	13F0478-10	B061905.D	06/19/2013	11:38:00
T2-SB02 (5-10ft)	13F0478-10	B061910.D	06/19/2013	11:38:00
T2-SS04 12-14	13F0478-11	B061906.D	06/19/2013	12:13:00
T2-SS03 (0-8in)	13F0478-05	B061908.D	06/19/2013	13:27:00
T1-SS02 0-6 / T3-SB63 (0-4ft)	13F0478-12 / 13F0478-09	B061909.D / B061911.D	06/19/2013	14:02:00 / 15:13
T2-SB02 (0-4ft)	13F0478-08	B061912.D	06/19/2013	15:48:00
T1-SB01 (5-10ft) (10x)	13F0478-07	B061913.D	06/19/2013	16:24:00
T1-SB01 (5-10ft) (100x)	13F0478-07	B062012.D	06/20/2013	~~16:24:00~~ 15:48
Matrix Spike	B075072-MS1	B061919.D	06/19/2013	19:50:00
Matrix Spike Dup	B075072-MSD1	B061920.D	06/19/2013	20:23:00

FALLS UNDER DIFFERENT TUNE !! (not reported by lab)

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300062	Instrument:	GMMSSV3
		Calibration Date:	6/6/2013 10:16:20AM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Naphthalene	1.103311	5.0			20	
2-Nitroaniline	0.3549997	6.1			20	
3-Nitroaniline	0.2410438	13.6			20	
4-Nitroaniline	0.2582388	8.8			20	
Nitrobenzene	0.4367226	5.4			20	
2-Nitrophenol	0.1717746	14.2			20	
4-Nitrophenol	0.1738655	14.0			20	
N-Nitrosodimethylamine	0.9885725	3.7			20	
N-Nitrosodiphenylamine	0.5041818	7.0			20	
N-Nitrosodi-n-propylamine	1.352404	4.7			20	
Pentachloronitrobenzene	3.634659E-02	11.9			20	
Pentachlorophenol	0.1435721	17.3			20	
Phenanthrene	1.0477	6.9			20	
Phenol	2.1011	5.5			20	
Pyrene	1.099859	5.2			20	
Pyridine	1.647069	6.8			20	
1,2,4,5-Tetrachlorobenzene	0.5499792	12.0			20	
1,2,4-Trichlorobenzene	0.3294798	6.1			20	
2,4,5-Trichlorophenol	0.3303908	13.3			20	
2,4,6-Trichlorophenol	0.3308075	14.7			20	
2-Fluorophenol	1.408285	3.8			20	
Phenol-d6	1.770523	5.9			20	
Nitrobenzene-d5	0.4141813	7.6			20	
2-Fluorobiphenyl	1.238199	7.2			20	
2,4,6-Tribromophenol	0.1285629	17.8			20	
p-Terphenyl-d14	0.5046013	5.6			20	

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6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Calibration:	1300063	Instrument:	GCMSSV2
		Calibration Date:	5/29/2013 12:47:21PM

COMPOUND	Mean RF	RF RSD	Linear r	Quad COD	LIMIT	Q
Naphthalene	1.016888	6.4			20	
2-Nitroaniline	0.3589516	5.2			20	
3-Nitroaniline	0.348696	6.4			20	
4-Nitroaniline	0.3603762	8.6			20	
Nitrobenzene	0.3633814	4.2			20	
2-Nitrophenol	0.1881495	5.9			20	
4-Nitrophenol	0.1612328	13.8			20	
N-Nitrosodimethylamine	0.828061	8.7			20	
N-Nitrosodiphenylamine	0.4928568	5.5			20	
N-Nitrosodi-n-propylamine	1.064936	4.1			20	
Pentachloronitrobenzene	3.145017E-02	5.4			20	
Pentachlorophenol	0.1093209	15.4			20	
Phenanthrene	1.035671	6.1			20	
Phenol	1.978329	7.0			20	
Pyrene	1.249758	4.3			20	
Pyridine	1.517645	4.1			20	
1,2,4,5-Tetrachlorobenzene	0.47941	7.7			20	
1,2,4-Trichlorobenzene	0.3121802	4.0			20	
2,4,5-Trichlorophenol	0.346071	4.4			20	
2,4,6-Trichlorophenol	0.3343909	4.2			20	
2-Fluorophenol	1.461692	2.5			20	
Phenol-d6	1.720284	4.4			20	
Nitrobenzene-d5	0.358987	3.4			20	
2-Fluorobiphenyl	1.146456	6.9			20	
2,4,6-Tribromophenol	0.1471741	12.0			20	
p-Terphenyl-d14	0.5370185	3.2			20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GMMSSV3	Calibration:	1300062
Lab File ID:	C061903.D	Calibration Date:	06/06/13 10:16
Sequence:	S004333	Injection Date:	06/19/13
Lab Sample ID:	S004333-CCV1	Injection Time:	13:08

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	50.0	45.6	1.081695	0.9859267		-8.9	20	
Acenaphthylene	A	50.0	44.6	1.726792	1.540511		-10.8	20	
Acetophenone	A	50.0	44.4	2.208879	1.95947		-11.3	20	
Aniline	A	50.0	47.9	2.333413	2.236011		-4.2	20	
Anthracene	A	50.0	45.9	1.055892	0.9689812		-8.2	20	
Benzidine	A	50.0	46.6	0.2886379	0.2687179		-6.9	20	
Benzo(a)anthracene	A	50.0	48.8	1.058623	1.032805		-2.4	20	
Benzo(a)pyrene	A	50.0	45.6	1.05902	0.966658		-8.7	20	
Benzo(b)fluoranthene	L	50.0	39.7	1.291918	1.190443		-20.7	20	*
Benzo(g,h,i)perylene	A	50.0	63.5	0.6379555	0.8103341		27.0	20	*
Benzo(k)fluoranthene	A	50.0	44.7	1.136277	1.016073		-10.6	20	
Benzoic Acid	L	50.0	42.4	0.1516819	0.1410572		-15.2	20	
Bis(2-chloroethoxy)methane	A	50.0	47.4	0.4032023	0.3818279		-5.3	20	
Bis(2-chloroethyl)ether	A	50.0	47.8	1.480987	1.414659		-4.5	20	
Bis(2-chloroisopropyl)ether	A	50.0	40.4	2.410763	1.948401		-19.2	20	
Bis(2-Ethylhexyl)phthalate	A	50.0	43.7	0.8494761	0.7418709		-12.7	20	
4-Bromophenylphenylether	A	50.0	46.0	0.1989611	0.1829507		-8.0	20	
Butylbenzylphthalate	A	50.0	46.5	0.5481793	0.5096516		-7.0	20	
Carbazole	A	50.0	43.7	0.9037719	0.7905277		-12.5	20	
4-Chloroaniline	A	50.0	46.1	0.4235389	0.3903693		-7.8	20	
4-Chloro-3-methylphenol	A	50.0	44.1	0.2972543	0.2621782		-11.8	20	
2-Chloronaphthalene	A	50.0	45.3	1.283294	1.161732		-9.5	20	
2-Chlorophenol	A	50.0	49.1	1.54524	1.517243		-1.8	20	
4-Chlorophenylphenylether	A	50.0	46.0	0.5916232	0.5448622		-7.9	20	
Chrysene	A	50.0	46.8	0.9103381	0.8516703		-6.4	20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GMMSSV3	Calibration:	1300062
Lab File ID:	C061903.D	Calibration Date:	06/06/13 10:16
Sequence:	S004333	Injection Date:	06/19/13
Lab Sample ID:	S004333-CCV1	Injection Time:	13:08

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Dibenz(a,h)anthracene	A	50.0	52.8	0.7093303	0.7494348		5.7	20	
Dibenzofuran	A	50.0	46.3	1.511736	1.398902		-7.5	20	
Di-n-butylphthalate	A	50.0	40.7	1.299448	1.057071		-18.7	20	
1,2-Dichlorobenzene	A	50.0	43.3	1.717425	1.486853		-13.4	20	
1,3-Dichlorobenzene	A	50.0	47.0	1.769608	1.664543		-5.9	20	
1,4-Dichlorobenzene	A	50.0	47.8	1.817858	1.739381		-4.3	20	
3,3-Dichlorobenzidine	A	50.0	51.2	0.33081	0.3389071		2.4	20	
2,4-Dichlorophenol	A	50.0	48.4	0.2770348	0.2683764		-3.1	20	
Diethylphthalate	A	50.0	41.9	1.244498	1.04185		-16.3	20	
2,4-Dimethylphenol	A	50.0	47.8	0.3112903	0.2972778		-4.5	20	
Dimethylphthalate	A	50.0	43.2	1.201404	1.038048		-13.6	20	
4,6-Dinitro-2-methylphenol	L	50.0	42.3	9.732805E-02	9.135276E-02		-15.5	20	
2,4-Dinitrophenol	L	50.0	41.8	9.459777E-02	0.0898263		-16.4	20	
2,4-Dinitrotoluene	A	50.0	45.2	0.3400621	0.3071838		-9.7	20	
2,6-Dinitrotoluene	A	50.0	47.1	0.2486051	0.2340573		-5.9	20	
Di-n-octylphthalate	A	50.0	42.6	1.896057	1.614975		-14.8	20	
1,2-Diphenylhydrazine (as Azobenzene)	A	50.0	41.9	0.8574755	0.7186194		-16.2	20	
Fluoranthene	A	50.0	43.8	1.072733	0.9389013		-12.5	20	
Fluorene	A	50.0	44.8	1.281741	1.147972		-10.4	20	
Hexachlorobenzene	A	50.0	44.6	0.2111014	0.1883785		-10.8	20	
Hexachlorobutadiene	A	50.0	44.5	0.1978784	0.1762122		-10.9	20	
Hexachlorocyclopentadiene	L	50.0	39.6	0.3596115	0.3307462		-20.9	20	*
Hexachloroethane	A	50.0	42.4	0.7343127	0.6222388		-15.3	20	
Indeno(1,2,3-cd)pyrene	A	50.0	54.7	0.6846314	0.7489398		9.4	20	
Isophorone	A	50.0	45.3	0.7517592	0.6806486		-9.5	20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GMMSSV3	Calibration:	1300062
Lab File ID:	C061903.D	Calibration Date:	06/06/13 10:16
Sequence:	S004333	Injection Date:	06/19/13
Lab Sample ID:	S004333-CCV1	Injection Time:	13:08

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1-Methylnaphthalene	A	50.0	41.7	0.7178115	0.5987346		-16.6	20	
2-Methylnaphthalene	A	50.0	43.6	0.7592265	0.6628436		-12.7	20	
2-Methylphenol	A	50.0	43.7	1.434068	1.254326		-12.5	20	
3/4-Methylphenol	A	100	86.4	1.633971	1.411822		-13.6	20	
Naphthalene	A	50.0	45.2	1.103311	0.9967585		-9.7	20	
2-Nitroaniline	A	50.0	44.2	0.3549997	0.3135031		-11.7	20	
3-Nitroaniline	A	50.0	53.3	0.2410438	0.256888		6.6	20	
4-Nitroaniline	A	50.0	42.8	0.2582388	0.2211697		-14.4	20	
Nitrobenzene	A	50.0	40.4	0.4367226	0.3530142		-19.2	20	
2-Nitrophenol	A	50.0	51.2	0.1717746	0.1758261		2.4	20	
4-Nitrophenol	A	50.0	37.5	0.1738655	0.1304934		-24.9	20	*
N-Nitrosodimethylamine	A	50.0	42.1	0.9885725	0.833248		-15.7	20	
N-Nitrosodiphenylamine	A	50.0	44.4	0.5041818	0.4481655		-11.1	20	
N-Nitrosodi-n-propylamine	A	50.0	41.7	1.352404	1.127234		-16.6	20	
Pentachloronitrobenzene	A	50.0	42.0	3.634659E-02	3.051694E-02		-16.0	20	
Pentachlorophenol	A	50.0	37.5	0.1435721	0.1077493		-25.0	20	*
Phenanthrene	A	50.0	45.3	1.0477	0.9500099		-9.3	20	
Phenol	A	50.0	47.1	2.1011	1.978958		-5.8	20	
Pyrene	A	50.0	45.2	1.099859	0.9944773		-9.6	20	
Pyridine	A	50.0	49.4	1.647069	1.62602		-1.3	20	
1,2,4,5-Tetrachlorobenzene	A	50.0	46.9	0.5499792	0.5159562		-6.2	20	
1,2,4-Trichlorobenzene	A	50.0	46.1	0.3294798	0.3036015		-7.9	20	
2,4,5-Trichlorophenol	A	50.0	46.1	0.3303908	0.3045786		-7.8	20	
2,4,6-Trichlorophenol	A	50.0	44.6	0.3308075	0.2948116		-10.9	20	
2-Fluorophenol	A	50.0	48.0	1.408285	1.3522		-4.0		

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSSV2	Calibration:	1300063
Lab File ID:	B061802.D	Calibration Date:	05/29/13 12:47
Sequence:	S004334	Injection Date:	06/18/13
Lab Sample ID:	S004334-CCV1	Injection Time:	09:30

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	50.0	50.8	1.056752	1.074711		1.7	20	
Acenaphthylene	A	50.0	50.2	1.68641	1.692777		0.4	20	
Acetophenone	A	50.0	53.3	1.931386	2.060107		6.7	20	
Aniline	A	50.0	55.4	2.145872	2.378961		10.9	20	
Anthracene	A	50.0	51.4	1.05399	1.083966		2.8	20	
Benzidine	A	50.0	65.3	0.3198915	0.4176139		30.5	20	*
Benzo(a)anthracene	A	50.0	49.3	1.028547	1.013876		-1.4	20	
Benzo(a)pyrene	A	50.0	50.5	0.9952339	1.004821		1.0	20	
Benzo(b)fluoranthene	A	50.0	49.1	1.086609	1.067585		-1.8	20	
Benzo(g,h,i)perylene	A	50.0	51.7	0.9279326	0.9595657		3.4	20	
Benzo(k)fluoranthene	A	50.0	48.2	1.076515	1.037939		-3.6	20	
Benzoic Acid	L	50.0	54.2	0.1691456	0.2090158		8.4	20	
Bis(2-chloroethoxy)methane	A	50.0	53.0	0.38229	0.4051852		6.0	20	
Bis(2-chloroethyl)ether	A	50.0	54.2	1.407577	1.526938		8.5	20	
Bis(2-chloroisopropyl)ether	A	50.0	55.6	2.284158	2.539745		11.2	20	
Bis(2-Ethylhexyl)phthalate	A	50.0	57.3	0.8035971	0.9203754		14.5	20	
4-Bromophenylphenylether	A	50.0	48.1	0.1750023	0.1682314		-3.9	20	
Butylbenzylphthalate	A	50.0	56.2	0.5804063	0.6523341		12.4	20	
Carbazole	A	50.0	53.1	0.9370628	0.9947658		6.2	20	
4-Chloroaniline	A	50.0	51.8	0.4249565	0.4406419		3.7	20	
4-Chloro-3-methylphenol	A	50.0	50.4	0.2905151	0.2930681		0.9	20	
2-Chloronaphthalene	A	50.0	51.2	1.254405	1.283192		2.3	20	
2-Chlorophenol	A	50.0	50.7	1.575674	1.596627		1.3	20	
4-Chlorophenylphenylether	A	50.0	47.1	0.5527584	0.5209853		-5.7	20	
Chrysene	A	50.0	48.3	1.028911	0.9935513		-3.4	20	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSSV2	Calibration:	1300063
Lab File ID:	B061802.D	Calibration Date:	05/29/13 12:47
Sequence:	S004334	Injection Date:	06/18/13
Lab Sample ID:	S004334-CCV1	Injection Time:	09:30

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1-Methylnaphthalene	A	50.0	48.4	0.642798	0.6227058		-3.1	20
2-Methylnaphthalene	A	50.0	48.8	0.6831472	0.66735		-2.3	20
2-Methylphenol	A	50.0	53.5	1.386391	1.484046		7.0	20
3/4-Methylphenol	A	100	112	1.492887	1.673505		12.1	20
Naphthalene	A	50.0	50.7	1.016888	1.03098		1.4	20
2-Nitroaniline	A	50.0	54.6	0.3589516	0.3923585		9.3	20
3-Nitroaniline	A	50.0	50.1	0.348696	0.3495817		0.3	20
4-Nitroaniline	A	50.0	48.4	0.3603762	0.3489558		-3.2	20
Nitrobenzene	A	50.0	51.3	0.3633814	0.3728065		2.6	20
2-Nitrophenol	A	50.0	52.0	0.1881495	0.1957878		4.1	20
4-Nitrophenol	A	50.0	46.7	0.1612328	0.1505856		-6.6	20
N-Nitrosodimethylamine	A	50.0	51.5	0.828061	0.8534942		3.1	20
N-Nitrosodiphenylamine	A	50.0	51.0	0.4928568	0.5022176		1.9	20
N-Nitrosodi-n-propylamine	A	50.0	54.0	1.064936	1.149298		7.9	20
Pentachloronitrobenzene	A	50.0	45.8	3.145017E-02	0.02881		-8.4	20
Pentachlorophenol	A	50.0	48.1	0.1093209	0.1051994		-3.8	20
Phenanthrene	A	50.0	50.7	1.035671	1.050698		1.5	20
Phenol	A	50.0	56.3	1.978329	2.228175		12.6	20
Pyrene	A	50.0	48.5	1.249758	1.211949		-3.0	20
Pyridine	A	50.0	58.0	1.517645	1.759706		15.9	20
1,2,4,5-Tetrachlorobenzene	A	50.0	49.4	0.47941	0.4734931		-1.2	20
1,2,4-Trichlorobenzene	A	50.0	46.0	0.3121802	0.2871346		-8.0	20
2,4,5-Trichlorophenol	A	50.0	50.3	0.346071	0.3481444		0.6	20
2,4,6-Trichlorophenol	A	50.0	48.9	0.3343909	0.3270258		-2.2	20
2-Fluorophenol	A	50.0	52.7	1.461692	1.540282		5.4	

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7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	13F0478
Client:	URS Corp. Clifton Park	Project:	20121210 Bronx PC
Instrument ID:	GCMSSV2	Calibration:	1300063
Lab File ID:	B061903.D	Calibration Date:	05/29/13 12:47
Sequence:	S004335	Injection Date:	06/19/13
Lab Sample ID:	S004335-CCV1	Injection Time:	10:19

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1-Methylnaphthalene	A	50.0	47.3	0.642798	0.6082791		-5.4	20
2-Methylnaphthalene	A	50.0	46.5	0.6831472	0.6353634		-7.0	20
2-Methylphenol	A	50.0	52.6	1.386391	1.45756		5.1	20
3/4-Methylphenol	A	100	116	1.492887	1.737749		16.4	20
Naphthalene	A	50.0	47.8	1.016888	0.9714987		-4.5	20
2-Nitroaniline	A	50.0	51.1	0.3589516	0.3670349		2.3	20
3-Nitroaniline	A	50.0	46.8	0.348696	0.3267285		-6.3	20
4-Nitroaniline	A	50.0	42.3	0.3603762	0.3049475		-15.4	20
Nitrobenzene	A	50.0	48.5	0.3633814	0.3522889		-3.1	20
2-Nitrophenol	A	50.0	50.7	0.1881495	0.1909115		1.5	20
4-Nitrophenol	A	50.0	40.5	0.1612328	0.130596		-19.0	20
N-Nitrosodimethylamine	A	50.0	46.2	0.828061	0.764632		-7.7	20
N-Nitrosodiphenylamine	A	50.0	50.3	0.4928568	0.4959548		0.6	20
N-Nitrosodi-n-propylamine	A	50.0	54.0	1.064936	1.151066		8.1	20
Pentachloronitrobenzene	A	50.0	45.0	3.145017E-02	2.832505E-02		-9.9	20
Pentachlorophenol	A	50.0	45.8	0.1093209	0.1001169		-8.4	20
Phenanthrene	A	50.0	47.7	1.035671	0.9887326		-4.5	20
Phenol	A	50.0	56.2	1.978329	2.222977		12.4	20
Pyrene	A	50.0	49.4	1.249758	1.234657		-1.2	20
Pyridine	A	50.0	52.9	1.517645	1.604539		5.7	20
1,2,4,5-Tetrachlorobenzene	A	50.0	47.3	0.47941	0.4535019		-5.4	20
1,2,4-Trichlorobenzene	A	50.0	45.8	0.3121802	0.2860499		-8.4	20
2,4,5-Trichlorophenol	A	50.0	46.8	0.346071	0.3237609		-6.4	20
2,4,6-Trichlorophenol	A	50.0	47.9	0.3343909	0.3204356		-4.2	20
2-Fluorophenol	A	50.0	51.6	1.461692	1.507044		3.1	

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FORM 10

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

T2-SS03 (0-8in)

Lab Sample ID: 13F0478-05

Date(s) Analyzed: 06/27/2013 06/27/2013

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.084	
	2	0.00	0.00	0.00	0.11	26.9

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ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FORM 10

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

T2-SS04 12-14

Lab Sample ID: 13F0478-11 Date(s) Analyzed: 06/27/2013 06/27/2013

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1260	1	0.00	0.00	0.00	0.030	
	2	0.00	0.00	0.00	0.045	38.7

DATA USABILITY SUMMARY REPORT

BRONX PSYCHIATRIC CENTER – TRANSFORMER ROOM 1 SITE
BRONX, NEW YORK

Analyses Performed by:

CHEMTECH
MOUNTAINSIDE, NEW JERSEY

Prepared for:

DORMITORY AUTHORITY OF THE STATE OF NEW YORK

Prepared by:

URS CORPORATION
257 WEST GENESEE STREET, SUITE 400
BUFFALO, NY 14202-2657

SEPTEMBER 2014

TABLE OF CONTENTS

		Page No.
I.	INTRODUCTION	1
II.	ANALYTICAL METHODOLOGIES	1
III.	DATA DELIVERABLE COMPLETENESS	2
IV.	SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES	2
V.	NON-CONFORMANCES	3
VI.	SAMPLE RESULTS AND REPORTING	5
VII.	SUMMARY	5

TABLES
(Following Text)

Table 1 Summary of Data Qualifications

ATTACHMENTS

Attachment A –Validated Form 1s

Attachment B – Support Documentation

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and Development of Data Usability Summary Reports*, May 2010.

This DUSR discusses the data usability of eleven (11) soil samples plus one (1) field duplicate and one (1) matrix spike/matrix spike duplicate (MS/MSD) pair; and two (2) groundwater samples plus one (1) MS/MSD pair and one (1) trip blank collected by URS personnel on July 23, 2014, as part of the sampling program at the Bronx Psychiatric Center – Transformer Room 1 Site located in Bronx, New York. This work has been performed for the Dormitory Authority of the State of New York (DASNY).

II. ANALYTICAL METHODOLOGIES

The soil and groundwater samples were sent to Chemtech located in Mountainside, New Jersey for analysis, and were analyzed for the following parameters:

- Volatile Organic Compounds (VOCs) plus Tentatively Identified Compounds (TICs) by United States Environmental Protection Agency (USEPA) Method 8260C,
- Semivolatile Organic Compounds (SVOCs) plus TICs by USEPA Method 8270D,
- Pesticides by USEPA Method 8081B,
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082A,
- Herbicides by USEPA Method 8151A, and
- Total and Dissolved (groundwater only) Metals by USEPA Methods 6010C/7470A/7471A.

A limited data validation was performed in accordance with the following USEPA Region II guidelines:

- *Low/Medium Volatile Data Validation*, SOP HW-33, Rev. 3, March 2013;

- *Semivolatile Data Validation,* SOP HW-35, Rev. 2, March 2013;
- *Pesticide Data Validation,* SOP HW-36, Rev. 4, May 2013;
- *Polychlorinated Biphenyl (PCB) Data Validation,* SOP HW-37, Rev. 3, May 2013;
- *Validating Chlorinated Herbicides, GC, SW-846, Method 8151A,* SOP HW-17, Rev. 2, September 2006;
- *ICP-AES Data Validation,* SOP HW-2a, Rev. 15, December 2012; and
- *Mercury and Cyanide Data Validation,* SOP HW-2c, Rev. 15, December 2012.

Qualifications applied to the data during the limited validation include 'J' (estimated concentration), 'UJ' (estimated quantitation limit), 'N' (tentatively identified), and 'R' (rejected). Definitions of USEPA data qualifiers are presented at the end of this text. A summary of data qualifications is presented in Table 1. Copies of the validated laboratory results (i.e., Form 1s) are presented in Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC Analytical Services Protocol (ASP) Category B or equivalent) were provided by the laboratory, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved and under proper chain-of-custody (COC), except for the following instance.

- The trip blank associated with the groundwater samples was not referenced on the COC. The laboratory notified URS of this non-conformance, whereupon, they were instructed to proceed with the VOC analysis accordingly.

All samples were analyzed within the required holding times.

V. NON-CONFORMANCES

- **Initial and Continuing Calibrations**

For VOCs, the minimum relative response factors (RRFs) for the initial calibrations (ICALs) and continuing calibrations (CCALs) were less than 0.01 for 1,4-dioxane. The 1,4-dioxane result for all soil, groundwater, field QC samples was rejected and qualified 'R', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 5, 6, and Form 7) is presented in Attachment B.

- **Surrogates (Organics only)**

The SVOC analysis of soil sample TI-SB-04 (10-WT) (performed at a 2x dilution) exhibited poor percent recoveries (%Rs) (<10%) for acid-phenol (AP) surrogate 2,4,5-tribromophenol. The subsequent reanalysis (performed at a 4x dilution) exhibited similar surrogate results. The AP compound results from the 2x dilution analysis were rejected and qualified 'R', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 2) is presented in Attachment B.

- **Internal Standards (VOC and SVOC only)**

The VOC analysis of soil sample TI-SB06D [field duplicate of TI-SB-03 (0-2)] exhibited a low %R (<50%) for internal standard (IS) 1,4-dichlorobenzene-d_4. The subsequent reanalysis exhibited a similar IS result, but the %R was not as low-biased. The reanalysis result was reported in its entirety with the non-detect results associated with this IS outlier qualified as estimated 'UJ', as listed on Table 1.

The VOC analysis of soil sample TI-SB04 (5-10) exhibited a low %R (<50%) for IS 1,4-dichlorobenzene-d_4. The subsequent reanalysis data was deemed unusable by the

laboratory due to poor instrument purge efficiency. The non-detect results associated with this IS outlier were qualified as estimated 'UJ', as listed on Table 1.

The VOC analysis of soil sample TI-SB05 (5-10) exhibited low %Rs (<50%) for ISs pentafluorobenzene, 1,4-difluorobenzene, and chlorobenzene-d_5; and poor %R (<25%) for 1,4-dichlorobenzene-d_4. The subsequent reanalysis data was deemed unusable by the laboratory due to poor instrument purge efficiency. The non-detect results associated with these IS outliers were qualified as estimated 'J' or 'UJ', or rejected 'R', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 8) is presented in Attachment B.

- **Method Blanks**

The SVOC soil method blank associated with the soil samples exhibited contamination for several TICs (e.g., aldol condensation products). The corresponding TICs in the soil samples were crossed out.

Documentation supporting the qualification of data (i.e., Form 1 and 4) is presented in Attachment B.

- **Matrix Spikes and Laboratory Control Samples**

The metals MS/MSD analyses for soil sample TI-SB03 (0-2) exhibited high %Rs for lead (Pb) and a low %R for selenium (Se). The detect Pb and Se results for this sample and its corresponding field duplicate TI-SB06D were estimated and qualified 'J', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 5a) is presented in Attachment B.

- **Serial Dilution**

The metals serial dilution analysis for soil sample TI-SB03 (0-2) exhibited high %Ds for arsenic (As), barium (Ba), chromium (Cr), copper (Cu), and manganese (Mn). The As, Ba, Cr, Cu, and Mn results for this sample and its corresponding field duplicate TI-SB06D were estimated and qualified 'J', as listed on Table 1.

Documentation supporting the qualification of data (i.e., Form 9) is presented in Attachment B.

VI. SAMPLE RESULTS AND REPORTING

All quantitation/reporting limits were reported in accordance with method requirements and were adjusted for sample size, percent moisture (soils only), and dilution factors.

During the limited data review, positive TIC results were qualified as tentatively identified and qualified 'N'. Furthermore, the laboratory quantitated some TIC results from the ICAL standards (i.e., carbon disulfide, naphthalene and p-isopropyltoluene). These TIC results should be considered accurate, thus do not require further qualification.

For pesticides, the percent differences (%Ds) between the dual-column analyses for several soil samples were >25%. The detected pesticide results for the affected samples were qualified 'J', as listed on Table 1. Documentation supporting the qualification of data (i.e., Form 10) is presented in Attachment B.

For soil sample TI-SB02 (5-10), the laboratory applied 'J' qualifier was removed from the Se result during the data review because the concentration is at the reporting limit, not below.

VII. SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'J' or 'UJ' are considered conditionally usable. Those TIC

results crossed out are considered non-detect, while those TIC results qualified 'N' are considered "tentatively identified'. Those results qualified 'R' are unusable. All other sample results are usable as reported. URS does not recommend the recollection of any samples at this time.

Prepared By: Peter R. Fairbanks, Senior Chemist PF **Date:** 9/17/14

Reviewed By: Ann Marie Kropovitch, Chemist AMK **Date:** 9/17/14

DEFINITIONS OF USEPA DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R – The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

N – The analysis indicates the presence of a TIC that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

TABLE 1

SUMMARY OF DATA QUALIFICATIONS

BRONX PSYCHIATRIC CENTER – BUILDING 1 SITE

SAMPLE ID	FRACTION	ANALYTICAL DEVIATION	QUALIFICATION
All soil, groundwater, and field QC samples	VOC	ICAL and CCAL minimum RRFs < 0.01 for 1,4-dioxane.	Qualify non-detect results 'R'.
Soil sample TI-SB-04 (10-WT)	SVOC	Acid-phenol (AP) surrogate %R < 10%.	Qualify non-detect AP results 'R'.
Soil sample TI-SB06D	VOC	IS %R <50% for 1,4-dichlorobenzene-d_4.	Qualify non-detect results associated with IS outlier from reanalysis 'UJ'.
Soil sample TI-SB04 (5-10)	VOC	IS %R <50% for 1,4-dichlorobenzene-d_4.	Qualify non-detect results associated with IS outlier 'UJ'.
Soil sample TI-SB05 (5-10)	VOC	IS %R <50% for pentafluorobenzene, 1,4-difluorobenzene, and chlorobenzene-d_5; and %R <25 for 1,4-dichlorobenzene-d_4.	Qualify detected results associated with IS outliers 'J' and non-detect results 'UJ' or 'R'.
Soil sample TI-SB03 (0-2) and field duplicate TI-SB06D	Metals	MS/MSD %Rs > QC limits for Pb and < QC limits for Se.	Qualify detected results 'J'.
Soil sample TI-SB03 (0-2) and field duplicate TI-SB06D	Metals	Serial dilution %Ds > QC limits for As, Ba, Cr, Cu, and Mn.	Qualify detected results 'J'.
Soil sample TI-SB02 (5-10)	Metals	Se result at RL, not below.	Remove 'J' qualifier.
Soil sample TI-SB02 (0-2)	Pest	%D between dual-column analyses >25% for 4,4'-DDD and dieldrin.	Qualify detected results 'J'.
Soil sample TI-SB02 (5-10)	Pest	%D between dual-column analyses >25% for 4,4'-DDT.	Qualify detected results 'J'.
Soil sample TI-SB03 (10-WT)	Pest	%D between dual-column analyses >25% for 4,4'-DDE.	Qualify detected results 'J'.

ATTACHMENT A

VALIDATED FORM 1s

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	8.5
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042443.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
75-35-4	1,1-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-64-1	Acetone	27.3	U	2.7	2.7	27.3	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.5	U	0.55	0.55	5.5	ug/Kg
75-09-2	Methylene Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
75-34-3	1,1-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
78-93-3	2-Butanone	27.3	U	3.4	8.2	27.3	ug/Kg
56-23-5	Carbon Tetrachloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-66-3	Chloroform	5.5	U	0.55	0.55	5.5	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
71-43-2	Benzene	5.5	U	0.42	0.55	5.5	ug/Kg
107-06-2	1,2-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
79-01-6	Trichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-88-3	Toluene	5.5	U	0.55	0.55	5.5	ug/Kg
127-18-4	Tetrachloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-90-7	Chlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
100-41-4	Ethyl Benzene	5.5	U	0.55	0.55	5.5	ug/Kg
1330-20-7	Total Xylenes	16.4	U	1.34	1.65	16.4	ug/Kg
103-65-1	n-propylbenzene	5.5	U	0.39	0.55	5.5	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.5	U	0.49	0.55	5.5	ug/Kg
98-06-6	tert-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
135-98-8	sec-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.5	U	0.4	0.55	5.5	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.5	U	0.45	0.55	5.5	ug/Kg
104-51-8	n-Butylbenzene	5.5	U	0.5	0.55	5.5	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
123-91-1	1,4-Dioxane	110	U R	110	110	110	ug/Kg
SURROGATES							

9/4/14
2

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	8.5
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042443.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	39.1		56 - 120		78%	SPK: 50
1868-53-7	Dibromofluoromethane	45.2		57 - 135		90%	SPK: 50
2037-26-5	Toluene-d8	41.3		67 - 123		83%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.8		33 - 141		78%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	144841	4.91				
540-36-3	1,4-Difluorobenzene	235090	5.64				
3114-55-4	Chlorobenzene-d5	196768	9.79				
3855-82-1	1,4-Dichlorobenzene-d4	84074	12.55				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.6
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042450.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	6.1	U	0.61	0.61	6.1	ug/Kg
75-35-4	1,1-Dichloroethene	6.1	U	0.61	0.61	6.1	ug/Kg
67-64-1	Acetone	30.3	U	3	3	30.3	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.1	U	0.61	0.61	6.1	ug/Kg
75-09-2	Methylene Chloride	6.1	U	0.61	0.61	6.1	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.1	U	0.61	0.61	6.1	ug/Kg
75-34-3	1,1-Dichloroethane	6.1	U	0.61	0.61	6.1	ug/Kg
78-93-3	2-Butanone	30.3	U	3.8	9.1	30.3	ug/Kg
56-23-5	Carbon Tetrachloride	6.1	U	0.61	0.61	6.1	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.1	U	0.61	0.61	6.1	ug/Kg
67-66-3	Chloroform	6.1	U	0.61	0.61	6.1	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.1	U	0.61	0.61	6.1	ug/Kg
71-43-2	Benzene	6.1	U	0.46	0.61	6.1	ug/Kg
107-06-2	1,2-Dichloroethane	6.1	U	0.61	0.61	6.1	ug/Kg
79-01-6	Trichloroethene	6.1	U	0.61	0.61	6.1	ug/Kg
108-88-3	Toluene	6.1	U	0.61	0.61	6.1	ug/Kg
127-18-4	Tetrachloroethene	6.1	U	0.61	0.61	6.1	ug/Kg
108-90-7	Chlorobenzene	6.1	U	0.61	0.61	6.1	ug/Kg
100-41-4	Ethyl Benzene	6.1	U	0.61	0.61	6.1	ug/Kg
1330-20-7	Total Xylenes	18.2	U	1.48	1.81	18.2	ug/Kg
103-65-1	n-propylbenzene	6.1	U	0.44	0.61	6.1	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	6.1	U	0.55	0.61	6.1	ug/Kg
98-06-6	tert-Butylbenzene	6.1	U	0.61	0.61	6.1	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	6.1	U	0.61	0.61	6.1	ug/Kg
135-98-8	sec-Butylbenzene	6.1	U	0.61	0.61	6.1	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.1	U	0.45	0.61	6.1	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.1	U	0.5	0.61	6.1	ug/Kg
104-51-8	n-Butylbenzene	6.1	U	0.56	0.61	6.1	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.1	U	0.61	0.61	6.1	ug/Kg
123-91-1	1,4-Dioxane	120	U R	120	120	120	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	17.6
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042450.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	43.2		56 - 120		86%	SPK: 50
1868-53-7	Dibromofluoromethane	48.9		57 - 135		98%	SPK: 50
2037-26-5	Toluene-d8	49		67 - 123		98%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.5		33 - 141		89%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	148799	4.91				
540-36-3	1,4-Difluorobenzene	240622	5.63				
3114-55-4	Chlorobenzene-d5	195787	9.78				
3855-82-1	1,4-Dichlorobenzene-d4	78106	12.55				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	1.7	J			14.45	ug/Kg

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.5
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042445.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	6.2	U	0.62	0.62	6.2	ug/Kg
75-35-4	1,1-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
67-64-1	Acetone	31.1	U	3.1	3.1	31.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.2	U	0.62	0.62	6.2	ug/Kg
75-09-2	Methylene Chloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
75-34-3	1,1-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
78-93-3	2-Butanone	31.1	U	3.9	9.3	31.1	ug/Kg
56-23-5	Carbon Tetrachloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
67-66-3	Chloroform	6.2	U	0.62	0.62	6.2	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
71-43-2	Benzene	6.2	U	0.47	0.62	6.2	ug/Kg
107-06-2	1,2-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
79-01-6	Trichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
108-88-3	Toluene	6.2	U	0.62	0.62	6.2	ug/Kg
127-18-4	Tetrachloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
108-90-7	Chlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
100-41-4	Ethyl Benzene	6.2	U	0.62	0.62	6.2	ug/Kg
1330-20-7	Total Xylenes	18.6	U	1.52	1.82	18.6	ug/Kg
103-65-1	n-propylbenzene	6.2	U	0.45	0.62	6.2	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	6.2	U	0.56	0.62	6.2	ug/Kg
98-06-6	tert-Butylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
135-98-8	sec-Butylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.2	U	0.46	0.62	6.2	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.2	U	0.51	0.62	6.2	ug/Kg
104-51-8	n-Butylbenzene	6.2	U	0.57	0.62	6.2	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
123-91-1	1,4-Dioxane	120	U R	120	120	120	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.5
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042445.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	35.5		56 - 120		71%	SPK: 50
1868-53-7	Dibromofluoromethane	36.8		57 - 135		74%	SPK: 50
2037-26-5	Toluene-d8	33.3		67 - 123		67%	SPK: 50
460-00-4	4-Bromofluorobenzene	29.4		33 - 141		59%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	147168	4.9				
540-36-3	1,4-Difluorobenzene	241382	5.63				
3114-55-4	Chlorobenzene-d5	181812	9.79				
3855-82-1	1,4-Dichlorobenzene-d4	66157	12.54				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	7.9	J			14.44	ug/Kg

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	6.1
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042446.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.3	U	0.53	0.53	5.3	ug/Kg
75-35-4	1,1-Dichloroethene	5.3	U	0.53	0.53	5.3	ug/Kg
67-64-1	Acetone	26.6	U	2.7	2.7	26.6	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.3	U	0.53	0.53	5.3	ug/Kg
75-09-2	Methylene Chloride	5.3	U	0.53	0.53	5.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.3	U	0.53	0.53	5.3	ug/Kg
75-34-3	1,1-Dichloroethane	5.3	U	0.53	0.53	5.3	ug/Kg
78-93-3	2-Butanone	26.6	U	3.3	8	26.6	ug/Kg
56-23-5	Carbon Tetrachloride	5.3	U	0.53	0.53	5.3	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.3	U	0.53	0.53	5.3	ug/Kg
67-66-3	Chloroform	5.3	U	0.53	0.53	5.3	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.3	U	0.53	0.53	5.3	ug/Kg
71-43-2	Benzene	5.3	U	0.4	0.53	5.3	ug/Kg
107-06-2	1,2-Dichloroethane	5.3	U	0.53	0.53	5.3	ug/Kg
79-01-6	Trichloroethene	5.3	U	0.53	0.53	5.3	ug/Kg
108-88-3	Toluene	5.3	U	0.53	0.53	5.3	ug/Kg
127-18-4	Tetrachloroethene	5.3	U	0.53	0.53	5.3	ug/Kg
108-90-7	Chlorobenzene	5.3	U	0.53	0.53	5.3	ug/Kg
100-41-4	Ethyl Benzene	5.3	U	0.53	0.53	5.3	ug/Kg
1330-20-7	Total Xylenes	15.9	U	1.3	1.63	15.9	ug/Kg
103-65-1	n-propylbenzene	5.3	U	0.38	0.53	5.3	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.3	U	0.48	0.53	5.3	ug/Kg
98-06-6	tert-Butylbenzene	5.3	U	0.53	0.53	5.3	ug/Kg
95-63-6	1.2,4-Trimethylbenzene	5.3	U	0.53	0.53	5.3	ug/Kg
135-98-8	sec-Butylbenzene	5.3	U	0.53	0.53	5.3	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.3	U	0.39	0.53	5.3	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.3	U	0.44	0.53	5.3	ug/Kg
104-51-8	n-Butylbenzene	5.3	U	0.49	0.53	5.3	ug/Kg
95-50-1	1.2-Dichlorobenzene	5.3	U	0.53	0.53	5.3	ug/Kg
123-91-1	1,4-Dioxane	110	U R	110	110	110	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	6.1
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042446.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	41.3		56 - 120		83%	SPK: 50
1868-53-7	Dibromofluoromethane	47.9		57 - 135		96%	SPK: 50
2037-26-5	Toluene-d8	42.2		67 - 123		84%	SPK: 50
460-00-4	4-Bromofluorobenzene	32.9		33 - 141		66%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	149531	4.91				
540-36-3	1,4-Difluorobenzene	246219	5.63				
3114-55-4	Chlorobenzene-d5	179462	9.78				
3855-82-1	1.4-Dichlorobenzene-d4	57975	12.55				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.7
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042447.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
75-35-4	1,1-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-64-1	Acetone	27.6	U	2.8	2.8	27.6	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.5	U	0.55	0.55	5.5	ug/Kg
75-09-2	Methylene Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
75-34-3	1,1-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
78-93-3	2-Butanone	27.6	U	3.4	8.3	27.6	ug/Kg
56-23-5	Carbon Tetrachloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-66-3	Chloroform	5.5	U	0.55	0.55	5.5	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
71-43-2	Benzene	5.5	U	0.42	0.55	5.5	ug/Kg
107-06-2	1,2-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
79-01-6	Trichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-88-3	Toluene	5.5	U	0.55	0.55	5.5	ug/Kg
127-18-4	Tetrachloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-90-7	Chlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
100-41-4	Ethyl Benzene	5.5	U	0.55	0.55	5.5	ug/Kg
1330-20-7	Total Xylenes	16.6	U	1.35	1.65	16.6	ug/Kg
103-65-1	n-propylbenzene	5.5	U	0.4	0.55	5.5	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.5	U	0.5	0.55	5.5	ug/Kg
98-06-6	tert-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
135-98-8	sec-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.5	U	0.41	0.55	5.5	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.5	U	0.45	0.55	5.5	ug/Kg
104-51-8	n-Butylbenzene	5.5	U	0.51	0.55	5.5	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
123-91-1	1,4-Dioxane	110	U R	110	110	110	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.7
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042447.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	47.4		56 - 120		95%	SPK: 50
1868-53-7	Dibromofluoromethane	49.1		57 - 135		98%	SPK: 50
2037-26-5	Toluene-d8	44.1		67 - 123		88%	SPK: 50
460-00-4	4-Bromofluorobenzene	40.9		33 - 141		82%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	135988	4.91				
540-36-3	1,4-Difluorobenzene	226485	5.63				
3114-55-4	Chlorobenzene-d5	187522	9.78				
3855-82-1	1,4-Dichlorobenzene-d4	72211	12.55				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	7.9	J			14.45	ug/Kg

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	21.9
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042448.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	6.4	U	0.64	0.64	6.4	ug/Kg
75-35-4	1,1-Dichloroethene	6.4	U	0.64	0.64	6.4	ug/Kg
67-64-1	Acetone	32	U	3.2	3.2	32	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.4	U	0.64	0.64	6.4	ug/Kg
75-09-2	Methylene Chloride	6.4	U	0.64	0.64	6.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.4	U	0.64	0.64	6.4	ug/Kg
75-34-3	1,1-Dichloroethane	6.4	U	0.64	0.64	6.4	ug/Kg
78-93-3	2-Butanone	32	U	4	9.6	32	ug/Kg
56-23-5	Carbon Tetrachloride	6.4	U	0.64	0.64	6.4	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.4	U	0.64	0.64	6.4	ug/Kg
67-66-3	Chloroform	6.4	U	0.64	0.64	6.4	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.4	U	0.64	0.64	6.4	ug/Kg
71-43-2	Benzene	6.4	U	0.49	0.64	6.4	ug/Kg
107-06-2	1,2-Dichloroethane	6.4	U	0.64	0.64	6.4	ug/Kg
79-01-6	Trichloroethene	6.4	U	0.64	0.64	6.4	ug/Kg
108-88-3	Toluene	6.4	U	0.64	0.64	6.4	ug/Kg
127-18-4	Tetrachloroethene	6.4	U	0.64	0.64	6.4	ug/Kg
108-90-7	Chlorobenzene	6.4	U	0.64	0.64	6.4	ug/Kg
100-41-4	Ethyl Benzene	6.4	U	0.64	0.64	6.4	ug/Kg
1330-20-7	Total Xylenes	19.2	U	1.56	1.94	19.2	ug/Kg
103-65-1	n-propylbenzene	6.4	U	0.46	0.64	6.4	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	6.4	U	0.58	0.64	6.4	ug/Kg
98-06-6	tert-Butylbenzene	6.4	U	0.64	0.64	6.4	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	6.4	U	0.64	0.64	6.4	ug/Kg
135-98-8	sec-Butylbenzene	6.4	U	0.64	0.64	6.4	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.4	U	0.47	0.64	6.4	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.4	U	0.52	0.64	6.4	ug/Kg
104-51-8	n-Butylbenzene	6.4	U	0.59	0.64	6.4	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.4	U	0.64	0.64	6.4	ug/Kg
123-91-1	1,4-Dioxane	130	U R	130	130	130	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	21.9
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042448.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	42		56 - 120		84%	SPK: 50
1868-53-7	Dibromofluoromethane	46.6		57 - 135		93%	SPK: 50
2037-26-5	Toluene-d8	42.2		67 - 123		84%	SPK: 50
460-00-4	4-Bromofluorobenzene	36.3		33 - 141		73%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	123734	4.91				
540-36-3	1,4-Difluorobenzene	201142	5.64				
3114-55-4	Chlorobenzene-d5	156185	9.79				
3855-82-1	1,4-Dichlorobenzene-d4	57201	12.54				
TENTATIVE IDENTIFIED COMPOUNDS							
000079-92-5	Camphene	13.5	J N			11.23	ug/Kg
99-87-6	p-Isopropyltoluene	1.5	J			12.47	ug/Kg
91-20-3	Naphthalene	2.4	J			14.44	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.4
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009145.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
75-35-4	1,1-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-64-1	Acetone	27.6	U	2.8	2.8	27.6	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.5	U	0.55	0.55	5.5	ug/Kg
75-09-2	Methylene Chloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
75-34-3	1,1-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
78-93-3	2-Butanone	27.6	U	3.4	8.3	27.6	ug/Kg
56-23-5	Carbon Tetrachloride	5.5	U	0.55	0.55	5.5	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
67-66-3	Chloroform	5.5	U	0.55	0.55	5.5	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
71-43-2	Benzene	5.5	U	0.42	0.55	5.5	ug/Kg
107-06-2	1,2-Dichloroethane	5.5	U	0.55	0.55	5.5	ug/Kg
79-01-6	Trichloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-88-3	Toluene	5.5	U	0.55	0.55	5.5	ug/Kg
127-18-4	Tetrachloroethene	5.5	U	0.55	0.55	5.5	ug/Kg
108-90-7	Chlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
100-41-4	Ethyl Benzene	5.5	U	0.55	0.55	5.5	ug/Kg
1330-20-7	Total Xylenes	16.5	U	1.34	1.65	16.5	ug/Kg
103-65-1	n-propylbenzene	5.5	U	0.4	0.55	5.5	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.5	U	0.5	0.55	5.5	ug/Kg
98-06-6	tert-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
95-63-6	1.2,4-Trimethylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
135-98-8	sec-Butylbenzene	5.5	U	0.55	0.55	5.5	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.5	U	0.41	0.55	5.5	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.5	U	0.45	0.55	5.5	ug/Kg
104-51-8	n-Butylbenzene	5.5	U	0.51	0.55	5.5	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.5	U	0.55	0.55	5.5	ug/Kg
123-91-1	1,4-Dioxane	110	U R	110	110	110	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.4
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009145.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	50.9		56 - 120		102%	SPK: 50
1868-53-7	Dibromofluoromethane	55.1		57 - 135		110%	SPK: 50
2037-26-5	Toluene-d8	54.3		67 - 123		109%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.8		33 - 141		96%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	709581	7.43				
540-36-3	1,4-Difluorobenzene	1149180	8.37				
3114-55-4	Chlorobenzene-d5	913741	11.21				
3855-82-1	1,4-Dichlorobenzene-d4	415210	13.15				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
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J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.6
Sample Wt/Vol:	4.95 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009146.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.6	U	0.56	0.56	5.6	ug/Kg
75-35-4	1,1-Dichloroethene	5.6	U	0.56	0.56	5.6	ug/Kg
67-64-1	Acetone	11.9	J	2.8	2.8	27.9	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.6	U	0.56	0.56	5.6	ug/Kg
75-09-2	Methylene Chloride	5.6	U	0.56	0.56	5.6	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.6	U	0.56	0.56	5.6	ug/Kg
75-34-3	1,1-Dichloroethane	5.6	U	0.56	0.56	5.6	ug/Kg
78-93-3	2-Butanone	27.9	U	3.5	8.4	27.9	ug/Kg
56-23-5	Carbon Tetrachloride	5.6	U	0.56	0.56	5.6	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.6	U	0.56	0.56	5.6	ug/Kg
67-66-3	Chloroform	5.6	U	0.56	0.56	5.6	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.6	U	0.56	0.56	5.6	ug/Kg
71-43-2	Benzene	5.6	U	0.42	0.56	5.6	ug/Kg
107-06-2	1,2-Dichloroethane	5.6	U	0.56	0.56	5.6	ug/Kg
79-01-6	Trichloroethene	5.6	U	0.56	0.56	5.6	ug/Kg
108-88-3	Toluene	5.6	U	0.56	0.56	5.6	ug/Kg
127-18-4	Tetrachloroethene	5.6	U	0.56	0.56	5.6	ug/Kg
108-90-7	Chlorobenzene	5.6	U	0.56	0.56	5.6	ug/Kg
100-41-4	Ethyl Benzene	5.6	U	0.56	0.56	5.6	ug/Kg
1330-20-7	Total Xylenes	16.8	U	1.36	1.66	16.8	ug/Kg
103-65-1	n-propylbenzene	5.6	U J	0.4	0.56	5.6	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.6	U	0.5	0.56	5.6	ug/Kg
98-06-6	tert-Butylbenzene	5.6	U	0.56	0.56	5.6	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.6	U	0.56	0.56	5.6	ug/Kg
135-98-8	sec-Butylbenzene	5.6	U	0.56	0.56	5.6	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.6	U	0.41	0.56	5.6	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.6	U	0.46	0.56	5.6	ug/Kg
104-51-8	n-Butylbenzene	5.6	U	0.51	0.56	5.6	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.6	U	0.56	0.56	5.6	ug/Kg
123-91-1	1,4-Dioxane	110	U R	110	110	110	ug/Kg
SURROGATES							

9/3/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	9.6
Sample Wt/Vol:	4.95 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009146.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	53.2		56 - 120		106%	SPK: 50
1868-53-7	Dibromofluoromethane	56.2		57 - 135		112%	SPK: 50
2037-26-5	Toluene-d8	52.6		67 - 123		105%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.5		33 - 141		83%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	681657	7.44				
540-36-3	1,4-Difluorobenzene	1078920	8.38				
3114-55-4	Chlorobenzene-d5	809688	11.21				
3855-82-1	1,4-Dichlorobenzene-d4	311074	13.15				
TENTATIVE IDENTIFIED COMPOUNDS							
75-15-0	Carbon Disulfide	3.3	J			3.86	ug/Kg
91-20-3	Naphthalene	3.9	J			14.94	ug/Kg

U = Not Detected
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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	13.7
Sample Wt/Vol:	4.98 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009147.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.8	U	0.58	0.58	5.8	ug/Kg
75-35-4	1,1-Dichloroethene	5.8	U	0.58	0.58	5.8	ug/Kg
67-64-1	Acetone	10.2	J	2.9	2.9	29.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.8	U	0.58	0.58	5.8	ug/Kg
75-09-2	Methylene Chloride	5.8	U	0.58	0.58	5.8	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.8	U	0.58	0.58	5.8	ug/Kg
75-34-3	1,1-Dichloroethane	5.8	U	0.58	0.58	5.8	ug/Kg
78-93-3	2-Butanone	29.1	U	3.6	8.7	29.1	ug/Kg
56-23-5	Carbon Tetrachloride	5.8	U	0.58	0.58	5.8	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.8	U	0.58	0.58	5.8	ug/Kg
67-66-3	Chloroform	5.8	U	0.58	0.58	5.8	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.8	U	0.58	0.58	5.8	ug/Kg
71-43-2	Benzene	5.8	U	0.44	0.58	5.8	ug/Kg
107-06-2	1,2-Dichloroethane	5.8	U	0.58	0.58	5.8	ug/Kg
79-01-6	Trichloroethene	5.8	U	0.58	0.58	5.8	ug/Kg
108-88-3	Toluene	5.8	U	0.58	0.58	5.8	ug/Kg
127-18-4	Tetrachloroethene	5.8	U	0.58	0.58	5.8	ug/Kg
108-90-7	Chlorobenzene	5.8	U	0.58	0.58	5.8	ug/Kg
100-41-4	Ethyl Benzene	5.8	U	0.58	0.58	5.8	ug/Kg
1330-20-7	Total Xylenes	17.4	U	1.42	1.78	17.4	ug/Kg
103-65-1	n-propylbenzene	5.8	U	0.42	0.58	5.8	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.8	U	0.52	0.58	5.8	ug/Kg
98-06-6	tert-Butylbenzene	5.8	U	0.58	0.58	5.8	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.8	U	0.58	0.58	5.8	ug/Kg
135-98-8	sec-Butylbenzene	5.8	U	0.58	0.58	5.8	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.8	U	0.43	0.58	5.8	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.8	U	0.48	0.58	5.8	ug/Kg
104-51-8	n-Butylbenzene	5.8	U	0.54	0.58	5.8	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.8	U	0.58	0.58	5.8	ug/Kg
123-91-1	1,4-Dioxane	120	U R	120	120	120	ug/Kg
SURROGATES							

9/4/14 2

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	13.7
Sample Wt/Vol:	4.98 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009147.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	44.9		56 - 120		90%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		57 - 135		95%	SPK: 50
2037-26-5	Toluene-d8	47.5		67 - 123		95%	SPK: 50
460-00-4	4-Bromofluorobenzene	41.2		33 - 141		82%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	788805	7.42				
540-36-3	1,4-Difluorobenzene	1265250	8.38				
3114-55-4	Chlorobenzene-d5	1008650	11.21				
3855-82-1	1,4-Dichlorobenzene-d4	447239	13.15				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	1.7	J			14.94	ug/Kg

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	24.5
Sample Wt/Vol:	5 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	100 uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	MED

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014401.D	1		07/30/14	VR073014

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	660	U	66.2	66.2	660	ug/Kg
75-35-4	1,1-Dichloroethene	660	U	66.2	66.2	660	ug/Kg
67-64-1	Acetone	3300	U	330	330	3300	ug/Kg
1634-04-4	Methyl tert-butyl Ether	660	U	66.2	66.2	660	ug/Kg
75-09-2	Methylene Chloride	660	U	66.2	66.2	660	ug/Kg
156-60-5	trans-1,2-Dichloroethene	660	U	66.2	66.2	660	ug/Kg
75-34-3	1,1-Dichloroethane	660	U	66.2	66.2	660	ug/Kg
78-93-3	2-Butanone	3300	U	410	990	3300	ug/Kg
56-23-5	Carbon Tetrachloride	660	U	66.2	66.2	660	ug/Kg
156-59-2	cis-1,2-Dichloroethene	660	U	66.2	66.2	660	ug/Kg
67-66-3	Chloroform	660	U	66.2	66.2	660	ug/Kg
71-55-6	1,1,1-Trichloroethane	660	U	66.2	66.2	660	ug/Kg
71-43-2	Benzene	660	U	50.3	66.2	660	ug/Kg
107-06-2	1,2-Dichloroethane	660	U	66.2	66.2	660	ug/Kg
79-01-6	Trichloroethene	660	U	66.2	66.2	660	ug/Kg
108-88-3	Toluene	660	U	66.2	66.2	660	ug/Kg
127-18-4	Tetrachloroethene	660	U	66.2	66.2	660	ug/Kg
108-90-7	Chlorobenzene	660	U	66.2	66.2	660	ug/Kg
100-41-4	Ethyl Benzene	660	U	66.2	66.2	660	ug/Kg
1330-20-7	Total Xylenes	1960	U	161	196	1960	ug/Kg
103-65-1	n-propylbenzene	660	U	47.7	66.2	660	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	660	U	59.6	66.2	660	ug/Kg
98-06-6	tert-Butylbenzene	660	U	66.2	66.2	660	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	660	U	66.2	66.2	660	ug/Kg
135-98-8	sec-Butylbenzene	660	U	66.2	66.2	660	ug/Kg
541-73-1	1,3-Dichlorobenzene	660	U	49	66.2	660	ug/Kg
106-46-7	1,4-Dichlorobenzene	660	U	54.3	66.2	660	ug/Kg
104-51-8	n-Butylbenzene	660	U	60.9	66.2	660	ug/Kg
95-50-1	1,2-Dichlorobenzene	660	U	66.2	66.2	660	ug/Kg
123-91-1	1,4-Dioxane	13200	UJ R	13200	13200	13200	ug/Kg
SURROGATES							

9/3/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	24.5
Sample Wt/Vol:	5 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	100 uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	MED

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014401.D	1		07/30/14	VR073014

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	57		56 - 120		114%	SPK: 50
1868-53-7	Dibromofluoromethane	45.3		57 - 135		91%	SPK: 50
2037-26-5	Toluene-d8	50.5		67 - 123		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.8		33 - 141		108%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	1061640	7.5				
540-36-3	1,4-Difluorobenzene	1760880	8.43				
3114-55-4	Chlorobenzene-d5	1533010	11.28				
3855-82-1	1,4-Dichlorobenzene-d4	564973	13.22				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.2
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009153.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	6.2	U J	0.62	0.62	6.2	ug/Kg
75-35-4	1,1-Dichloroethene	6.2	U J	0.62	0.62	6.2	ug/Kg
67-64-1	Acetone	17	J	3.1	3.1	31	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.2	U J	0.62	0.62	6.2	ug/Kg
75-09-2	Methylene Chloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
75-34-3	1,1-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
78-93-3	2-Butanone	31	U	3.9	9.3	31	ug/Kg
56-23-5	Carbon Tetrachloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
67-66-3	Chloroform	6.2	U	0.62	0.62	6.2	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
71-43-2	Benzene	6.2	U	0.47	0.62	6.2	ug/Kg
107-06-2	1,2-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
79-01-6	Trichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
108-88-3	Toluene	6.2	U	0.62	0.62	6.2	ug/Kg
127-18-4	Tetrachloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
108-90-7	Chlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
100-41-4	Ethyl Benzene	6.2	U	0.62	0.62	6.2	ug/Kg
1330-20-7	Total Xylenes	18.6	U	1.51	1.82	18.6	ug/Kg
103-65-1	n-propylbenzene	6.2	U R	0.45	0.62	6.2	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	6.2	U	0.56	0.62	6.2	ug/Kg
98-06-6	tert-Butylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
135-98-8	sec-Butylbenzene	6.2	U	0.62	0.62	6.2	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.2	U	0.46	0.62	6.2	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.2	U	0.51	0.62	6.2	ug/Kg
104-51-8	n-Butylbenzene	6.2	U	0.57	0.62	6.2	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
123-91-1	1,4-Dioxane	120	U R	120	120	120	ug/Kg
SURROGATES							

9/3/14 2

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.2
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VT009153.D	1		07/28/14	VT072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	59.4		56 - 120		119%	SPK: 50
1868-53-7	Dibromofluoromethane	59.3		57 - 135		119%	SPK: 50
2037-26-5	Toluene-d8	54		67 - 123		108%	SPK: 50
460-00-4	4-Bromofluorobenzene	38.7		33 - 141		77%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	370462	7.44				
540-36-3	1,4-Difluorobenzene	602130	8.38				
3114-55-4	Chlorobenzene-d5	437768	11.21				
3855-82-1	1,4-Dichlorobenzene-d4	156402	13.15				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	2.1	J			14.94	ug/Kg

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D [TI-SB03(0-2)]	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD042772.D	1		07/25/14	VD072514

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.4	U	0.54	0.54	5.4	ug/Kg
75-35-4	1,1-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
67-64-1	Acetone	27.1	U	2.7	2.7	27.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.4	U	0.54	0.54	5.4	ug/Kg
75-09-2	Methylene Chloride	1.3	J	0.54	0.54	5.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
75-34-3	1,1-Dichloroethane	5.4	U	0.54	0.54	5.4	ug/Kg
78-93-3	2-Butanone	27.1	U	3.4	8.1	27.1	ug/Kg
56-23-5	Carbon Tetrachloride	5.4	U	0.54	0.54	5.4	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
67-66-3	Chloroform	5.4	U	0.54	0.54	5.4	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.4	U	0.54	0.54	5.4	ug/Kg
71-43-2	Benzene	5.4	U	0.41	0.54	5.4	ug/Kg
107-06-2	1,2-Dichloroethane	5.4	UQ	0.54	0.54	5.4	ug/Kg
79-01-6	Trichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
108-88-3	Toluene	5.4	U	0.54	0.54	5.4	ug/Kg
127-18-4	Tetrachloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
108-90-7	Chlorobenzene	5.4	U	0.54	0.54	5.4	ug/Kg
100-41-4	Ethyl Benzene	5.4	U	0.54	0.54	5.4	ug/Kg
1330-20-7	Total Xylenes	16.2	UQ	1.32	1.64	16.2	ug/Kg
103-65-1	n-propylbenzene	5.4	U	0.39	0.54	5.4	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.4	U	0.49	0.54	5.4	ug/Kg
98-06-6	tert-Butylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
135-98-8	sec-Butylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.4	U	0.4	0.54	5.4	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.4	U	0.44	0.54	5.4	ug/Kg
104-51-8	n-Butylbenzene	5.4	U	0.5	0.54	5.4	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.4	U	0.54	0.54	5.4	ug/Kg
123-91-1	1,4-Dioxane	110	U	110	110	110	ug/Kg
SURROGATES							

9/3/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D [TI-SB02 (0-2)]	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VD042772.D	1		07/25/14	VD072514

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	43.7		56 - 120		87%	SPK: 50
1868-53-7	Dibromofluoromethane	42.2		57 - 135		84%	SPK: 50
2037-26-5	Toluene-d8	38.9		67 - 123		78%	SPK: 50
460-00-4	4-Bromofluorobenzene	31.6		33 - 141		63%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	435914	6.48				
540-36-3	1,4-Difluorobenzene	633805	7.6				
3114-55-4	Chlorobenzene-d5	388058	11.7				
3855-82-1	1,4-Dichlorobenzene-d4	108824	14.04				
TENTATIVE IDENTIFIED COMPOUNDS							
91-20-3	Naphthalene	18.3	J			15.96	ug/Kg

9/3/14

U = Not Detected
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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06DRE [TI-SB03(0-2)]	SDG No.:	F3304
Lab Sample ID:	F3304-12RE	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042449.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5.4	U	0.54	0.54	5.4	ug/Kg
75-35-4	1,1-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
67-64-1	Acetone	27.1	U	2.7	2.7	27.1	ug/Kg
1634-04-4	Methyl tert-butyl Ether	5.4	U	0.54	0.54	5.4	ug/Kg
75-09-2	Methylene Chloride	5.4	U	0.54	0.54	5.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
75-34-3	1,1-Dichloroethane	5.4	U	0.54	0.54	5.4	ug/Kg
78-93-3	2-Butanone	27.1	U	3.4	8.1	27.1	ug/Kg
56-23-5	Carbon Tetrachloride	5.4	U	0.54	0.54	5.4	ug/Kg
156-59-2	cis-1,2-Dichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
67-66-3	Chloroform	5.4	U	0.54	0.54	5.4	ug/Kg
71-55-6	1,1,1-Trichloroethane	5.4	U	0.54	0.54	5.4	ug/Kg
71-43-2	Benzene	5.4	U	0.41	0.54	5.4	ug/Kg
107-06-2	1,2-Dichloroethane	5.4	U	0.54	0.54	5.4	ug/Kg
79-01-6	Trichloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
108-88-3	Toluene	5.4	U	0.54	0.54	5.4	ug/Kg
127-18-4	Tetrachloroethene	5.4	U	0.54	0.54	5.4	ug/Kg
108-90-7	Chlorobenzene	5.4	U	0.54	0.54	5.4	ug/Kg
100-41-4	Ethyl Benzene	5.4	U	0.54	0.54	5.4	ug/Kg
1330-20-7	Total Xylenes	16.2	U	1.32	1.64	16.2	ug/Kg
103-65-1	n-propylbenzene	5.4	U	0.39	0.54	5.4	ug/Kg
108-67-8	1,3,5-Trimethylbenzene	5.4	U	0.49	0.54	5.4	ug/Kg
98-06-6	tert-Butylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
95-63-6	1,2,4-Trimethylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
135-98-8	sec-Butylbenzene	5.4	U	0.54	0.54	5.4	ug/Kg
541-73-1	1,3-Dichlorobenzene	5.4	U	0.4	0.54	5.4	ug/Kg
106-46-7	1,4-Dichlorobenzene	5.4	U	0.44	0.54	5.4	ug/Kg
104-51-8	n-Butylbenzene	5.4	U	0.5	0.54	5.4	ug/Kg
95-50-1	1,2-Dichlorobenzene	5.4	U	0.54	0.54	5.4	ug/Kg
123-91-1	1,4-Dioxane	110	UR	110	110	110	ug/Kg
SURROGATES							

9/4/14

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5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06DRE [TI-SB03(0-2)]	SDG No.:	F3304
Lab Sample ID:	F3304-12RE	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	7.6
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VF042449.D	1		07/28/14	VF072814

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	34.5		56 - 120		69%	SPK: 50
1868-53-7	Dibromofluoromethane	37.4		57 - 135		75%	SPK: 50
2037-26-5	Toluene-d8	33.9		67 - 123		68%	SPK: 50
460-00-4	4-Bromofluorobenzene	29.6		33 - 141		59%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	106623	4.91				
540-36-3	1.4-Difluorobenzene	179774	5.63				
3114-55-4	Chlorobenzene-d5	139991	9.79				
3855-82-1	1,4-Dichlorobenzene-d4	51883	12.55				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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* = Values outside of QC limits
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6

Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB02(0-2)		SDG No.:	F3304	
Lab Sample ID:	F3304-01		Matrix:	SOIL	D
Analytical Method:	SW8270		% Moisture:	8.5	
Sample Wt/Vol:	30.1 Units:	g	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	SVOCMS Group1	
Extraction Type :		Decanted : N	Level :	LOW	
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072800.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
108-95-2	Phenol		360	U	8.4	36.3	360	ug/Kg
95-48-7	2-Methylphenol		360	U	19.7	36.3	360	ug/Kg
65794-96-9	3+4-Methylphenols		360	U	18.8	36.3	360	ug/Kg
91-20-3	Naphthalene		190	J	12.5	36.3	360	ug/Kg
208-96-8	Acenaphthylene		360	U	9.1	36.3	360	ug/Kg
83-32-9	Acenaphthene		440		10.2	36.3	360	ug/Kg
132-64-9	Dibenzofuran		330	J	14.2	36.3	360	ug/Kg
86-73-7	Fluorene		500		13.7	36.3	360	ug/Kg
118-74-1	Hexachlorobenzene		360	U	14.8	36.3	360	ug/Kg
87-86-5	Pentachlorophenol		360	U	24.8	36.3	360	ug/Kg
85-01-8	Phenanthrene	4000	~~3300~~	D ~~E~~	~~9.8~~ 19.6	~~36.3~~ 72.6	~~360~~ 720	ug/Kg
120-12-7	Anthracene		1000		7.4	36.3	360	ug/Kg
206-44-0	Fluoranthene	4400	~~3600~~	D ~~E~~	~~7.3~~ 14.6	~~36.3~~ 72.6	~~360~~ 720	ug/Kg
129-00-0	Pyrene	3000	~~2900~~	D ~~E~~	~~8.7~~ 17.4	~~36.3~~ ↓	~~360~~ ↓	ug/Kg
56-55-3	Benzo(a)anthracene		1700		17.3	36.3	360	ug/Kg
218-01-9	Chrysene		1600		16.4	36.3	360	ug/Kg
205-99-2	Benzo(b)fluoranthene		1600		11.9	36.3	360	ug/Kg
207-08-9	Benzo(k)fluoranthene		690		17.1	36.3	360	ug/Kg
50-32-8	Benzo(a)pyrene		1500		7.8	36.3	360	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene		830		12.1	36.3	360	ug/Kg
53-70-3	Dibenzo(a,h)anthracene		170	J	10.5	36.3	360	ug/Kg
191-24-2	Benzo(g,h,i)perylene		810		14.7	36.3	360	ug/Kg
SURROGATES								
367-12-4	2-Fluorophenol		100		28 - 127		70%	SPK: 150
13127-88-3	Phenol-d6		110		34 - 127		75%	SPK: 150
4165-60-0	Nitrobenzene-d5		82.8		31 - 132		83%	SPK: 100
321-60-8	2-Fluorobiphenyl		80.4		39 - 123		80%	SPK: 100
118-79-6	2,4,6-Tribromophenol		99.8		30 - 133		67%	SPK: 150
1718-51-0	Terphenyl-d14		82		37 - 115		82%	SPK: 100
INTERNAL STANDARDS								
3855-82-1	1,4-Dichlorobenzene-d4		171848	6.4				

9/4/14

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)			SDG No.:	F3304
Lab Sample ID:	F3304-01			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	8.5
Sample Wt/Vol:	30.1	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072800.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	661933	8.34				
15067-26-2	Acenaphthene-d10	370776	11.14				
1517-22-2	Phenanthrene-d10	682925	13.55				
1719-03-5	Chrysene-d12	723401	17.23				
1520-96-3	Perylene-d12	699023	18.89				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	7500	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	950	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1800~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2700	J			6.09	ug/Kg
91-57-6	2-Methylnaphthalene	82.8	J			9.49	ug/Kg
131-11-3	Dimethylphthalate	640	J			10.79	ug/Kg
86-74-8	Carbazole	540	J			13.96	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	200	J N			14.32	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	530	J N			14.48	ug/Kg
005672-97-9	5,16[1,2]:8,13[1,2]-Dibenzen	260	J N			14.78	ug/Kg
018435-45-5	1-Nonadecene	300	J N			15.21	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	270	J			17.28	ug/Kg
002498-66-0	Benz(A)anthracene-7,12-dione	220	J N			18.11	ug/Kg
000192-97-2	Benzo[e]pyrene	440	J N			18.59	ug/Kg
000198-55-0	Perylene	880	J N			18.78	ug/Kg
000192-65-4	1,2:4,5-Dibenzopyrene	380	J N			22.38	ug/Kg
005385-75-1	Dibenz(a,e)aceanthrylene	240	J N			22.54	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)DL	SDG No.:	F3304
Lab Sample ID:	F3304-01DL	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	8.5
Sample Wt/Vol:	30.1 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072891.D	2	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	720	UD	16.8	72.6	720	ug/Kg
95-48-7	2-Methylphenol	720	UD	39.4	72.6	720	ug/Kg
65794-96-9	3+4-Methylphenols	720	UD	37.7	72.6	720	ug/Kg
91-20-3	Naphthalene	200	JD	25.1	72.6	720	ug/Kg
208-96-8	Acenaphthylene	720	UD	18.3	72.6	720	ug/Kg
83-32-9	Acenaphthene	490	JD	20.5	72.6	720	ug/Kg
132-64-9	Dibenzofuran	350	JD	28.3	72.6	720	ug/Kg
86-73-7	Fluorene	540	JD	27.4	72.6	720	ug/Kg
118-74-1	Hexachlorobenzene	720	UD	29.6	72.6	720	ug/Kg
87-86-5	Pentachlorophenol	720	UD	49.7	72.6	720	ug/Kg
85-01-8	Phenanthrene	4000	D	19.6	72.6	720	ug/Kg
120-12-7	Anthracene	1100	D	14.8	72.6	720	ug/Kg
206-44-0	Fluoranthene	4400	D	14.6	72.6	720	ug/Kg
129-00-0	Pyrene	3000	D	17.4	72.6	720	ug/Kg
56-55-3	Benzo(a)anthracene	1800	D	34.6	72.6	720	ug/Kg
218-01-9	Chrysene	1600	D	32.9	72.6	720	ug/Kg
205-99-2	Benzo(b)fluoranthene	1900	D	23.7	72.6	720	ug/Kg
207-08-9	Benzo(k)fluoranthene	570	JD	34.2	72.6	720	ug/Kg
50-32-8	Benzo(a)pyrene	1600	D	15.7	72.6	720	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	860	D	24.2	72.6	720	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	190	JD	20.9	72.6	720	ug/Kg
191-24-2	Benzo(g,h,i)perylene	910	D	29.4	72.6	720	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	110		28 - 127		75%	SPK: 150
13127-88-3	Phenol-d6	110		34 - 127		75%	SPK: 150
4165-60-0	Nitrobenzene-d5	90.2		31 - 132		90%	SPK: 100
321-60-8	2-Fluorobiphenyl	89.4		39 - 123		89%	SPK: 100
118-79-6	2,4,6-Tribromophenol	96.4		30 - 133		64%	SPK: 150
1718-51-0	Terphenyl-d14	75.9		37 - 115		76%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	118256	6.26				

9/7/14

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)DL			SDG No.:	F3304
Lab Sample ID:	F3304-01DL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	8.5
Sample Wt/Vol:	30.1	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted :	N	Level :	LOW
Injection Volume :		GPC Factor :	1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072891.D	2	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	452109	8.2				
15067-26-2	Acenaphthene-d10	255167	10.98				
1517-22-2	Phenanthrene-d10	474180	13.37				
1719-03-5	Chrysene-d12	553999	17.07				
1520-96-3	Perylene-d12	513403	18.72				

9/4/14

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B = Analyte Found in Associated Method Blank
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6

Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)			SDG No.:	F3304
Lab Sample ID:	F3304-02			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	17.6
Sample Wt/Vol:	30.05	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072804.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	400	U	9.3	40.4	400	ug/Kg
95-48-7	2-Methylphenol	400	U	21.9	40.4	400	ug/Kg
65794-96-9	3+4-Methylphenols	400	U	21	40.4	400	ug/Kg
91-20-3	Naphthalene	400	U	13.9	40.4	400	ug/Kg
208-96-8	Acenaphthylene	400	U	10.2	40.4	400	ug/Kg
83-32-9	Acenaphthene	400	U	11.4	40.4	400	ug/Kg
132-64-9	Dibenzofuran	400	U	15.8	40.4	400	ug/Kg
86-73-7	Fluorene	400	U	15.3	40.4	400	ug/Kg
118-74-1	Hexachlorobenzene	400	U	16.5	40.4	400	ug/Kg
87-86-5	Pentachlorophenol	400	U	27.6	40.4	400	ug/Kg
85-01-8	Phenanthrene	130	J	10.9	40.4	400	ug/Kg
120-12-7	Anthracene	400	U	8.2	40.4	400	ug/Kg
206-44-0	Fluoranthene	120	J	8.1	40.4	400	ug/Kg
129-00-0	Pyrene	98.1	J	9.7	40.4	400	ug/Kg
56-55-3	Benzo(a)anthracene	400	U	19.3	40.4	400	ug/Kg
218-01-9	Chrysene	400	U	18.3	40.4	400	ug/Kg
205-99-2	Benzo(b)fluoranthene	400	U	13.2	40.4	400	ug/Kg
207-08-9	Benzo(k)fluoranthene	400	U	19	40.4	400	ug/Kg
50-32-8	Benzo(a)pyrene	400	U	8.7	40.4	400	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	400	U	13.4	40.4	400	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	400	U	11.6	40.4	400	ug/Kg
191-24-2	Benzo(g,h,i)perylene	400	U	16.4	40.4	400	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	93.2		28 - 127		62%	SPK: 150
13127-88-3	Phenol-d6	98.3		34 - 127		66%	SPK: 150
4165-60-0	Nitrobenzene-d5	73.3		31 - 132		73%	SPK: 100
321-60-8	2-Fluorobiphenyl	64.8		39 - 123		65%	SPK: 100
118-79-6	2,4,6-Tribromophenol	88.4		30 - 133		59%	SPK: 150
1718-51-0	Terphenyl-d14	63.1		37 - 115		63%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	177225	6.4				

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	17.6
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072804.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	681995	8.34				
15067-26-2	Acenaphthene-d10	379630	11.16				
1517-22-2	Phenanthrene-d10	693017	13.55				
1719-03-5	Chrysene-d12	763880	17.23				
1520-96-3	Perylene-d12	702740	18.89				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	8600	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	1500	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1600~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2500	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	720	J			10.79	ug/Kg
074685-29-3	9-Eicosene, (E)-	180	J N			15.21	ug/Kg
1000282-97-3	Heptafluorobutanoic acid, heptadec	130	J			17.1	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	190	J			17.28	ug/Kg
	unknown17.50	88.8	J N			17.5	ug/Kg
000080-09-1	4,4-Dihydroxydiphenylsulphone	89.7	J			18.25	ug/Kg
000192-97-2	Benzo[e]pyrene	110	J			18.47	ug/Kg

a/4/14 a

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)			SDG No.:	F3304
Lab Sample ID:	F3304-03			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	19.5
Sample Wt/Vol:	30.04	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072808.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	820	U	19.1	82.7	820	ug/Kg
95-48-7	2-Methylphenol	820	U	44.9	82.7	820	ug/Kg
65794-96-9	3+4-Methylphenols	820	U	42.9	82.7	820	ug/Kg
91-20-3	Naphthalene	820	U	28.5	82.7	820	ug/Kg
208-96-8	Acenaphthylene	410	J	20.8	82.7	820	ug/Kg
83-32-9	Acenaphthene	190	J	23.3	82.7	820	ug/Kg
132-64-9	Dibenzofuran	200	J	32.3	82.7	820	ug/Kg
86-73-7	Fluorene	290	J	31.3	82.7	820	ug/Kg
118-74-1	Hexachlorobenzene	820	U	33.7	82.7	820	ug/Kg
87-86-5	Pentachlorophenol	820	U	56.6	82.7	820	ug/Kg
85-01-8	Phenanthrene	3300		22.3	82.7	820	ug/Kg
120-12-7	Anthracene	680	J	16.9	82.7	820	ug/Kg
206-44-0	Fluoranthene	4100		16.6	82.7	820	ug/Kg
129-00-0	Pyrene	3300		19.8	82.7	820	ug/Kg
56-55-3	Benzo(a)anthracene	1800		39.5	82.7	820	ug/Kg
218-01-9	Chrysene	2000		37.5	82.7	820	ug/Kg
205-99-2	Benzo(b)fluoranthene	2600		27	82.7	820	ug/Kg
207-08-9	Benzo(k)fluoranthene	530	J	39	82.7	820	ug/Kg
50-32-8	Benzo(a)pyrene	1700		17.9	82.7	820	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1000		27.5	82.7	820	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	260	J	23.8	82.7	820	ug/Kg
191-24-2	Benzo(g,h,i)perylene	1100		33.5	82.7	820	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	120		28 - 127		77%	SPK: 150
13127-88-3	Phenol-d6	130		34 - 127		84%	SPK: 150
4165-60-0	Nitrobenzene-d5	93.2		31 - 132		93%	SPK: 100
321-60-8	2-Fluorobiphenyl	91.6		39 - 123		92%	SPK: 100
118-79-6	2,4,6-Tribromophenol	94.3		30 - 133		63%	SPK: 150
1718-51-0	Terphenyl-d14	92.7		37 - 115		93%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	173013	6.41				

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Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB02(10-WT)		SDG No.:	F3304	
Lab Sample ID:	F3304-03		Matrix:	SOIL	
Analytical Method:	SW8270		% Moisture:	19.5	
Sample Wt/Vol:	30.04 Units:	g	Final Vol:	1000	uL
Soil Aliquot Vol:		uL	Test:	SVOCMS Group1	
Extraction Type :		Decanted : N	Level :	LOW	
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072808.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	682031	8.34				
15067-26-2	Acenaphthene-d10	382175	11.16				
1517-22-2	Phenanthrene-d10	724566	13.55				
1719-03-5	Chrysene-d12	801346	17.23				
1520-96-3	Perylene-d12	707121	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
~~000077-76-9~~	~~Propane, 2,2-dimethoxy-~~	~~10500~~	~~JB~~			~~1.37~~	~~ug/Kg~~
000994-05-8	Butane, 2-methoxy-2-methyl-	1200	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~2400~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	3300	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	1200	J			10.79	ug/Kg
86-74-8	Carbazole	290	J			13.96	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	380	J N			14.33	ug/Kg
000832-69-9	Phenanthrene, 1-methyl-	510	J			14.37	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	650	J			14.48	ug/Kg
000610-48-0	Anthracene, 1-methyl-	260	J			14.52	ug/Kg
137235-51-9	1,2,4,8-Tetramethylbicyclo[6.3.0]u	530	J			14.78	ug/Kg
003674-66-6	Phenanthrene, 2,5-dimethyl-	250	J			15.12	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	310	J			15.23	ug/Kg
~~000123-95-5~~	~~Octadecanoic acid, butyl ester~~	~~350~~	~~JB~~			~~16.63~~	~~ug/Kg~~
	unknown16.94	240	J			16.94	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	320	J			17.28	ug/Kg
000192-97-2	Benzo[e]pyrene	330	J N			18.6	ug/Kg

9/4/14 a

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	6.1
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072809.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	700	U	16.4	70.9	700	ug/Kg
95-48-7	2-Methylphenol	700	U	38.5	70.9	700	ug/Kg
65794-96-9	3+4-Methylphenols	700	U	36.8	70.9	700	ug/Kg
91-20-3	Naphthalene	700	U	24.5	70.9	700	ug/Kg
208-96-8	Acenaphthylene	700	U	17.9	70.9	700	ug/Kg
83-32-9	Acenaphthene	700	U	20	70.9	700	ug/Kg
132-64-9	Dibenzofuran	700	U	27.6	70.9	700	ug/Kg
86-73-7	Fluorene	700	U	26.8	70.9	700	ug/Kg
118-74-1	Hexachlorobenzene	700	U	28.9	70.9	700	ug/Kg
87-86-5	Pentachlorophenol	700	U	48.5	70.9	700	ug/Kg
85-01-8	Phenanthrene	620	J	19.1	70.9	700	ug/Kg
120-12-7	Anthracene	160	J	14.5	70.9	700	ug/Kg
206-44-0	Fluoranthene	1000		14.2	70.9	700	ug/Kg
129-00-0	Pyrene	800		17	70.9	700	ug/Kg
56-55-3	Benzo(a)anthracene	510	J	33.8	70.9	700	ug/Kg
218-01-9	Chrysene	420	J	32.1	70.9	700	ug/Kg
205-99-2	Benzo(b)fluoranthene	610	J	23.2	70.9	700	ug/Kg
207-08-9	Benzo(k)fluoranthene	180	J	33.4	70.9	700	ug/Kg
50-32-8	Benzo(a)pyrene	480	J	15.3	70.9	700	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	250	J	23.6	70.9	700	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	700	U	20.4	70.9	700	ug/Kg
191-24-2	Benzo(g,h,i)perylene	300	J	28.7	70.9	700	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	84.1		28 - 127		56%	SPK: 150
13127-88-3	Phenol-d6	87.9		34 - 127		59%	SPK: 150
4165-60-0	Nitrobenzene-d5	63.5		31 - 132		63%	SPK: 100
321-60-8	2-Fluorobiphenyl	65.9		39 - 123		66%	SPK: 100
118-79-6	2,4,6-Tribromophenol	78.1		30 - 133		52%	SPK: 150
1718-51-0	Terphenyl-d14	67.2		37 - 115		67%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	169645	6.41				

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6

Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB03(0-2)		SDG No.:	F3304	
Lab Sample ID:	F3304-04		Matrix:	SOIL	D
Analytical Method:	SW8270		% Moisture:	6.1	
Sample Wt/Vol:	30.05 Units: g		Final Vol:	1000	uL
Soil Aliquot Vol:	uL		Test:	SVOCMS Group1	
Extraction Type :	Decanted : N		Level :	LOW	
Injection Volume :	GPC Factor : 1.0		GPC Cleanup :	N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072809.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	677983	8.34				
15067-26-2	Acenaphthene-d10	384854	11.16				
1517-22-2	Phenanthrene-d10	694191	13.55				
1719-03-5	Chrysene-d12	823744	17.23				
1520-96-3	Perylene-d12	717320	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
~~000077-76-9~~	~~Propane, 2,2-dimethoxy-~~	~~5400~~	~~JB~~			~~1.37~~	~~ug/Kg~~
000994-05-8	Butane, 2-methoxy-2-methyl-	560	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1500~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2100	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	620	J			10.79	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	160	J N			14.48	ug/Kg
000110-36-1	n-Butyl myristate	150	J N			16.63	ug/Kg
	unknown17.11	150	J			17.11	ug/Kg
000629-97-0	Docosane	200	J N			18.62	ug/Kg
000192-97-2	Benzo[e]pyrene	280	J			18.79	ug/Kg
000629-99-2	Pentacosane	200	J			19.35	ug/Kg

9/4/14 2

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	9.7
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072810.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	730	U	17	73.6	730	ug/Kg
95-48-7	2-Methylphenol	730	U	40	73.6	730	ug/Kg
65794-96-9	3+4-Methylphenols	730	U	38.2	73.6	730	ug/Kg
91-20-3	Naphthalene	730	U	25.4	73.6	730	ug/Kg
208-96-8	Acenaphthylene	490	J	18.5	73.6	730	ug/Kg
83-32-9	Acenaphthene	300	J	20.8	73.6	730	ug/Kg
132-64-9	Dibenzofuran	180	J	28.7	73.6	730	ug/Kg
86-73-7	Fluorene	380	J	27.8	73.6	730	ug/Kg
118-74-1	Hexachlorobenzene	730	U	30	73.6	730	ug/Kg
87-86-5	Pentachlorophenol	730	U	50.3	73.6	730	ug/Kg
85-01-8	Phenanthrene	4300		19.9	73.6	730	ug/Kg
120-12-7	Anthracene	1200		15	73.6	730	ug/Kg
206-44-0	Fluoranthene	7300 ~~6600~~ D ~~E~~		~~14.8~~ 27.6	~~73.6~~ 150	~~730~~ 1500	ug/Kg
129-00-0	Pyrene	5600		17.7	73.6	730	ug/Kg
56-55-3	Benzo(a)anthracene	3500		35.1	73.6	730	ug/Kg
218-01-9	Chrysene	3100		33.3	73.6	730	ug/Kg
205-99-2	Benzo(b)fluoranthene	3600		24.1	73.6	730	ug/Kg
207-08-9	Benzo(k)fluoranthene	1200		34.7	73.6	730	ug/Kg
50-32-8	Benzo(a)pyrene	2900		15.9	73.6	730	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1600		24.5	73.6	730	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	410	J	21.2	73.6	730	ug/Kg
191-24-2	Benzo(g,h,i)perylene	1700		29.8	73.6	730	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	130		28 - 127		86%	SPK: 150
13127-88-3	Phenol-d6	140		34 - 127		92%	SPK: 150
4165-60-0	Nitrobenzene-d5	100		31 - 132		102%	SPK: 100
321-60-8	2-Fluorobiphenyl	100		39 - 123		104%	SPK: 100
118-79-6	2,4,6-Tribromophenol	120		30 - 133		77%	SPK: 150
1718-51-0	Terphenyl-d14	100		37 - 115		104%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	130973	6.41				

5/4/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	9.7
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072810.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	519758	8.34				
15067-26-2	Acenaphthene-d10	291422	11.16				
1517-22-2	Phenanthrene-d10	553147	13.56				
1719-03-5	Chrysene-d12	624129	17.23				
1520-96-3	Perylene-d12	582432	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	14500	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	980	J N			1.62	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~2000~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	3200	J			6.09	ug/Kg
105-60-2	Caprolactam	260	J			9.04	ug/Kg
131-11-3	Dimethylphthalate	1100	J			10.79	ug/Kg
86-74-8	Carbazole	360	J			13.96	ug/Kg
016587-52-3	Dibenzothiophene, 3-methyl-	370	J N			14.07	ug/Kg
000832-69-9	Phenanthrene, 1-methyl-	760	J			14.33	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	980	J			14.37	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	1400	J			14.48	ug/Kg
107426-38-0	Naphtho[2,3-b]norbornadiene	550	J			14.52	ug/Kg
035465-71-5	2-Phenylnaphthalene	860	J			14.78	ug/Kg
003674-66-6	Phenanthrene, 2,5-dimethyl-	760	J			15.13	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	470	J			15.24	ug/Kg
000243-17-4	11H-Benzo[b]fluorene	420	J			16.09	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	570	J			17.28	ug/Kg
000192-97-2	Benzo[e]pyrene	820	J N			18.6	ug/Kg
000198-55-0	Perylene	1800	J			18.79	ug/Kg
068351-74-6	1-Methyl-1-hydridotetrachlorocyclo	780	J			20.03	ug/Kg
000213-46-7	1,2:7,8-Dibenzophenanthrene	490	J			20.32	ug/Kg

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6

Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)DL			SDG No.:	F3304
Lab Sample ID:	F3304-05DL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	9.7
Sample Wt/Vol:	30.09	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup : N	PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072892.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	1500	UD	34	150	1500	ug/Kg
95-48-7	2-Methylphenol	1500	UD	79.9	150	1500	ug/Kg
65794-96-9	3+4-Methylphenols	1500	UD	76.4	150	1500	ug/Kg
91-20-3	Naphthalene	1500	UD	50.8	150	1500	ug/Kg
208-96-8	Acenaphthylene	390	JD	37.1	150	1500	ug/Kg
83-32-9	Acenaphthene	310	JD	41.5	150	1500	ug/Kg
132-64-9	Dibenzofuran	1500	UD	57.4	150	1500	ug/Kg
86-73-7	Fluorene	390	JD	55.6	150	1500	ug/Kg
118-74-1	Hexachlorobenzene	1500	UD	60.1	150	1500	ug/Kg
87-86-5	Pentachlorophenol	1500	UD	100	150	1500	ug/Kg
85-01-8	Phenanthrene	4500	D	39.7	150	1500	ug/Kg
120-12-7	Anthracene	1100	JD	30	150	1500	ug/Kg
206-44-0	Fluoranthene	7300	D	29.6	150	1500	ug/Kg
129-00-0	Pyrene	5400	D	35.3	150	1500	ug/Kg
56-55-3	Benzo(a)anthracene	3500	D	70.2	150	1500	ug/Kg
218-01-9	Chrysene	3200	D	66.7	150	1500	ug/Kg
205-99-2	Benzo(b)fluoranthene	3600	D	48.1	150	1500	ug/Kg
207-08-9	Benzo(k)fluoranthene	1200	JD	69.3	150	1500	ug/Kg
50-32-8	Benzo(a)pyrene	2900	D	31.8	150	1500	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1700	D	49	150	1500	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	420	JD	42.4	150	1500	ug/Kg
191-24-2	Benzo(g,h,i)perylene	1800	D	59.6	150	1500	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	120		28 - 127		81%	SPK: 150
13127-88-3	Phenol-d6	130		34 - 127		83%	SPK: 150
4165-60-0	Nitrobenzene-d5	100		31 - 132		101%	SPK: 100
321-60-8	2-Fluorobiphenyl	100		39 - 123		101%	SPK: 100
118-79-6	2,4,6-Tribromophenol	98.5		30 - 133		66%	SPK: 150
1718-51-0	Terphenyl-d14	91.2		37 - 115		91%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	108066	6.26				

9/4/14

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)DL			SDG No.:	F3304
Lab Sample ID:	F3304-05DL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	9.7
Sample Wt/Vol:	30.09	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted :	N	Level :	LOW
Injection Volume :		GPC Factor :	1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072892.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	416889	8.2				
15067-26-2	Acenaphthene-d10	234510	10.98				
1517-22-2	Phenanthrene-d10	453207	13.37				
1719-03-5	Chrysene-d12	524625	17.07				
1520-96-3	Perylene-d12	502607	18.73				

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	21.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072811.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	840	U	19.7	85.2	840	ug/Kg
95-48-7	2-Methylphenol	840	U	46.3	85.2	840	ug/Kg
65794-96-9	3+4-Methylphenols	840	U	44.2	85.2	840	ug/Kg
91-20-3	Naphthalene	840	U	29.4	85.2	840	ug/Kg
208-96-8	Acenaphthylene	360	J	21.5	85.2	840	ug/Kg
83-32-9	Acenaphthene	840	U	24	85.2	840	ug/Kg
132-64-9	Dibenzofuran	840	U	33.2	85.2	840	ug/Kg
86-73-7	Fluorene	840	U	32.2	85.2	840	ug/Kg
118-74-1	Hexachlorobenzene	840	U	34.8	85.2	840	ug/Kg
87-86-5	Pentachlorophenol	840	U	58.3	85.2	840	ug/Kg
85-01-8	Phenanthrene	1100		23	85.2	840	ug/Kg
120-12-7	Anthracene	330	J	17.4	85.2	840	ug/Kg
206-44-0	Fluoranthene	1900		17.1	85.2	840	ug/Kg
129-00-0	Pyrene	2400		20.5	85.2	840	ug/Kg
56-55-3	Benzo(a)anthracene	1300		40.7	85.2	840	ug/Kg
218-01-9	Chrysene	1200		38.6	85.2	840	ug/Kg
205-99-2	Benzo(b)fluoranthene	1900		27.9	85.2	840	ug/Kg
207-08-9	Benzo(k)fluoranthene	510	J	40.2	85.2	840	ug/Kg
50-32-8	Benzo(a)pyrene	1600		18.4	85.2	840	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	930		28.4	85.2	840	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	200	J	24.6	85.2	840	ug/Kg
191-24-2	Benzo(g,h,i)perylene	1500		34.5	85.2	840	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	120		28 - 127		83%	SPK: 150
13127-88-3	Phenol-d6	130		34 - 127		89%	SPK: 150
4165-60-0	Nitrobenzene-d5	100		31 - 132		103%	SPK: 100
321-60-8	2-Fluorobiphenyl	90.5		39 - 123		90%	SPK: 100
118-79-6	2,4,6-Tribromophenol	110		30 - 133		74%	SPK: 150
1718-51-0	Terphenyl-d14	87.8		37 - 115		88%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	176445	6.41				

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	21.9
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072811.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	671163	8.36				
15067-26-2	Acenaphthene-d10	383781	11.16				
1517-22-2	Phenanthrene-d10	702446	13.56				
1719-03-5	Chrysene-d12	789133	17.23				
1520-96-3	Perylene-d12	703493	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	16400	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	1200	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~2300~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	3700	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	980	J			10.79	ug/Kg
000832-69-9	Phenanthrene, 1-methyl-	190	J N			14.37	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	390	J			14.48	ug/Kg
000612-94-2	Naphthalene, 2-phenyl-	260	J			14.78	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	210	J			15.23	ug/Kg
025732-74-5	Cyclopenta(cd)pyrene, 3,4-dihydro-	240	J			16.94	ug/Kg
018835-32-0	1-Tricosene	240	J			17.11	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	630	J			17.28	ug/Kg
016452-37-2	Benz[a]anthracene, 1,2,3,4,7,7a,8,	210	J N			17.9	ug/Kg
001090-13-7	5,12-Naphthacenedione	220	J			18.11	ug/Kg
000192-97-2	Benzo[e]pyrene	490	J			18.6	ug/Kg
074003-55-7	3,4-Dibromobenzaldehyde	230	J			19.39	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
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N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	9.4
Sample Wt/Vol:	30.04 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072798.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	360	U	8.5	36.7	360	ug/Kg
95-48-7	2-Methylphenol	360	U	20	36.7	360	ug/Kg
65794-96-9	3+4-Methylphenols	360	U	19.1	36.7	360	ug/Kg
91-20-3	Naphthalene	360	U	12.7	36.7	360	ug/Kg
208-96-8	Acenaphthylene	360	U	9.3	36.7	360	ug/Kg
83-32-9	Acenaphthene	360	U	10.4	36.7	360	ug/Kg
132-64-9	Dibenzofuran	360	U	14.3	36.7	360	ug/Kg
86-73-7	Fluorene	360	U	13.9	36.7	360	ug/Kg
118-74-1	Hexachlorobenzene	360	U	15	36.7	360	ug/Kg
87-86-5	Pentachlorophenol	360	U	25.1	36.7	360	ug/Kg
85-01-8	Phenanthrene	410		9.9	36.7	360	ug/Kg
120-12-7	Anthracene	84.5	J	7.5	36.7	360	ug/Kg
206-44-0	Fluoranthene	530		7.4	36.7	360	ug/Kg
129-00-0	Pyrene	400		8.8	36.7	360	ug/Kg
56-55-3	Benzo(a)anthracene	230	J	17.5	36.7	360	ug/Kg
218-01-9	Chrysene	210	J	16.6	36.7	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	240	J	12	36.7	360	ug/Kg
207-08-9	Benzo(k)fluoranthene	89.3	J	17.3	36.7	360	ug/Kg
50-32-8	Benzo(a)pyrene	180	J	7.9	36.7	360	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	97.7	J	12.2	36.7	360	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	360	U	10.6	36.7	360	ug/Kg
191-24-2	Benzo(g,h,i)perylene	97.7	J	14.9	36.7	360	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	120		28 - 127		78%	SPK: 150
13127-88-3	Phenol-d6	130		34 - 127		83%	SPK: 150
4165-60-0	Nitrobenzene-d5	91.9		31 - 132		92%	SPK: 100
321-60-8	2-Fluorobiphenyl	83.4		39 - 123		83%	SPK: 100
118-79-6	2,4,6-Tribromophenol	110		30 - 133		75%	SPK: 150
1718-51-0	Terphenyl-d14	82.4		37 - 115		82%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	168760	6.4				

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S

Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB04(0-2)		SDG No.:	F3304	
Lab Sample ID:	F3304-07		Matrix:	SOIL	
Analytical Method:	SW8270		% Moisture:	9.4	
Sample Wt/Vol:	30.04 Units: g		Final Vol:	1000	uL
Soil Aliquot Vol:	uL		Test:	SVOCMS Group1	
Extraction Type :	Decanted : N		Level :	LOW	
Injection Volume :	GPC Factor : 1.0		GPC Cleanup : N	PH :	

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072798.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	645284	8.34				
15067-26-2	Acenaphthene-d10	361489	11.14				
1517-22-2	Phenanthrene-d10	718055	13.55				
1719-03-5	Chrysene-d12	785698	17.23				
1520-96-3	Perylene-d12	703796	18.89				
TENTATIVE IDENTIFIED COMPOUNDS							
~~000077-76-9~~	~~Propane, 2,2-dimethoxy-~~	~~11200~~	~~JB~~			~~1.37~~	~~ug/Kg~~
000994-05-8	Butane, 2-methoxy-2-methyl-	1200	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1700~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2900	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	970	J			10.79	ug/Kg
000192-97-2	Benzo[e]pyrene	110	J N			18.78	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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6

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	9.6
Sample Wt/Vol:	30.06 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072814.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	730	U	17	73.6	730	ug/Kg
95-48-7	2-Methylphenol	730	U	40	73.6	730	ug/Kg
65794-96-9	3+4-Methylphenols	730	U	38.2	73.6	730	ug/Kg
91-20-3	Naphthalene	1100		25.4	73.6	730	ug/Kg
208-96-8	Acenaphthylene	640	J	18.5	73.6	730	ug/Kg
83-32-9	Acenaphthene	1400		20.8	73.6	730	ug/Kg
132-64-9	Dibenzofuran	540	J	28.7	73.6	730	ug/Kg
86-73-7	Fluorene	1200		27.8	73.6	730	ug/Kg
118-74-1	Hexachlorobenzene	730	U	30	73.6	730	ug/Kg
87-86-5	Pentachlorophenol	730	U	50.3	73.6	730	ug/Kg
85-01-8	Phenanthrene	8400 ~~6700~~	D ~~E~~	~~19.9~~ ~~39.7~~	~~73.6~~ 150	~~730~~ 1500	ug/Kg
120-12-7	Anthracene	2100		15	73.6	730	ug/Kg
206-44-0	Fluoranthene	10000 ~~7400~~	D ~~E~~	~~14.8~~ ~~29.6~~	~~73.6~~ 150	~~730~~ 1500	ug/Kg
129-00-0	Pyrene	8500 ~~8100~~	D ~~E~~	~~17.7~~ ~~35.3~~	~~73.6~~ 150	~~730~~ 1500	ug/Kg
56-55-3	Benzo(a)anthracene	5300		35.1	73.6	730	ug/Kg
218-01-9	Chrysene	4400		33.3	73.6	730	ug/Kg
205-99-2	Benzo(b)fluoranthene	6300 ~~6600~~	D ~~E~~	~~24.1~~ ~~48.1~~	~~73.6~~ 150	~~730~~ 1500	ug/Kg
207-08-9	Benzo(k)fluoranthene	1100		34.7	73.6	730	ug/Kg
50-32-8	Benzo(a)pyrene	4800		15.9	73.6	730	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	2800		24.5	73.6	730	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	710	J	21.2	73.6	730	ug/Kg
191-24-2	Benzo(g,h,i)perylene	3500		29.8	73.6	730	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	100		28 - 127		67%	SPK: 150
13127-88-3	Phenol-d6	110		34 - 127		71%	SPK: 150
4165-60-0	Nitrobenzene-d5	78.8		31 - 132		79%	SPK: 100
321-60-8	2-Fluorobiphenyl	71.4		39 - 123		71%	SPK: 100
118-79-6	2,4,6-Tribromophenol	93.4		30 - 133		62%	SPK: 150
1718-51-0	Terphenyl-d14	70.7		37 - 115		71%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	156534	6.41				

9/4/14 2

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6

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	9.6
Sample Wt/Vol:	30.06 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072814.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	629355	8.34				
15067-26-2	Acenaphthene-d10	347717	11.16				
1517-22-2	Phenanthrene-d10	657926	13.56				
1719-03-5	Chrysene-d12	714437	17.24				
1520-96-3	Perylene-d12	693980	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	12500	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	900	J N			1.62	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1500~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2500	J			6.09	ug/Kg
91-57-6	2-Methylnaphthalene	790	J			9.49	ug/Kg
131-11-3	Dimethylphthalate	820	J			10.79	ug/Kg
86-74-8	Carbazole	800	J			13.96	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	1200	J N			14.33	ug/Kg
000832-69-9	Phenanthrene, 1-methyl-	1200	J			14.37	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	2100	J			14.48	ug/Kg
035465-71-5	2-Phenylnaphthalene	1300	J			14.78	ug/Kg
000781-43-1	9,10-Dimethylanthracene	880	J			15.13	ug/Kg
001090-13-7	5,12-Naphthacenedione	910	J			18.11	ug/Kg
000192-97-2	Benzo[e]pyrene	1100	J			18.6	ug/Kg
	unknown19.40	1200	J			19.4	ug/Kg
000192-65-4	1,2:4,5-Dibenzopyrene	1500	J N			22.43	ug/Kg
000189-64-0	3,4:8,9-Dibenzopyrene	1100	J N			22.57	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)DL			SDG No.:	F3304
Lab Sample ID:	F3304-08DL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	9.6
Sample Wt/Vol:	30.06	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072894.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	1500	UD	34	150	1500	ug/Kg
95-48-7	2-Methylphenol	1500	UD	79.9	150	1500	ug/Kg
65794-96-9	3+4-Methylphenols	1500	UD	76.4	150	1500	ug/Kg
91-20-3	Naphthalene	1200	JD	50.8	150	1500	ug/Kg
208-96-8	Acenaphthylene	480	JD	37.1	150	1500	ug/Kg
83-32-9	Acenaphthene	1600	D	41.5	150	1500	ug/Kg
132-64-9	Dibenzofuran	620	JD	57.4	150	1500	ug/Kg
86-73-7	Fluorene	1300	JD	55.6	150	1500	ug/Kg
118-74-1	Hexachlorobenzene	1500	UD	60.1	150	1500	ug/Kg
87-86-5	Pentachlorophenol	1500	UD	100	150	1500	ug/Kg
85-01-8	Phenanthrene	8400	D	39.7	150	1500	ug/Kg
120-12-7	Anthracene	2300	D	30	150	1500	ug/Kg
206-44-0	Fluoranthene	10000	D	29.6	150	1500	ug/Kg
129-00-0	Pyrene	8500	D	35.3	150	1500	ug/Kg
56-55-3	Benzo(a)anthracene	5600	D	70.2	150	1500	ug/Kg
218-01-9	Chrysene	5000	D	66.7	150	1500	ug/Kg
205-99-2	Benzo(b)fluoranthene	6300	D	48.1	150	1500	ug/Kg
207-08-9	Benzo(k)fluoranthene	2300	D	69.3	150	1500	ug/Kg
50-32-8	Benzo(a)pyrene	5700	D	31.8	150	1500	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	3600	D	49	150	1500	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	900	JD	42.4	150	1500	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4300	D	59.6	150	1500	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	100		28 - 127		69%	SPK: 150
13127-88-3	Phenol-d6	110		34 - 127		72%	SPK: 150
4165-60-0	Nitrobenzene-d5	87.1		31 - 132		87%	SPK: 100
321-60-8	2-Fluorobiphenyl	80.5		39 - 123		81%	SPK: 100
118-79-6	2,4,6-Tribromophenol	91.6		30 - 133		61%	SPK: 150
1718-51-0	Terphenyl-d14	66.2		37 - 115		66%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	122129	6.26				

9/4/14

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S

Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)DL			SDG No.:	F3304
Lab Sample ID:	F3304-08DL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	9.6
Sample Wt/Vol:	30.06	Units:	g	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	SVOCMS Group1
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072894.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	462737	8.2				
15067-26-2	Acenaphthene-d10	260681	10.98				
1517-22-2	Phenanthrene-d10	498344	13.37				
1719-03-5	Chrysene-d12	586722	17.07				
1520-96-3	Perylene-d12	562936	18.73				

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)			SDG No.:	F3304
Lab Sample ID:	F3304-09			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	13.7
Sample Wt/Vol:	30.01	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072813.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	760	UR	17.8	77.2	760	ug/Kg
95-48-7	2-Methylphenol	760	U	41.9	77.2	760	ug/Kg
65794-96-9	3+4-Methylphenols	760	U	40.1	77.2	760	ug/Kg
91-20-3	Naphthalene	760	U	26.6	77.2	760	ug/Kg
208-96-8	Acenaphthylene	1100		19.5	77.2	760	ug/Kg
83-32-9	Acenaphthene	760	U	21.8	77.2	760	ug/Kg
132-64-9	Dibenzofuran	760	U	30.1	77.2	760	ug/Kg
86-73-7	Fluorene	160	J	29.2	77.2	760	ug/Kg
118-74-1	Hexachlorobenzene	760	U	31.5	77.2	760	ug/Kg
87-86-5	Pentachlorophenol	760	UR	52.8	77.2	760	ug/Kg
85-01-8	Phenanthrene	790		20.9	77.2	760	ug/Kg
120-12-7	Anthracene	360	J	15.8	77.2	760	ug/Kg
206-44-0	Fluoranthene	3200		15.5	77.2	760	ug/Kg
129-00-0	Pyrene	8100 ~~7500~~	D E	~~18.5~~ 37.1	~~77.2~~ 150	~~760~~ 1500	ug/Kg
56-55-3	Benzo(a)anthracene	3100		36.8	77.2	760	ug/Kg
218-01-9	Chrysene	2400		35	77.2	760	ug/Kg
205-99-2	Benzo(b)fluoranthene	4000		25.3	77.2	760	ug/Kg
207-08-9	Benzo(k)fluoranthene	1700		36.4	77.2	760	ug/Kg
50-32-8	Benzo(a)pyrene	4800		16.7	77.2	760	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	2500		25.7	77.2	760	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	540	J	22.2	77.2	760	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4300		31.3	77.2	760	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	18.9	*	28 - 127		13%	SPK: 150
13127-88-3	Phenol-d6	75.1		34 - 127		50%	SPK: 150
4165-60-0	Nitrobenzene-d5	74.1		31 - 132		74%	SPK: 100
321-60-8	2-Fluorobiphenyl	71.4		39 - 123		71%	SPK: 100
118-79-6	2,4,6-Tribromophenol	4.6	*	30 - 133		3%	SPK: 150
1718-51-0	Terphenyl-d14	72.7		37 - 115		73%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	163164	6.41				

8/26/14

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S

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.7
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072813.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	636782	8.36				
15067-26-2	Acenaphthene-d10	359548	11.16				
1517-22-2	Phenanthrene-d10	672564	13.56				
1719-03-5	Chrysene-d12	736185	17.23				
1520-96-3	Perylene-d12	701289	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
~~000077-76-9~~	~~Propane, 2,2-dimethoxy-~~	~~12300~~	~~JB~~			~~1.37~~	~~ug/Kg~~
000994-05-8	Butane, 2-methoxy-2-methyl-	790	J N			1.62	ug/Kg
~~000141-79-7~~	~~3-Penten-2-one, 4-methyl-~~	~~3100~~	~~AB~~			~~3.42~~	~~ug/Kg~~
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~2900~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	1100	J			6.09	ug/Kg
000083-33-0	1H-Inden-1-one, 2,3-dihydro-	820	J N			9.32	ug/Kg
131-11-3	Dimethylphthalate	810	J			10.79	ug/Kg
000082-86-0	1,2-Accnaphthylenedione	1100	J N			14.16	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	750	J			14.48	ug/Kg
005672-97-9	5,16[1,2]:8,13[1,2]-Dibenzen	380	J			14.78	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	770	J			15.24	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	290	J			17.28	ug/Kg
000192-97-2	Benzo[e]pyrene	2700	J N			18.79	ug/Kg
000239-85-0	13H-Dibenzo[a,h]fluorene	550	J			19.08	ug/Kg
074003-55-7	3,4-Dibromobenzaldehyde	880	J			19.4	ug/Kg
000191-26-4	Dibenzo[def,mno]chrysene	940	J			20.04	ug/Kg
000215-58-7	Benzo[b]triphenylene	460	J			20.38	ug/Kg
	unknown21.55	400	J			21.55	ug/Kg
000189-64-0	3,4:8,9-Dibenzopyrene	470	J N			22.57	ug/Kg

9/4/14

U = Not Detected
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)DL	SDG No.:	F3304
Lab Sample ID:	F3304-09DL	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.7
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072893.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	1500	UD	35.7	150	1500	ug/Kg
95-48-7	2-Methylphenol	1500	UD	83.9	150	1500	ug/Kg
65794-96-9	3+4-Methylphenols	1500	UD	80.2	150	1500	ug/Kg
91-20-3	Naphthalene	1500	UD	53.3	150	1500	ug/Kg
208-96-8	Acenaphthylene	850	JD	38.9	150	1500	ug/Kg
83-32-9	Acenaphthene	1500	UD	43.6	150	1500	ug/Kg
132-64-9	Dibenzofuran	1500	UD	60.2	150	1500	ug/Kg
86-73-7	Fluorene	1500	UD	58.4	150	1500	ug/Kg
118-74-1	Hexachlorobenzene	1500	UD	63	150	1500	ug/Kg
87-86-5	Pentachlorophenol	1500	UD	110	150	1500	ug/Kg
85-01-8	Phenanthrene	880	JD	41.7	150	1500	ug/Kg
120-12-7	Anthracene	330	JD	31.5	150	1500	ug/Kg
206-44-0	Fluoranthene	3900	D	31	150	1500	ug/Kg
129-00-0	Pyrene	8100	D	37.1	150	1500	ug/Kg
56-55-3	Benzo(a)anthracene	3200	D	73.7	150	1500	ug/Kg
218-01-9	Chrysene	2600	D	70	150	1500	ug/Kg
205-99-2	Benzo(b)fluoranthene	4600	D	50.5	150	1500	ug/Kg
207-08-9	Benzo(k)fluoranthene	1700	D	72.7	150	1500	ug/Kg
50-32-8	Benzo(a)pyrene	5500	D	33.4	150	1500	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	3000	D	51.4	150	1500	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	560	JD	44.5	150	1500	ug/Kg
191-24-2	Benzo(g,h,i)perylene	5100	D	62.6	150	1500	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	18.4	*	28 - 127		12%	SPK: 150
13127-88-3	Phenol-d6	75.6		34 - 127		50%	SPK: 150
4165-60-0	Nitrobenzene-d5	76.5		31 - 132		76%	SPK: 100
321-60-8	2-Fluorobiphenyl	79.8		39 - 123		80%	SPK: 100
118-79-6	2,4,6-Tribromophenol	3.4	*	30 - 133		2%	SPK: 150
1718-51-0	Terphenyl-d14	68.6		37 - 115		69%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	121023	6.26				

9/4/14

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6

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)DL	SDG No.:	F3304
Lab Sample ID:	F3304-09DL	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	13.7
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072893.D	4	07/25/14	07/31/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	479352	8.2				
15067-26-2	Acenaphthene-d10	262026	10.99				
1517-22-2	Phenanthrene-d10	498681	13.37				
1719-03-5	Chrysene-d12	587876	17.05				
1520-96-3	Perylene-d12	554624	18.73				

9/4/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	24.5
Sample Wt/Vol:	30.11 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072799.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	440	U	10.2	44	440	ug/Kg
95-48-7	2-Methylphenol	440	U	23.9	44	440	ug/Kg
65794-96-9	3+4-Methylphenols	440	U	22.8	44	440	ug/Kg
91-20-3	Naphthalene	440	U	15.2	44	440	ug/Kg
208-96-8	Acenaphthylene	440	U	11.1	44	440	ug/Kg
83-32-9	Acenaphthene	440	U	12.4	44	440	ug/Kg
132-64-9	Dibenzofuran	440	U	17.2	44	440	ug/Kg
86-73-7	Fluorene	440	U	16.6	44	440	ug/Kg
118-74-1	Hexachlorobenzene	440	U	17.9	44	440	ug/Kg
87-86-5	Pentachlorophenol	440	U	30.1	44	440	ug/Kg
85-01-8	Phenanthrene	140	J	11.9	44	440	ug/Kg
120-12-7	Anthracene	440	U	9	44	440	ug/Kg
206-44-0	Fluoranthene	230	J	8.8	44	440	ug/Kg
129-00-0	Pyrene	190	J	10.6	44	440	ug/Kg
56-55-3	Benzo(a)anthracene	110	J	21	44	440	ug/Kg
218-01-9	Chrysene	100	J	19.9	44	440	ug/Kg
205-99-2	Benzo(b)fluoranthene	130	J	14.4	44	440	ug/Kg
207-08-9	Benzo(k)fluoranthene	440	U	20.7	44	440	ug/Kg
50-32-8	Benzo(a)pyrene	94.6	J	9.5	44	440	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	440	U	14.6	44	440	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	440	U	12.7	44	440	ug/Kg
191-24-2	Benzo(g,h,i)perylene	440	U	17.8	44	440	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	63.2		28 - 127		42%	SPK: 150
13127-88-3	Phenol-d6	64.2		34 - 127		43%	SPK: 150
4165-60-0	Nitrobenzene-d5	51		31 - 132		51%	SPK: 100
321-60-8	2-Fluorobiphenyl	45.3		39 - 123		45%	SPK: 100
118-79-6	2,4,6-Tribromophenol	58.2		30 - 133		39%	SPK: 150
1718-51-0	Terphenyl-d14	44.9		37 - 115		45%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	164104	6.4				

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6

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	24.5
Sample Wt/Vol:	30.11 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072799.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	620100	8.34				
15067-26-2	Acenaphthene-d10	349413	11.14				
1517-22-2	Phenanthrene-d10	666484	13.55				
1719-03-5	Chrysene-d12	736497	17.21				
1520-96-3	Perylene-d12	659678	18.89				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	8700	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	680	J N			1.62	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1100~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	1900	J			6.09	ug/Kg
131-11-3	Dimethylphthalate	630	J			10.79	ug/Kg

9/4/14

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Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)			SDG No.:	F3304
Lab Sample ID:	F3304-11			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	19.2
Sample Wt/Vol:	30.07	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072812.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	810	U	19	82.3	810	ug/Kg
95-48-7	2-Methylphenol	810	U	44.7	82.3	810	ug/Kg
65794-96-9	3+4-Methylphenols	810	U	42.7	82.3	810	ug/Kg
91-20-3	Naphthalene	500	J	28.4	82.3	810	ug/Kg
208-96-8	Acenaphthylene	630	J	20.7	82.3	810	ug/Kg
83-32-9	Acenaphthene	620	J	23.2	82.3	810	ug/Kg
132-64-9	Dibenzofuran	240	J	32.1	82.3	810	ug/Kg
86-73-7	Fluorene	530	J	31.1	82.3	810	ug/Kg
118-74-1	Hexachlorobenzene	810	U	33.6	82.3	810	ug/Kg
87-86-5	Pentachlorophenol	810	U	56.3	82.3	810	ug/Kg
85-01-8	Phenanthrene	3400		22.2	82.3	810	ug/Kg
120-12-7	Anthracene	970		16.8	82.3	810	ug/Kg
206-44-0	Fluoranthene	4000		16.5	82.3	810	ug/Kg
129-00-0	Pyrene	4900		19.8	82.3	810	ug/Kg
56-55-3	Benzo(a)anthracene	3100		39.3	82.3	810	ug/Kg
218-01-9	Chrysene	2300		37.3	82.3	810	ug/Kg
205-99-2	Benzo(b)fluoranthene	3700		26.9	82.3	810	ug/Kg
207-08-9	Benzo(k)fluoranthene	1000		38.8	82.3	810	ug/Kg
50-32-8	Benzo(a)pyrene	3300		17.8	82.3	810	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	1900		27.4	82.3	810	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	410	J	23.7	82.3	810	ug/Kg
191-24-2	Benzo(g,h,i)perylene	2700		33.3	82.3	810	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	97.7		28 - 127		65%	SPK: 150
13127-88-3	Phenol-d6	100		34 - 127		68%	SPK: 150
4165-60-0	Nitrobenzene-d5	75.6		31 - 132		76%	SPK: 100
321-60-8	2-Fluorobiphenyl	53		39 - 123		53%	SPK: 100
118-79-6	2,4,6-Tribromophenol	84.4		30 - 133		56%	SPK: 150
1718-51-0	Terphenyl-d14	47.8		37 - 115		48%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	165488	6.41				

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	19.2
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072812.D	2	07/25/14	07/27/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	647035	8.34				
15067-26-2	Acenaphthene-d10	377190	11.16				
1517-22-2	Phenanthrene-d10	693609	13.55				
1719-03-5	Chrysene-d12	780528	17.23				
1520-96-3	Perylene-d12	722056	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
~~000077-76-9~~	~~Propane, 2,2-dimethoxy-~~	~~13700~~	~~JB~~			~~1.37~~	~~ug/Kg~~
000994-05-8	Butane, 2-methoxy-2-methyl-	920	J N			1.62	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1600~~	~~AB~~			~~4.09~~	~~ug/Kg~~
	unknown6.09	2800	J			6.09	ug/Kg
91-57-6	2-Methylnaphthalene	400	J			9.49	ug/Kg
000090-12-0	Naphthalene, 1-methyl-	450	J N			9.64	ug/Kg
000571-61-9	Naphthalene, 1,5-dimethyl-	310	J N			10.62	ug/Kg
131-11-3	Dimethylphthalate	970	J			10.79	ug/Kg
86-74-8	Carbazole	320	J			13.96	ug/Kg
000082-86-0	1,2-Acenaphthylenedione	400	J N			14.16	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	520	J			14.33	ug/Kg
000613-12-7	Anthracene, 2-methyl-	580	J			14.37	ug/Kg
000203-64-5	4H-Cyclopenta[def]phenanthrene	1100	J			14.48	ug/Kg
014251-57-1	Benzene, 1,1-(1,2-propadienyliden	390	J			14.52	ug/Kg
000612-94-2	Naphthalene, 2-phenyl-	630	J			14.78	ug/Kg
003674-66-6	Phenanthrene, 2,5-dimethyl-	460	J			15.13	ug/Kg
005737-13-3	Cyclopenta(def)phenanthrenone	350	J			15.23	ug/Kg
000192-97-2	Benzo[e]pyrene	1400	J			18.78	ug/Kg
000220-97-3	11H-Indeno[2,1-a]phenanthrene	310	J			19.07	ug/Kg
000189-64-0	3,4:8,9-Dibenzopyrene	400	J			22.4	ug/Kg

9/4/14 2

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.6
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072801.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	360	U	8.3	36	360	ug/Kg
95-48-7	2-Methylphenol	360	U	19.6	36	360	ug/Kg
65794-96-9	3+4-Methylphenols	360	U	18.7	36	360	ug/Kg
91-20-3	Naphthalene	360	U	12.4	36	360	ug/Kg
208-96-8	Acenaphthylene	93.3	J	9.1	36	360	ug/Kg
83-32-9	Acenaphthene	92.2	J	10.2	36	360	ug/Kg
132-64-9	Dibenzofuran	360	U	14	36	360	ug/Kg
86-73-7	Fluorene	110	J	13.6	36	360	ug/Kg
118-74-1	Hexachlorobenzene	360	U	14.7	36	360	ug/Kg
87-86-5	Pentachlorophenol	360	U	24.6	36	360	ug/Kg
85-01-8	Phenanthrene	1100		9.7	36	360	ug/Kg
120-12-7	Anthracene	260	J	7.3	36	360	ug/Kg
206-44-0	Fluoranthene	1400		7.2	36	360	ug/Kg
129-00-0	Pyrene	1300		8.6	36	360	ug/Kg
56-55-3	Benzo(a)anthracene	730		17.2	36	360	ug/Kg
218-01-9	Chrysene	730		16.3	36	360	ug/Kg
205-99-2	Benzo(b)fluoranthene	770		11.8	36	360	ug/Kg
207-08-9	Benzo(k)fluoranthene	370		17	36	360	ug/Kg
50-32-8	Benzo(a)pyrene	690		7.8	36	360	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	400		12	36	360	ug/Kg
53-70-3	Dibenzo(a,h)anthracene	92.9	J	10.4	36	360	ug/Kg
191-24-2	Benzo(g,h,i)perylene	450		14.6	36	360	ug/Kg
SURROGATES							
367-12-4	2-Fluorophenol	78.4		28 - 127		52%	SPK: 150
13127-88-3	Phenol-d6	81.7		34 - 127		54%	SPK: 150
4165-60-0	Nitrobenzene-d5	64.2		31 - 132		64%	SPK: 100
321-60-8	2-Fluorobiphenyl	62.7		39 - 123		63%	SPK: 100
118-79-6	2,4,6-Tribromophenol	72.7		30 - 133		48%	SPK: 150
1718-51-0	Terphenyl-d14	61.3		37 - 115		61%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	180172	6.4				

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6

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	7.6
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072801.D	1	07/25/14	07/26/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	692142	8.34				
15067-26-2	Acenaphthene-d10	397566	11.16				
1517-22-2	Phenanthrene-d10	732941	13.55				
1719-03-5	Chrysene-d12	811757	17.23				
1520-96-3	Perylene-d12	738299	18.91				
TENTATIVE IDENTIFIED COMPOUNDS							
	unknown1.37	7700	J			1.37	ug/Kg
000994-05-8	Butane, 2-methoxy-2-methyl-	1300	J N			1.64	ug/Kg
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~1200~~	~~AB~~			~~4.08~~	~~ug/Kg~~
	unknown6.09	2000	J			6.09	ug/Kg
105-60-2	Caprolactam	580	J			9.04	ug/Kg
131-11-3	Dimethylphthalate	610	J			10.79	ug/Kg
86-74-8	Carbazole	110	J			13.96	ug/Kg
000832-69-9	Phenanthrene, 1-methyl-	150	J N			14.32	ug/Kg
002531-84-2	Phenanthrene, 2-methyl-	200	J N			14.37	ug/Kg
	unknown14.48	290	J			14.48	ug/Kg
035465-71-5	2-Phenylnaphthalene	170	J N			14.78	ug/Kg
000781-43-1	9,10-Dimethylanthracene	130	J			15.12	ug/Kg
003674-66-6	Phenanthrene, 2,5-dimethyl-	120	J			15.24	ug/Kg
000243-17-4	11H-Benzo[b]fluorene	150	J			16.09	ug/Kg
000110-36-1	n-Butyl myristate	120	J			16.63	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	120	J			17.28	ug/Kg
000198-55-0	Perylene	440	J N			18.78	ug/Kg
000191-26-4	Dibenzo[def,mno]chrysene	140	J			20.03	ug/Kg
000215-58-7	Benzo[b]triphenylene	120	J			20.31	ug/Kg
003319-31-1	tri(2-Ethylhexyl) trimellitate	160	J			21	ug/Kg

9/4/14 2

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7

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	8.5 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023544.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.9	U	0.142	0.359	1.9	ug/kg
319-85-7	beta-BHC	1.9	U	0.196	0.359	1.9	ug/kg
319-86-8	delta-BHC	1.9	U	0.109	0.359	1.9	ug/kg
58-89-9	gamma-BHC (Lindane)	1.9	U	0.163	0.359	1.9	ug/kg
76-44-8	Heptachlor	1.9	U	0.152	0.359	1.9	ug/kg
309-00-2	Aldrin	1.9	U	0.109	0.359	1.9	ug/kg
959-98-8	Endosulfan I	1.9	U	0.163	0.359	1.9	ug/kg
60-57-1	Dieldrin	5.9	P J	0.142	0.359	1.9	ug/kg
72-55-9	4,4-DDE	130 ~~170~~	E D	~~0.218~~ 2.2	~~0.359~~ 3.6	~~1.9~~ 18.5	ug/kg
72-20-8	Endrin	1.9	U	0.196	0.359	1.9	ug/kg
33213-65-9	Endosulfan II	1.9	U	0.152	0.359	1.9	ug/kg
72-54-8	4,4-DDD	6.2	P J	0.185	0.359	1.9	ug/kg
1031-07-8	Endosulfan Sulfate	1.9	U	0.163	0.359	1.9	ug/kg
50-29-3	4,4-DDT	120 ~~160~~	E D	~~0.152~~ 1.5	~~0.359~~ 3.6	~~1.9~~ 18.5	ug/kg
5103-71-9	alpha-Chlordane	1.9	U	0.152	0.359	1.9	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	20.2		10 - 169		101%	SPK: 20
877-09-8	Tetrachloro-m-xylene	20.3		31 - 151		102%	SPK: 20

9/9/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)DL	SDG No.:	F3304
Lab Sample ID:	F3304-01DL	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	8.5 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023562.D	10	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	18.5	UD	1.4	3.6	18.5	ug/kg
319-85-7	beta-BHC	18.5	UD	2	3.6	18.5	ug/kg
319-86-8	delta-BHC	18.5	UD	1.1	3.6	18.5	ug/kg
58-89-9	gamma-BHC (Lindane)	18.5	UD	1.6	3.6	18.5	ug/kg
76-44-8	Heptachlor	18.5	UD	1.5	3.6	18.5	ug/kg
309-00-2	Aldrin	18.5	UD	1.1	3.6	18.5	ug/kg
959-98-8	Endosulfan I	18.5	UD	1.6	3.6	18.5	ug/kg
60-57-1	Dieldrin	18.5	UD	1.4	3.6	18.5	ug/kg
72-55-9	4,4-DDE	130	D	2.2	3.6	18.5	ug/kg
72-20-8	Endrin	18.5	UD	2	3.6	18.5	ug/kg
33213-65-9	Endosulfan II	18.5	UD	1.5	3.6	18.5	ug/kg
72-54-8	4,4-DDD	18.5	UD	1.9	3.6	18.5	ug/kg
1031-07-8	Endosulfan Sulfate	18.5	UD	1.6	3.6	18.5	ug/kg
50-29-3	4,4-DDT	120	D	1.5	3.6	18.5	ug/kg
5103-71-9	alpha-Chlordane	18.5	UD	1.5	3.6	18.5	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	0	*	10 - 169		0%	SPK: 20
877-09-8	Tetrachloro-m-xylene	0	*	31 - 151		0%	SPK: 20

9/9/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	17.6 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023545.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2.1	U	0.157	0.399	2.1	ug/kg
319-85-7	beta-BHC	2.1	U	0.218	0.399	2.1	ug/kg
319-86-8	delta-BHC	2.1	U	0.121	0.399	2.1	ug/kg
58-89-9	gamma-BHC (Lindane)	2.1	U	0.182	0.399	2.1	ug/kg
76-44-8	Heptachlor	2.1	U	0.169	0.399	2.1	ug/kg
309-00-2	Aldrin	2.1	U	0.121	0.399	2.1	ug/kg
959-98-8	Endosulfan I	2.1	U	0.182	0.399	2.1	ug/kg
60-57-1	Dieldrin	2.1	U	0.157	0.399	2.1	ug/kg
72-55-9	4,4-DDE	2.5		0.242	0.399	2.1	ug/kg
72-20-8	Endrin	2.1	U	0.218	0.399	2.1	ug/kg
33213-65-9	Endosulfan II	2.1	U	0.169	0.399	2.1	ug/kg
72-54-8	4,4-DDD	2.1	U	0.206	0.399	2.1	ug/kg
1031-07-8	Endosulfan Sulfate	2.1	U	0.182	0.399	2.1	ug/kg
50-29-3	4,4-DDT	5.3	~~P~~ J	0.169	0.399	2.1	ug/kg
5103-71-9	alpha-Chlordane	2.1	U	0.169	0.399	2.1	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	16.6		10 - 169		83%	SPK: 20
877-09-8	Tetrachloro-m-xylene	19.2		31 - 151		96%	SPK: 20

9/5/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-03	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	19.5 Decanted:
Sample Wt/Vol:	30.02 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023546.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2.1	U	0.161	0.41	2.1	ug/kg
319-85-7	beta-BHC	2.1	U	0.223	0.41	2.1	ug/kg
319-86-8	delta-BHC	2.1	U	0.124	0.41	2.1	ug/kg
58-89-9	gamma-BHC (Lindane)	2.1	U	0.186	0.41	2.1	ug/kg
76-44-8	Heptachlor	2.1	U	0.174	0.41	2.1	ug/kg
309-00-2	Aldrin	2.1	U	0.124	0.41	2.1	ug/kg
959-98-8	Endosulfan I	2.1	U	0.186	0.41	2.1	ug/kg
60-57-1	Dieldrin	2.1	U	0.161	0.41	2.1	ug/kg
72-55-9	4,4-DDE	7.7		0.248	0.41	2.1	ug/kg
72-20-8	Endrin	2.1	U	0.223	0.41	2.1	ug/kg
33213-65-9	Endosulfan II	2.1	U	0.174	0.41	2.1	ug/kg
72-54-8	4,4-DDD	1.6	J	0.211	0.41	2.1	ug/kg
1031-07-8	Endosulfan Sulfate	2.1	U	0.186	0.41	2.1	ug/kg
50-29-3	4,4-DDT	17.3		0.174	0.41	2.1	ug/kg
5103-71-9	alpha-Chlordane	2.1	U	0.174	0.41	2.1	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	19.8		10 - 169		99%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16		31 - 151		80%	SPK: 20

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	6.1 Decanted:
Sample Wt/Vol:	30.04 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023547.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.8	U	0.138	0.351	1.8	ug/kg
319-85-7	beta-BHC	1.8	U	0.191	0.351	1.8	ug/kg
319-86-8	delta-BHC	1.8	U	0.106	0.351	1.8	ug/kg
58-89-9	gamma-BHC (Lindane)	1.8	U	0.16	0.351	1.8	ug/kg
76-44-8	Heptachlor	1.8	U	0.149	0.351	1.8	ug/kg
309-00-2	Aldrin	1.8	U	0.106	0.351	1.8	ug/kg
959-98-8	Endosulfan I	1.8	U	0.16	0.351	1.8	ug/kg
60-57-1	Dieldrin	1.8	U	0.138	0.351	1.8	ug/kg
72-55-9	4,4-DDE	34.8 ~~37.3~~	~~E~~ D	~~0.213~~ 0.425	~~0.351~~ 0.702	~~1.8~~ 3.6	ug/kg
72-20-8	Endrin	1.8	U	0.191	0.351	1.8	ug/kg
33213-65-9	Endosulfan II	1.8	U	0.149	0.351	1.8	ug/kg
72-54-8	4,4-DDD	1.8	U	0.181	0.351	1.8	ug/kg
1031-07-8	Endosulfan Sulfate	1.8	U	0.16	0.351	1.8	ug/kg
50-29-3	4,4-DDT	37.4 ~~40.9~~	~~E~~ D	~~0.149~~ 0.297	~~0.351~~ 0.702	~~1.8~~ 3.6	ug/kg
5103-71-9	alpha-Chlordane	1.8	U	0.149	0.351	1.8	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	18.4		10 - 169		92%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16.8		31 - 151		84%	SPK: 20

9/9/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)DL	SDG No.:	F3304
Lab Sample ID:	F3304-04DL	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	6.1 Decanted:
Sample Wt/Vol:	30.04 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023563.D	2	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	3.6	UD	0.277	0.702	3.6	ug/kg
319-85-7	beta-BHC	3.6	UD	0.383	0.702	3.6	ug/kg
319-86-8	delta-BHC	3.6	UD	0.213	0.702	3.6	ug/kg
58-89-9	gamma-BHC (Lindane)	3.6	UD	0.319	0.702	3.6	ug/kg
76-44-8	Heptachlor	3.6	UD	0.298	0.702	3.6	ug/kg
309-00-2	Aldrin	3.6	UD	0.213	0.702	3.6	ug/kg
959-98-8	Endosulfan I	3.6	UD	0.319	0.702	3.6	ug/kg
60-57-1	Dieldrin	3.6	UD	0.277	0.702	3.6	ug/kg
72-55-9	4,4-DDE	34.8	D	0.425	0.702	3.6	ug/kg
72-20-8	Endrin	3.6	UD	0.383	0.702	3.6	ug/kg
33213-65-9	Endosulfan II	3.6	UD	0.298	0.702	3.6	ug/kg
72-54-8	4,4-DDD	3.6	UD	0.362	0.702	3.6	ug/kg
1031-07-8	Endosulfan Sulfate	3.6	UD	0.319	0.702	3.6	ug/kg
50-29-3	4,4-DDT	37.4	D	0.298	0.702	3.6	ug/kg
5103-71-9	alpha-Chlordane	3.6	UD	0.298	0.702	3.6	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	18.1		10 - 169		90%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16.3		31 - 151		82%	SPK: 20

9/9/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	9.7 Decanted:
Sample Wt/Vol:	30 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023550.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.9	U	0.144	0.365	1.9	ug/kg
319-85-7	beta-BHC	1.9	U	0.199	0.365	1.9	ug/kg
319-86-8	delta-BHC	1.9	U	0.111	0.365	1.9	ug/kg
58-89-9	gamma-BHC (Lindane)	1.9	U	0.166	0.365	1.9	ug/kg
76-44-8	Heptachlor	1.9	U	0.155	0.365	1.9	ug/kg
309-00-2	Aldrin	1.9	U	0.111	0.365	1.9	ug/kg
959-98-8	Endosulfan I	1.9	U	0.166	0.365	1.9	ug/kg
60-57-1	Dieldrin	1.9	U	0.144	0.365	1.9	ug/kg
72-55-9	4,4-DDE	11.5		0.221	0.365	1.9	ug/kg
72-20-8	Endrin	1.9	U	0.199	0.365	1.9	ug/kg
33213-65-9	Endosulfan II	1.9	U	0.155	0.365	1.9	ug/kg
72-54-8	4,4-DDD	1.9	U	0.188	0.365	1.9	ug/kg
1031-07-8	Endosulfan Sulfate	1.9	U	0.166	0.365	1.9	ug/kg
50-29-3	4,4-DDT	16.5		0.155	0.365	1.9	ug/kg
5103-71-9	alpha-Chlordane	1.9	U	0.155	0.365	1.9	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	18.2		10 - 169		91%	SPK: 20
877-09-8	Tetrachloro-m-xylene	15.7		31 - 151		78%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	21.9 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023551.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2.2	U	0.166	0.421	2.2	ug/kg
319-85-7	beta-BHC	2.2	U	0.23	0.421	2.2	ug/kg
319-86-8	delta-BHC	2.2	U	0.128	0.421	2.2	ug/kg
58-89-9	gamma-BHC (Lindane)	2.2	U	0.191	0.421	2.2	ug/kg
76-44-8	Heptachlor	2.2	U	0.179	0.421	2.2	ug/kg
309-00-2	Aldrin	2.2	U	0.128	0.421	2.2	ug/kg
959-98-8	Endosulfan I	2.2	U	0.191	0.421	2.2	ug/kg
60-57-1	Dieldrin	2.2	U	0.166	0.421	2.2	ug/kg
72-55-9	4,4-DDE	1.6	JP	0.255	0.421	2.2	ug/kg
72-20-8	Endrin	2.2	U	0.23	0.421	2.2	ug/kg
33213-65-9	Endosulfan II	2.2	U	0.179	0.421	2.2	ug/kg
72-54-8	4,4-DDD	2.2	U	0.217	0.421	2.2	ug/kg
1031-07-8	Endosulfan Sulfate	2.2	U	0.191	0.421	2.2	ug/kg
50-29-3	4,4-DDT	2.6		0.179	0.421	2.2	ug/kg
5103-71-9	alpha-Chlordane	2.2	U	0.179	0.421	2.2	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	17.2		10 - 169		86%	SPK: 20
877-09-8	Tetrachloro-m-xylene	15.8		31 - 151		79%	SPK: 20

9/9/14 N

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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P = Indicates >25% difference for detected concentrations between the two GC columns
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J = Estimated Value
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N = Presumptive Evidence of a Compound
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	9.4 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023552.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.9	U	0.143	0.363	1.9	ug/kg
319-85-7	beta-BHC	1.9	U	0.198	0.363	1.9	ug/kg
319-86-8	delta-BHC	1.9	U	0.11	0.363	1.9	ug/kg
58-89-9	gamma-BHC (Lindane)	1.9	U	0.165	0.363	1.9	ug/kg
76-44-8	Heptachlor	1.9	U	0.154	0.363	1.9	ug/kg
309-00-2	Aldrin	1.9	U	0.11	0.363	1.9	ug/kg
959-98-8	Endosulfan I	1.9	U	0.165	0.363	1.9	ug/kg
60-57-1	Dieldrin	1.9	U	0.143	0.363	1.9	ug/kg
72-55-9	4,4-DDE	1.4	J	0.22	0.363	1.9	ug/kg
72-20-8	Endrin	1.9	U	0.198	0.363	1.9	ug/kg
33213-65-9	Endosulfan II	1.9	U	0.154	0.363	1.9	ug/kg
72-54-8	4,4-DDD	1.9	U	0.187	0.363	1.9	ug/kg
1031-07-8	Endosulfan Sulfate	1.9	U	0.165	0.363	1.9	ug/kg
50-29-3	4,4-DDT	1.9	U	0.154	0.363	1.9	ug/kg
5103-71-9	alpha-Chlordane	1.9	U	0.154	0.363	1.9	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	17.2		10 - 169		86%	SPK: 20
877-09-8	Tetrachloro-m-xylene	17.7		31 - 151		88%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	9.6 Decanted:
Sample Wt/Vol:	30.07 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023553.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.9	U	0.143	0.364	1.9	ug/kg
319-85-7	beta-BHC	1.9	U	0.199	0.364	1.9	ug/kg
319-86-8	delta-BHC	1.9	U	0.11	0.364	1.9	ug/kg
58-89-9	gamma-BHC (Lindane)	1.9	U	0.166	0.364	1.9	ug/kg
76-44-8	Heptachlor	1.9	U	0.155	0.364	1.9	ug/kg
309-00-2	Aldrin	1.9	U	0.11	0.364	1.9	ug/kg
959-98-8	Endosulfan I	1.9	U	0.166	0.364	1.9	ug/kg
60-57-1	Dieldrin	1.9	U	0.143	0.364	1.9	ug/kg
72-55-9	4,4-DDE	2.1		0.221	0.364	1.9	ug/kg
72-20-8	Endrin	1.9	U	0.199	0.364	1.9	ug/kg
33213-65-9	Endosulfan II	1.9	U	0.155	0.364	1.9	ug/kg
72-54-8	4,4-DDD	1.9	U	0.188	0.364	1.9	ug/kg
1031-07-8	Endosulfan Sulfate	1.9	U	0.166	0.364	1.9	ug/kg
50-29-3	4,4-DDT	4		0.155	0.364	1.9	ug/kg
5103-71-9	alpha-Chlordane	1.9	U	0.155	0.364	1.9	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	19.8		10 - 169		99%	SPK: 20
877-09-8	Tetrachloro-m-xylene	15.8		31 - 151		79%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements

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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	13.7 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023554.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2	U	0.15	0.381	2	ug/kg
319-85-7	beta-BHC	2	U	0.208	0.381	2	ug/kg
319-86-8	delta-BHC	2	U	0.115	0.381	2	ug/kg
58-89-9	gamma-BHC (Lindane)	2	U	0.173	0.381	2	ug/kg
76-44-8	Heptachlor	2	U	0.162	0.381	2	ug/kg
309-00-2	Aldrin	2	U	0.115	0.381	2	ug/kg
959-98-8	Endosulfan I	2	U	0.173	0.381	2	ug/kg
60-57-1	Dieldrin	2	U	0.15	0.381	2	ug/kg
72-55-9	4,4-DDE	2	U	0.231	0.381	2	ug/kg
72-20-8	Endrin	2	U	0.208	0.381	2	ug/kg
33213-65-9	Endosulfan II	2	U	0.162	0.381	2	ug/kg
72-54-8	4,4-DDD	2	U	0.196	0.381	2	ug/kg
1031-07-8	Endosulfan Sulfate	2	U	0.173	0.381	2	ug/kg
50-29-3	4,4-DDT	2	U	0.162	0.381	2	ug/kg
5103-71-9	alpha-Chlordane	2	U	0.162	0.381	2	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	15.5		10 - 169		77%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16.1		31 - 151		80%	SPK: 20

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements

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N = Presumptive Evidence of a Compound
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	24.5 Decanted:
Sample Wt/Vol:	30 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023555.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2.3	U	0.172	0.437	2.3	ug/kg
319-85-7	beta-BHC	2.3	U	0.238	0.437	2.3	ug/kg
319-86-8	delta-BHC	2.3	U	0.132	0.437	2.3	ug/kg
58-89-9	gamma-BHC (Lindane)	2.3	U	0.199	0.437	2.3	ug/kg
76-44-8	Heptachlor	2.3	U	0.185	0.437	2.3	ug/kg
309-00-2	Aldrin	2.3	U	0.132	0.437	2.3	ug/kg
959-98-8	Endosulfan I	2.3	U	0.199	0.437	2.3	ug/kg
60-57-1	Dieldrin	2.3	U	0.172	0.437	2.3	ug/kg
72-55-9	4,4-DDE	24.6		0.265	0.437	2.3	ug/kg
72-20-8	Endrin	2.3	U	0.238	0.437	2.3	ug/kg
33213-65-9	Endosulfan II	2.3	U	0.185	0.437	2.3	ug/kg
72-54-8	4,4-DDD	2.3	U	0.225	0.437	2.3	ug/kg
1031-07-8	Endosulfan Sulfate	2.3	U	0.199	0.437	2.3	ug/kg
50-29-3	4,4-DDT	26.2		0.185	0.437	2.3	ug/kg
5103-71-9	alpha-Chlordane	2.3	U	0.185	0.437	2.3	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	18.2		10 - 169		91%	SPK: 20
877-09-8	Tetrachloro-m-xylene	19		31 - 151		95%	SPK: 20

U = Not Detected
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	19.2 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023556.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	2.1	U	0.16	0.407	2.1	ug/kg
319-85-7	beta-BHC	2.1	U	0.222	0.407	2.1	ug/kg
319-86-8	delta-BHC	2.1	U	0.123	0.407	2.1	ug/kg
58-89-9	gamma-BHC (Lindane)	2.1	U	0.185	0.407	2.1	ug/kg
76-44-8	Heptachlor	2.1	U	0.173	0.407	2.1	ug/kg
309-00-2	Aldrin	2.1	U	0.123	0.407	2.1	ug/kg
959-98-8	Endosulfan I	2.1	U	0.185	0.407	2.1	ug/kg
60-57-1	Dieldrin	2.1	U	0.16	0.407	2.1	ug/kg
72-55-9	4,4-DDE	2.1	U	0.247	0.407	2.1	ug/kg
72-20-8	Endrin	2.1	U	0.222	0.407	2.1	ug/kg
33213-65-9	Endosulfan II	2.1	U	0.173	0.407	2.1	ug/kg
72-54-8	4,4-DDD	2.1	U	0.21	0.407	2.1	ug/kg
1031-07-8	Endosulfan Sulfate	2.1	U	0.185	0.407	2.1	ug/kg
50-29-3	4,4-DDT	2.1	U	0.173	0.407	2.1	ug/kg
5103-71-9	alpha-Chlordane	2.1	U	0.173	0.407	2.1	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	16.3		10 - 169		81%	SPK: 20
877-09-8	Tetrachloro-m-xylene	15.2		31 - 151		76%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8081	% Moisture:	7.6 Decanted:
Sample Wt/Vol:	30.07 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023557.D	1	07/25/14	07/28/14	PB78046

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	1.8	U	0.14	0.356	1.8	ug/kg
319-85-7	beta-BHC	1.8	U	0.194	0.356	1.8	ug/kg
319-86-8	delta-BHC	1.8	U	0.108	0.356	1.8	ug/kg
58-89-9	gamma-BHC (Lindane)	1.8	U	0.162	0.356	1.8	ug/kg
76-44-8	Heptachlor	1.8	U	0.151	0.356	1.8	ug/kg
309-00-2	Aldrin	1.8	U	0.108	0.356	1.8	ug/kg
959-98-8	Endosulfan I	1.8	U	0.162	0.356	1.8	ug/kg
60-57-1	Dieldrin	1.8	U	0.14	0.356	1.8	ug/kg
72-55-9	4,4-DDE	21.2		0.216	0.356	1.8	ug/kg
72-20-8	Endrin	1.8	U	0.194	0.356	1.8	ug/kg
33213-65-9	Endosulfan II	1.8	U	0.151	0.356	1.8	ug/kg
72-54-8	4,4-DDD	1.8	U	0.184	0.356	1.8	ug/kg
1031-07-8	Endosulfan Sulfate	1.8	U	0.162	0.356	1.8	ug/kg
50-29-3	4,4-DDT	22.2		0.151	0.356	1.8	ug/kg
5103-71-9	alpha-Chlordane	1.8	U	0.151	0.356	1.8	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	18.1		10 - 169		91%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16.8		31 - 151		84%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
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N = Presumptive Evidence of a Compound
* = Values outside of QC limits
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8

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	8.5 Decanted:
Sample Wt/Vol:	30.04 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016931.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.6	U	3.6	3.6	18.6	ug/kg
11104-28-2	Aroclor-1221	18.6	U	3.6	3.6	18.6	ug/kg
11141-16-5	Aroclor-1232	18.6	U	3.6	3.6	18.6	ug/kg
53469-21-9	Aroclor-1242	18.6	U	3.6	3.6	18.6	ug/kg
12672-29-6	Aroclor-1248	18.6	U	3.6	3.6	18.6	ug/kg
11097-69-1	Aroclor-1254	18.6	U	1.6	3.6	18.6	ug/kg
11096-82-5	Aroclor-1260	18.6	U	3.6	3.6	18.6	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	18.2		10 - 166		91%	SPK: 20
2051-24-3	Decachlorobiphenyl	16.3		60 - 125		82%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	17.6 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016933.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	20.6	U	4	4	20.6	ug/kg
11104-28-2	Aroclor-1221	20.6	U	4	4	20.6	ug/kg
11141-16-5	Aroclor-1232	20.6	U	4	4	20.6	ug/kg
53469-21-9	Aroclor-1242	20.6	U	4	4	20.6	ug/kg
12672-29-6	Aroclor-1248	20.6	U	4	4	20.6	ug/kg
11097-69-1	Aroclor-1254	20.6	U	1.8	4	20.6	ug/kg
11096-82-5	Aroclor-1260	20.6	U	4	4	20.6	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	18.1		10 - 166		90%	SPK: 20
2051-24-3	Decachlorobiphenyl	15.6		60 - 125		78%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB02(10-WT)		SDG No.:	F3304	
Lab Sample ID:	F3304-03		Matrix:	SOIL	
Analytical Method:	SW8082A		% Moisture:	19.5	Decanted:
Sample Wt/Vol:	30.1 Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016934.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	21	U	4.1	4.1	21	ug/kg
11104-28-2	Aroclor-1221	21	U	4.1	4.1	21	ug/kg
11141-16-5	Aroclor-1232	21	U	4.1	4.1	21	ug/kg
53469-21-9	Aroclor-1242	21	U	4.1	4.1	21	ug/kg
12672-29-6	Aroclor-1248	21	U	4.1	4.1	21	ug/kg
11097-69-1	Aroclor-1254	21	U	1.8	4.1	21	ug/kg
11096-82-5	Aroclor-1260	21	U	4.1	4.1	21	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	15.3		10 - 166		77%	SPK: 20
2051-24-3	Decachlorobiphenyl	21.4		60 - 125		107%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	6.1 Decanted:
Sample Wt/Vol:	30.01 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016935.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.1	U	3.5	3.5	18.1	ug/kg
11104-28-2	Aroclor-1221	18.1	U	3.5	3.5	18.1	ug/kg
11141-16-5	Aroclor-1232	18.1	U	3.5	3.5	18.1	ug/kg
53469-21-9	Aroclor-1242	18.1	U	3.5	3.5	18.1	ug/kg
12672-29-6	Aroclor-1248	18.1	U	3.5	3.5	18.1	ug/kg
11097-69-1	Aroclor-1254	18.1	U	1.6	3.5	18.1	ug/kg
11096-82-5	Aroclor-1260	18.1	U	3.5	3.5	18.1	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	14.9		10 - 166		75%	SPK: 20
2051-24-3	Decachlorobiphenyl	18.1		60 - 125		90%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	9.7 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016938.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.8	U	3.7	3.7	18.8	ug/kg
11104-28-2	Aroclor-1221	18.8	U	3.7	3.7	18.8	ug/kg
11141-16-5	Aroclor-1232	18.8	U	3.7	3.7	18.8	ug/kg
53469-21-9	Aroclor-1242	18.8	U	3.7	3.7	18.8	ug/kg
12672-29-6	Aroclor-1248	18.8	U	3.7	3.7	18.8	ug/kg
11097-69-1	Aroclor-1254	18.8	U	1.6	3.7	18.8	ug/kg
11096-82-5	Aroclor-1260	18.8	U	3.7	3.7	18.8	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	17.8		10 - 166		89%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.6		60 - 125		98%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	21.9 Decanted:
Sample Wt/Vol:	30.03 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016939.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	21.7	U	4.3	4.3	21.7	ug/kg
11104-28-2	Aroclor-1221	21.7	U	4.3	4.3	21.7	ug/kg
11141-16-5	Aroclor-1232	21.7	U	4.3	4.3	21.7	ug/kg
53469-21-9	Aroclor-1242	21.7	U	4.3	4.3	21.7	ug/kg
12672-29-6	Aroclor-1248	21.7	U	4.3	4.3	21.7	ug/kg
11097-69-1	Aroclor-1254	21.7	U	1.9	4.3	21.7	ug/kg
11096-82-5	Aroclor-1260	21.7	U	4.3	4.3	21.7	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	13.9		10 - 166		69%	SPK: 20
2051-24-3	Decachlorobiphenyl	15.3		60 - 125		77%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/24/14	
Client Sample ID:	TI-SB04(0-2)		SDG No.:	F3304	
Lab Sample ID:	F3304-07		Matrix:	SOIL	
Analytical Method:	SW8082A		% Moisture:	9.4	Decanted:
Sample Wt/Vol:	30.1 Units:	g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016940.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.7	U	3.7	3.7	18.7	ug/kg
11104-28-2	Aroclor-1221	18.7	U	3.7	3.7	18.7	ug/kg
11141-16-5	Aroclor-1232	18.7	U	3.7	3.7	18.7	ug/kg
53469-21-9	Aroclor-1242	18.7	U	3.7	3.7	18.7	ug/kg
12672-29-6	Aroclor-1248	18.7	U	3.7	3.7	18.7	ug/kg
11097-69-1	Aroclor-1254	18.7	U	1.6	3.7	18.7	ug/kg
11096-82-5	Aroclor-1260	18.7	U	3.7	3.7	18.7	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	15.8		10 - 166		79%	SPK: 20
2051-24-3	Decachlorobiphenyl	12.8		60 - 125		64%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	9.6 Decanted:
Sample Wt/Vol:	30.05 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016941.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.8	U	3.7	3.7	18.8	ug/kg
11104-28-2	Aroclor-1221	18.8	U	3.7	3.7	18.8	ug/kg
11141-16-5	Aroclor-1232	18.8	U	3.7	3.7	18.8	ug/kg
53469-21-9	Aroclor-1242	18.8	U	3.7	3.7	18.8	ug/kg
12672-29-6	Aroclor-1248	18.8	U	3.7	3.7	18.8	ug/kg
11097-69-1	Aroclor-1254	18.8	U	1.6	3.7	18.8	ug/kg
11096-82-5	Aroclor-1260	18.8	U	3.7	3.7	18.8	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	14.2		10 - 166		71%	SPK: 20
2051-24-3	Decachlorobiphenyl	20.8		60 - 125		104%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	13.7 Decanted:
Sample Wt/Vol:	30.05 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016942.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	19.7	U	3.9	3.9	19.7	ug/kg
11104-28-2	Aroclor-1221	19.7	U	3.9	3.9	19.7	ug/kg
11141-16-5	Aroclor-1232	19.7	U	3.9	3.9	19.7	ug/kg
53469-21-9	Aroclor-1242	19.7	U	3.9	3.9	19.7	ug/kg
12672-29-6	Aroclor-1248	19.7	U	3.9	3.9	19.7	ug/kg
11097-69-1	Aroclor-1254	19.7	U	1.7	3.9	19.7	ug/kg
11096-82-5	Aroclor-1260	19.7	U	3.9	3.9	19.7	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	16.9		10 - 166		85%	SPK: 20
2051-24-3	Decachlorobiphenyl	17.5		60 - 125		87%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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8

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	24.5 Decanted:
Sample Wt/Vol:	30.09 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016943.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	22.4	U	4.4	4.4	22.4	ug/kg
11104-28-2	Aroclor-1221	22.4	U	4.4	4.4	22.4	ug/kg
11141-16-5	Aroclor-1232	22.4	U	4.4	4.4	22.4	ug/kg
53469-21-9	Aroclor-1242	22.4	U	4.4	4.4	22.4	ug/kg
12672-29-6	Aroclor-1248	22.4	U	4.4	4.4	22.4	ug/kg
11097-69-1	Aroclor-1254	22.4	U	2	4.4	22.4	ug/kg
11096-82-5	Aroclor-1260	120		4.4	4.4	22.4	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	17.7		10 - 166		88%	SPK: 20
2051-24-3	Decachlorobiphenyl	16.4		60 - 125		82%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	19.2 Decanted:
Sample Wt/Vol:	30.07 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016944.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	21	U	4.1	4.1	21	ug/kg
11104-28-2	Aroclor-1221	21	U	4.1	4.1	21	ug/kg
11141-16-5	Aroclor-1232	21	U	4.1	4.1	21	ug/kg
53469-21-9	Aroclor-1242	21	U	4.1	4.1	21	ug/kg
12672-29-6	Aroclor-1248	21	U	4.1	4.1	21	ug/kg
11097-69-1	Aroclor-1254	21	U	1.8	4.1	21	ug/kg
11096-82-5	Aroclor-1260	21	U	4.1	4.1	21	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	13.8		10 - 166		69%	SPK: 20
2051-24-3	Decachlorobiphenyl	13		60 - 125		65%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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8

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8082A	% Moisture:	7.6 Decanted:
Sample Wt/Vol:	30.02 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016932.D	1	07/25/14	07/29/14	PB78045

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	18.4	U	3.6	3.6	18.4	ug/kg
11104-28-2	Aroclor-1221	18.4	U	3.6	3.6	18.4	ug/kg
11141-16-5	Aroclor-1232	18.4	U	3.6	3.6	18.4	ug/kg
53469-21-9	Aroclor-1242	18.4	U	3.6	3.6	18.4	ug/kg
12672-29-6	Aroclor-1248	18.4	U	3.6	3.6	18.4	ug/kg
11097-69-1	Aroclor-1254	18.4	U	1.6	3.6	18.4	ug/kg
11096-82-5	Aroclor-1260	18.4	U	3.6	3.6	18.4	ug/kg
SURROGATES							
877-09-8	Tetrachloro-m-xylene	16.7		10 - 166		84%	SPK: 20
2051-24-3	Decachlorobiphenyl	19.2		60 - 125		96%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	8.5 Decanted:
Sample Wt/Vol:	30.04 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010685.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	73.1	U	11.9	18.2	73.1	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	228		12 - 189		46%	SPK: 500

D

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	17.6 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010686.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	81.1	U	13.2	20.2	81.1	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	340		12 - 189		68%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-03	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	19.5 Decanted:
Sample Wt/Vol:	30.05 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010687.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	83.1	U	13.5	20.7	83.1	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	257		12 - 189		52%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	6.1 Decanted:
Sample Wt/Vol:	30.03 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010688.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	71.3	U	11.6	17.7	71.3	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	288		12 - 189		58%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	9.7 Decanted:
Sample Wt/Vol:	30.09 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010689.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	74	U	12	18.4	74	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	256		12 - 189		51%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	21.9 Decanted:
Sample Wt/Vol:	30.01 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010690.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	85.8	U	14	21.3	85.8	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	297		12 - 189		59%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	9.4 Decanted:
Sample Wt/Vol:	30.07 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010691.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	73.8	U	12	18.4	73.8	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	344		12 - 189		69%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	9.6 Decanted:
Sample Wt/Vol:	30.08 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010692.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	73.9	U	12	18.4	73.9	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	352		12 - 189		70%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	13.7 Decanted:
Sample Wt/Vol:	30.03 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010693.D	1	07/29/14	07/31/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	77.6	U	12.6	19.3	77.6	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	123		12 - 189		25%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	24.5 Decanted:
Sample Wt/Vol:	30.09 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010696.D	1	07/29/14	08/01/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	88.5	U	14.4	22	88.5	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	248		12 - 189		50%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	19.2 Decanted:
Sample Wt/Vol:	30.11 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010697.D	1	07/29/14	08/01/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	82.6	U	13.5	20.6	82.6	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	387		12 - 189		78%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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9

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Analytical Method:	SW8151A	% Moisture:	7.6 Decanted:
Sample Wt/Vol:	30.05 Units: g	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010698.D	1	07/29/14	08/01/14	PB78075

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	72.4	U	11.8	18	72.4	ug/Kg
SURROGATES							
19719-28-9	2,4-DCAA	198		12 - 189		40%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	91.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	6.96		1	0.304	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	233		1	0.369	2.31	4.61	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.635		1	0.055	0.138	0.277	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.277	U	1	0.055	0.138	0.277	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	21.9		1	0.12	0.231	0.461	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	47.2		1	0.295	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	62.4	N	1	0.111	0.277	0.553	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	309		1	0.175	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.078		1	0.005	0.005	0.011	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	42.7		1	0.424	0.922	1.84	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.46	N	1	0.378	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.461	U	1	0.138	0.231	0.461	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	152		1	0.646	0.922	1.84	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-02	Matrix:	SOIL
Level (low/med):	low	% Solid:	82.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	4.29		1	0.339	0.514	1.03	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	172		1	0.411	2.57	5.14	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.542		1	0.062	0.154	0.309	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.309	U	1	0.062	0.154	0.309	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	19.9		1	0.134	0.257	0.514	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	57.2		1	0.329	0.514	1.03	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	125	N	1	0.123	0.309	0.617	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	238		1	0.195	0.514	1.03	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.342		1	0.005	0.005	0.01	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	39.7		1	0.473	1.03	2.06	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.03	N	1	0.422	0.514	1.03	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.514	U	1	0.154	0.257	0.514	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	144		1	0.72	1.03	2.06	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB02(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	80.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	9.39		1	0.335	0.507	1.01	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	472		1	0.406	2.54	5.07	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.659		1	0.061	0.152	0.304	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	1.53		1	0.061	0.152	0.304	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	36.2		1	0.132	0.254	0.507	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	77.3		1	0.325	0.507	1.01	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	488	N	1	0.122	0.304	0.608	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	277		1	0.193	0.507	1.01	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.278		1	0.006	0.006	0.011	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	38.1		1	0.466	1.01	2.03	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.06	N	1	0.416	0.507	1.01	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.267	J	1	0.152	0.254	0.507	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	429		1	0.71	1.01	2.03	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-04	Matrix:	SOIL
Level (low/med):	low	% Solid:	93.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	15.6	J	1	0.304	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	216	J	1	0.369	2.31	4.61	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.611		1	0.055	0.138	0.277	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.277	U	1	0.055	0.138	0.277	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	22.5	J	1	0.12	0.231	0.461	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	39.1	J	1	0.295	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	197	N J	1	0.111	0.277	0.553	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	273	J	1	0.175	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.161		1	0.005	0.005	0.011	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	34.6		1	0.424	0.922	1.84	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.54	N J	1	0.378	0.461	0.922	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.461	U	1	0.138	0.231	0.461	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	218		1	0.645	0.922	1.84	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-05	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	12.3		1	0.308	0.467	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	328		1	0.374	2.34	4.67	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.601		1	0.056	0.14	0.28	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.079	J	1	0.056	0.14	0.28	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	21.6		1	0.121	0.234	0.467	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	36.9		1	0.299	0.467	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	276	N	1	0.112	0.28	0.561	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	266		1	0.178	0.467	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.208		1	0.005	0.005	0.011	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	32.7		1	0.43	0.935	1.87	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.1	N	1	0.383	0.467	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.467	U	1	0.14	0.234	0.467	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	302		1	0.654	0.935	1.87	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
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* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB03(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-06	Matrix:	SOIL
Level (low/med):	low	% Solid:	78.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	22.9		1	0.363	0.55	1.1	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	341		1	0.44	2.75	5.5	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.741		1	0.066	0.165	0.33	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	2.06		1	0.066	0.165	0.33	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	29.1		1	0.143	0.275	0.55	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	65		1	0.352	0.55	1.1	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	326	N	1	0.132	0.33	0.659	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	269		1	0.209	0.55	1.1	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.195		1	0.006	0.006	0.012	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	38.3		1	0.506	1.1	2.2	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.3	N	1	0.451	0.55	1.1	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.55	U	1	0.165	0.275	0.55	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	372		1	0.769	1.1	2.2	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-07	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	6.28		1	0.309	0.468	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	180		1	0.374	2.34	4.68	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.545		1	0.056	0.14	0.281	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.281	U	1	0.056	0.14	0.281	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	20.3		1	0.122	0.234	0.468	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	35.2		1	0.299	0.468	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	134	N	1	0.112	0.281	0.561	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	281		1	0.178	0.468	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.109		1	0.005	0.005	0.01	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	31.9		1	0.43	0.935	1.87	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.11	N	1	0.384	0.468	0.935	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.468	U	1	0.14	0.234	0.468	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	186		1	0.655	0.935	1.87	mg/Kg	07/28/14	07/28/14	SW6010

8/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
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OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-08	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	6.11		1	0.32	0.485	0.97	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	290		1	0.388	2.43	4.85	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.711		1	0.058	0.146	0.291	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.26	J	1	0.058	0.146	0.291	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	25		1	0.126	0.243	0.485	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	54.6		1	0.311	0.485	0.97	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	273	N	1	0.116	0.291	0.582	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	288		1	0.184	0.485	0.97	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.388		1	0.005	0.005	0.011	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	55		1	0.446	0.97	1.94	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.28	N	1	0.398	0.485	0.97	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.485	U	1	0.146	0.243	0.485	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	289		1	0.679	0.97	1.94	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Gray	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB04(10-WT)	SDG No.:	F3304
Lab Sample ID:	F3304-09	Matrix:	SOIL
Level (low/med):	low	% Solid:	86.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	5.11		1	0.317	0.481	0.962	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	390		1	0.385	2.4	4.81	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.733		1	0.058	0.144	0.288	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.174	J	1	0.058	0.144	0.288	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	23.9		1	0.125	0.24	0.481	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	47.1		1	0.308	0.481	0.962	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	267		1	0.115	0.288	0.577	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	310		1	0.183	0.481	0.962	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.179		1	0.005	0.005	0.01	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	40.7		1	0.442	0.962	1.92	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.24		1	0.394	0.481	0.962	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.481	U	1	0.144	0.24	0.481	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	274		1	0.673	0.962	1.92	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(0-2)	SDG No.:	F3304
Lab Sample ID:	F3304-10	Matrix:	SOIL
Level (low/med):	low	% Solid:	75.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	20.4		1	0.374	0.566	1.13	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	181		1	0.453	2.83	5.66	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.5		1	0.068	0.17	0.34	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.34	U	1	0.068	0.17	0.34	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	19.1		1	0.147	0.283	0.566	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	28.3		1	0.362	0.566	1.13	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	155	N	1	0.136	0.34	0.679	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	252		1	0.215	0.566	1.13	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.123		1	0.006	0.006	0.012	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	22.8		1	0.521	1.13	2.26	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	0.895	J N	1	0.464	0.566	1.13	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.566	U	1	0.17	0.283	0.566	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	120		1	0.792	1.13	2.26	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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J = Estimated Value
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB05(5-10)	SDG No.:	F3304
Lab Sample ID:	F3304-11	Matrix:	SOIL
Level (low/med):	low	% Solid:	80.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	18.8		1	0.358	0.543	1.09	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	455		1	0.434	2.71	5.43	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	1.04		1	0.065	0.163	0.326	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	1.69		1	0.065	0.163	0.326	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	21.9		1	0.141	0.271	0.543	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	80.2		1	0.347	0.543	1.09	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	580	N	1	0.13	0.326	0.651	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	314		1	0.206	0.543	1.09	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.468		1	0.006	0.006	0.012	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	44.6		1	0.499	1.09	2.17	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.25	N	1	0.445	0.543	1.09	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.31	J	1	0.163	0.271	0.543	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	769		1	0.76	1.09	2.17	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Gray	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
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N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/24/14
Client Sample ID:	TI-SB06D	SDG No.:	F3304
Lab Sample ID:	F3304-12	Matrix:	SOIL
Level (low/med):	low	% Solid:	92.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	7.49	J	1	0.305	0.463	0.925	mg/Kg	07/28/14	07/28/14	SW6010
7440-39-3	Barium	306	J	1	0.37	2.31	4.63	mg/Kg	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	0.531		1	0.056	0.139	0.278	mg/Kg	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	0.278	U	1	0.056	0.139	0.278	mg/Kg	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	33.1	J	1	0.12	0.231	0.463	mg/Kg	07/28/14	07/28/14	SW6010
7440-50-8	Copper	48.4	J	1	0.296	0.463	0.925	mg/Kg	07/28/14	07/28/14	SW6010
7439-92-1	Lead	285	N J	1	0.111	0.278	0.555	mg/Kg	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	259	J	1	0.176	0.463	0.925	mg/Kg	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.226		1	0.005	0.005	0.01	mg/Kg	07/25/14	07/28/14	SW7471A
7440-02-0	Nickel	37		1	0.426	0.925	1.85	mg/Kg	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	1.02	N J	1	0.379	0.463	0.925	mg/Kg	07/28/14	07/28/14	SW6010
7440-22-4	Silver	0.463	U	1	0.139	0.231	0.463	mg/Kg	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	387		1	0.648	0.925	1.85	mg/Kg	07/28/14	07/28/14	SW6010

9/12/14

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Metals Group1				

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CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014427.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5	U	0.34	0.5	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	0.47	0.5	5	ug/L
67-64-1	Acetone	25	U	0.5	2.5	25	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	0.35	0.5	5	ug/L
75-09-2	Methylene Chloride	5	U	0.41	0.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	0.41	0.5	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	0.36	0.5	5	ug/L
78-93-3	2-Butanone	25	U	1.3	2.5	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	0.2	0.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	0.35	0.5	5	ug/L
67-66-3	Chloroform	5	U	0.34	0.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	0.4	0.75	5	ug/L
71-43-2	Benzene	5	U	0.32	0.5	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	0.48	0.75	5	ug/L
79-01-6	Trichloroethene	5	U	0.28	0.5	5	ug/L
108-88-3	Toluene	5	U	0.37	0.5	5	ug/L
127-18-4	Tetrachloroethene	5	U	0.27	0.5	5	ug/L
108-90-7	Chlorobenzene	5	U	0.49	0.5	5	ug/L
100-41-4	Ethyl Benzene	5	U	0.2	0.5	5	ug/L
1330-20-7	Total Xylenes	15	U	1.38	1.5	15	ug/L
103-65-1	n-propylbenzene	5	U	0.45	0.5	5	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U	0.46	0.5	5	ug/L
98-06-6	tert-Butylbenzene	5	U	0.44	0.5	5	ug/L
95-63-6	1,2,4-Trimethylbenzene	5	U	0.38	0.5	5	ug/L
135-98-8	sec-Butylbenzene	5	U	0.46	0.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	0.43	0.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	0.32	0.5	5	ug/L
104-51-8	n-Butylbenzene	5	U	0.41	0.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	0.45	0.5	5	ug/L
123-91-1	1,4-Dioxane	100	U R	50	50	100	ug/L
SURROGATES							

9/15/14

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014427.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	49.9		61 - 141		100%	SPK: 50
1868-53-7	Dibromofluoromethane	44		69 - 133		88%	SPK: 50
2037-26-5	Toluene-d8	50.5		65 - 126		101%	SPK: 50
460-00-4	4-Bromofluorobenzene	53		58 - 135		106%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	936281	7.5				
540-36-3	1,4-Difluorobenzene	1616820	8.44				
3114-55-4	Chlorobenzene-d5	1436410	11.28				
3855-82-1	1,4-Dichlorobenzene-d4	519731	13.22				
TENTATIVE IDENTIFIED COMPOUNDS							
000115-11-7	1-Propene, 2-methyl-	21.9	J N			2.08	ug/L

9/15/14

U = Not Detected
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MDL = Method Detection Limit
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Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014428.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5	U	0.34	0.5	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	0.47	0.5	5	ug/L
67-64-1	Acetone	25	U	0.5	2.5	25	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	0.35	0.5	5	ug/L
75-09-2	Methylene Chloride	5	U	0.41	0.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	0.41	0.5	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	0.36	0.5	5	ug/L
78-93-3	2-Butanone	25	U	1.3	2.5	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	0.2	0.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	0.35	0.5	5	ug/L
67-66-3	Chloroform	5	U	0.34	0.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	0.4	0.75	5	ug/L
71-43-2	Benzene	5	U	0.32	0.5	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	0.48	0.75	5	ug/L
79-01-6	Trichloroethene	5	U	0.28	0.5	5	ug/L
108-88-3	Toluene	5	U	0.37	0.5	5	ug/L
127-18-4	Tetrachloroethene	5	U	0.27	0.5	5	ug/L
108-90-7	Chlorobenzene	5	U	0.49	0.5	5	ug/L
100-41-4	Ethyl Benzene	5	U	0.2	0.5	5	ug/L
1330-20-7	Total Xylenes	15	U	1.38	1.5	15	ug/L
103-65-1	n-propylbenzene	5	U	0.45	0.5	5	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U	0.46	0.5	5	ug/L
98-06-6	tert-Butylbenzene	5	U	0.44	0.5	5	ug/L
95-63-6	1,2,4-Trimethylbenzene	5	U	0.38	0.5	5	ug/L
135-98-8	sec-Butylbenzene	5	U	0.46	0.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	0.43	0.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	0.32	0.5	5	ug/L
104-51-8	n-Butylbenzene	5	U	0.41	0.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	0.45	0.5	5	ug/L
123-91-1	1,4-Dioxane	100	U R	50	50	100	ug/L
SURROGATES							

9/15/14 a

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014428.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	49.9		61 - 141		100%	SPK: 50
1868-53-7	Dibromofluoromethane	43.7		69 - 133		87%	SPK: 50
2037-26-5	Toluene-d8	50.1		65 - 126		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		58 - 135		104%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	931112	7.5				
540-36-3	1,4-Difluorobenzene	1600890	8.44				
3114-55-4	Chlorobenzene-d5	1407450	11.28				
3855-82-1	1,4-Dichlorobenzene-d4	502663	13.22				

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	TB-072314	SDG No.:	F3308
Lab Sample ID:	F3308-09	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014426.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-01-4	Vinyl Chloride	5	U	0.34	0.5	5	ug/L
75-35-4	1,1-Dichloroethene	5	U	0.47	0.5	5	ug/L
67-64-1	Acetone	25	U	0.5	2.5	25	ug/L
1634-04-4	Methyl tert-butyl Ether	5	U	0.35	0.5	5	ug/L
75-09-2	Methylene Chloride	5	U	0.41	0.5	5	ug/L
156-60-5	trans-1,2-Dichloroethene	5	U	0.41	0.5	5	ug/L
75-34-3	1,1-Dichloroethane	5	U	0.36	0.5	5	ug/L
78-93-3	2-Butanone	25	U	1.3	2.5	25	ug/L
56-23-5	Carbon Tetrachloride	5	U	0.2	0.5	5	ug/L
156-59-2	cis-1,2-Dichloroethene	5	U	0.35	0.5	5	ug/L
67-66-3	Chloroform	5	U	0.34	0.5	5	ug/L
71-55-6	1,1,1-Trichloroethane	5	U	0.4	0.75	5	ug/L
71-43-2	Benzene	5	U	0.32	0.5	5	ug/L
107-06-2	1,2-Dichloroethane	5	U	0.48	0.75	5	ug/L
79-01-6	Trichloroethene	5	U	0.28	0.5	5	ug/L
108-88-3	Toluene	5	U	0.37	0.5	5	ug/L
127-18-4	Tetrachloroethene	5	U	0.27	0.5	5	ug/L
108-90-7	Chlorobenzene	5	U	0.49	0.5	5	ug/L
100-41-4	Ethyl Benzene	5	U	0.2	0.5	5	ug/L
1330-20-7	Total Xylenes	15	U	1.38	1.5	15	ug/L
103-65-1	n-propylbenzene	5	U	0.45	0.5	5	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U	0.46	0.5	5	ug/L
98-06-6	tert-Butylbenzene	5	U	0.44	0.5	5	ug/L
95-63-6	1,2,4-Trimethylbenzene	5	U	0.38	0.5	5	ug/L
135-98-8	sec-Butylbenzene	5	U	0.46	0.5	5	ug/L
541-73-1	1,3-Dichlorobenzene	5	U	0.43	0.5	5	ug/L
106-46-7	1,4-Dichlorobenzene	5	U	0.32	0.5	5	ug/L
104-51-8	n-Butylbenzene	5	U	0.41	0.5	5	ug/L
95-50-1	1,2-Dichlorobenzene	5	U	0.45	0.5	5	ug/L
123-91-1	1,4-Dioxane	100	U R	50	50	100	ug/L
SURROGATES							

9/15/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	TB-072314	SDG No.:	F3308
Lab Sample ID:	F3308-09	Matrix:	Water
Analytical Method:	SW8260	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VR014426.D	1		07/31/14	VR073114

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
17060-07-0	1,2-Dichloroethane-d4	50.6		61 - 141		101%	SPK: 50
1868-53-7	Dibromofluoromethane	43.1		69 - 133		86%	SPK: 50
2037-26-5	Toluene-d8	49.6		65 - 126		99%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.3		58 - 135		107%	SPK: 50
INTERNAL STANDARDS							
363-72-4	Pentafluorobenzene	941147	7.5				
540-36-3	1,4-Difluorobenzene	1621560	8.44				
3114-55-4	Chlorobenzene-d5	1447300	11.28				
3855-82-1	1,4-Dichlorobenzene-d4	543122	13.22				

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4

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	Water
Analytical Method:	SW8270	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072846.D	1	07/29/14	07/29/14	PB78096

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	10	U	0.21	1	10	ug/L
95-48-7	2-Methylphenol	10	U	0.24	1	10	ug/L
65794-96-9	3+4-Methylphenols	10	U	0.38	1	10	ug/L
91-20-3	Naphthalene	10	U	0.12	1	10	ug/L
208-96-8	Acenaphthylene	10	U	0.7	1	10	ug/L
83-32-9	Acenaphthene	10	U	0.21	1	10	ug/L
132-64-9	Dibenzofuran	10	U	0.24	1	10	ug/L
86-73-7	Fluorene	10	U	0.31	1	10	ug/L
118-74-1	Hexachlorobenzene	10	U	0.18	1	10	ug/L
87-86-5	Pentachlorophenol	10	U	1	1	10	ug/L
85-01-8	Phenanthrene	10	U	0.26	1	10	ug/L
120-12-7	Anthracene	10	U	0.16	1	10	ug/L
206-44-0	Fluoranthene	10	U	0.4	1	10	ug/L
129-00-0	Pyrene	10	U	0.2	1	10	ug/L
56-55-3	Benzo(a)anthracene	10	U	0.16	1	10	ug/L
218-01-9	Chrysene	10	U	0.18	1	10	ug/L
205-99-2	Benzo(b)fluoranthene	10	U	0.29	1	10	ug/L
207-08-9	Benzo(k)fluoranthene	10	U	0.18	1	10	ug/L
50-32-8	Benzo(a)pyrene	10	U	0.14	1	10	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	10	U	0.15	1	10	ug/L
53-70-3	Dibenzo(a,h)anthracene	10	U	0.42	1	10	ug/L
191-24-2	Benzo(g,h,i)perylene	10	U	0.29	1	10	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	50.9		10 - 130		34%	SPK: 150
13127-88-3	Phenol-d6	35.6		10 - 130		24%	SPK: 150
4165-60-0	Nitrobenzene-d5	100		36 - 131		103%	SPK: 100
321-60-8	2-Fluorobiphenyl	110		39 - 131		106%	SPK: 100
118-79-6	2,4,6-Tribromophenol	140		25 - 155		97%	SPK: 150
1718-51-0	Terphenyl-d14	110		23 - 130		109%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	190909	6.3				

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4

Report of Analysis

Client:	URS Corporation			Date Collected:	07/23/14
Project:	Bronx Psy. Center			Date Received:	07/25/14
Client Sample ID:	MW-2			SDG No.:	F3308
Lab Sample ID:	F3308-01			Matrix:	Water
Analytical Method:	SW8270			% Moisture:	100
Sample Wt/Vol:	1000	Units:	mL	Final Vol:	1000 uL
Soil Aliquot Vol:			uL	Test:	SVOCMS Group1
Extraction Type :			Decanted : N	Level :	LOW
Injection Volume :			GPC Factor : 1.0	GPC Cleanup : N	PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072846.D	1	07/29/14	07/29/14	PB78096

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	746721	8.23				
15067-26-2	Acenaphthene-d10	435367	11.03				
1517-22-2	Phenanthrene-d10	823823	13.42				
1719-03-5	Chrysene-d12	785839	17.1				
1520-96-3	Perylene-d12	638396	18.79				
TENTATIVE IDENTIFIED COMPOUNDS							
000994-05-8	Butane, 2-methoxy-2-methyl-	56	J N			1.53	ug/L
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~14.5~~	~~AB~~			~~3.98~~	~~ug/L~~
	unknown5.98	64.9	J			5.98	ug/L
020324-32-7	2-Propanol, 1-(2-methoxy-1-methyle	2.3	J N			6.07	ug/L
034590-94-8	Dipropylene glycol monomethyl ethe	2.2	J			6.12	ug/L
131-11-3	Dimethylphthalate	5.1	J			10.68	ug/L

9/15/14

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4

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8270	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

D

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072881.D	1	07/29/14	07/30/14	PB78096

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
108-95-2	Phenol	10	U	0.21	1	10	ug/L
95-48-7	2-Methylphenol	10	U	0.24	1	10	ug/L
65794-96-9	3+4-Methylphenols	10	U	0.38	1	10	ug/L
91-20-3	Naphthalene	10	U	0.12	1	10	ug/L
208-96-8	Acenaphthylene	10	U	0.7	1	10	ug/L
83-32-9	Acenaphthene	10	U	0.21	1	10	ug/L
132-64-9	Dibenzofuran	10	U	0.24	1	10	ug/L
86-73-7	Fluorene	10	U	0.31	1	10	ug/L
118-74-1	Hexachlorobenzene	10	U	0.18	1	10	ug/L
87-86-5	Pentachlorophenol	10	U	1	1	10	ug/L
85-01-8	Phenanthrene	10	U	0.26	1	10	ug/L
120-12-7	Anthracene	10	U	0.16	1	10	ug/L
206-44-0	Fluoranthene	10	U	0.4	1	10	ug/L
129-00-0	Pyrene	10	U	0.2	1	10	ug/L
56-55-3	Benzo(a)anthracene	10	U	0.16	1	10	ug/L
218-01-9	Chrysene	10	U	0.18	1	10	ug/L
205-99-2	Benzo(b)fluoranthene	10	U	0.29	1	10	ug/L
207-08-9	Benzo(k)fluoranthene	10	U	0.18	1	10	ug/L
50-32-8	Benzo(a)pyrene	10	U	0.14	1	10	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	10	U	0.15	1	10	ug/L
53-70-3	Dibenzo(a,h)anthracene	10	U	0.42	1	10	ug/L
191-24-2	Benzo(g,h,i)perylene	10	U	0.29	1	10	ug/L
SURROGATES							
367-12-4	2-Fluorophenol	65.7		10 - 130		44%	SPK: 150
13127-88-3	Phenol-d6	41.6		10 - 130		28%	SPK: 150
4165-60-0	Nitrobenzene-d5	120		36 - 131		121%	SPK: 100
321-60-8	2-Fluorobiphenyl	120		39 - 131		123%	SPK: 100
118-79-6	2,4,6-Tribromophenol	150		25 - 155		101%	SPK: 150
1718-51-0	Terphenyl-d14	110		23 - 130		110%	SPK: 100
INTERNAL STANDARDS							
3855-82-1	1,4-Dichlorobenzene-d4	118162	6.26				

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8270	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072881.D	1	07/29/14	07/30/14	PB78096

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	448968	8.2				
15067-26-2	Acenaphthene-d10	246149	10.98				
1517-22-2	Phenanthrene-d10	470428	13.37				
1719-03-5	Chrysene-d12	536102	17.05				
1520-96-3	Perylene-d12	495323	18.72				
TENTATIVE IDENTIFIED COMPOUNDS							
000994-05-8	Butane, 2-methoxy-2-methyl-	88.3	J N			1.5	ug/L
~~000123-42-2~~	~~2-Pentanone, 4-hydroxy-4-methyl-~~	~~17.7~~	~~AB~~			~~3.94~~	~~ug/L~~
	unknown5.96	79.9	J			5.96	ug/L
034590-94-8	Dipropylene glycol monomethyl ethe	3.7	J N			6.04	ug/L
054305-61-2	2-Butanol, 3,3-oxybis-	3.5	J			6.08	ug/L
131-11-3	Dimethylphthalate	3.2	J			10.64	ug/L

9/15/14

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	Water
Analytical Method:	SW8081	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023590.D	1	07/29/14	07/29/14	PB78095

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	0.05	U	0.005	0.01	0.05	ug/L
319-85-7	beta-BHC	0.05	U	0.009	0.01	0.05	ug/L
319-86-8	delta-BHC	0.05	U	0.006	0.01	0.05	ug/L
58-89-9	gamma-BHC (Lindane)	0.05	U	0.006	0.01	0.05	ug/L
76-44-8	Heptachlor	0.05	U	0.007	0.01	0.05	ug/L
309-00-2	Aldrin	0.05	U	0.006	0.01	0.05	ug/L
959-98-8	Endosulfan I	0.05	U	0.006	0.01	0.05	ug/L
60-57-1	Dieldrin	0.05	U	0.005	0.01	0.05	ug/L
72-55-9	4,4-DDE	0.05	U	0.005	0.01	0.05	ug/L
72-20-8	Endrin	0.05	U	0.006	0.01	0.05	ug/L
33213-65-9	Endosulfan II	0.05	U	0.006	0.01	0.05	ug/L
72-54-8	4,4-DDD	0.05	U	0.007	0.01	0.05	ug/L
1031-07-8	Endosulfan Sulfate	0.05	U	0.006	0.01	0.05	ug/L
50-29-3	4,4-DDT	0.05	U	0.006	0.01	0.05	ug/L
5103-71-9	alpha-Chlordane	0.05	U	0.005	0.01	0.05	ug/L
SURROGATES							
2051-24-3	Decachlorobiphenyl	14.9		10 - 192		75%	SPK: 20
877-09-8	Tetrachloro-m-xylene	19.9		10 - 172		100%	SPK: 20

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Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8081	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PESTICIDE Group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PD023591.D	1	07/29/14	07/29/14	PB78095

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
319-84-6	alpha-BHC	0.05	U	0.005	0.01	0.05	ug/L
319-85-7	beta-BHC	0.05	U	0.009	0.01	0.05	ug/L
319-86-8	delta-BHC	0.05	U	0.006	0.01	0.05	ug/L
58-89-9	gamma-BHC (Lindane)	0.05	U	0.006	0.01	0.05	ug/L
76-44-8	Heptachlor	0.05	U	0.007	0.01	0.05	ug/L
309-00-2	Aldrin	0.05	U	0.006	0.01	0.05	ug/L
959-98-8	Endosulfan I	0.05	U	0.006	0.01	0.05	ug/L
60-57-1	Dieldrin	0.05	U	0.005	0.01	0.05	ug/L
72-55-9	4,4-DDE	0.05	U	0.005	0.01	0.05	ug/L
72-20-8	Endrin	0.05	U	0.006	0.01	0.05	ug/L
33213-65-9	Endosulfan II	0.05	U	0.006	0.01	0.05	ug/L
72-54-8	4,4-DDD	0.05	U	0.007	0.01	0.05	ug/L
1031-07-8	Endosulfan Sulfate	0.05	U	0.006	0.01	0.05	ug/L
50-29-3	4,4-DDT	0.05	U	0.006	0.01	0.05	ug/L
5103-71-9	alpha-Chlordane	0.05	U	0.005	0.01	0.05	ug/L
SURROGATES							
2051-24-3	Decachlorobiphenyl	14.4		10 - 192		72%	SPK: 20
877-09-8	Tetrachloro-m-xylene	20.1		10 - 172		101%	SPK: 20

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8

Report of Analysis

Client:	URS Corporation		Date Collected:	07/23/14	
Project:	Bronx Psy. Center		Date Received:	07/25/14	
Client Sample ID:	MW-2		SDG No.:	F3308	
Lab Sample ID:	F3308-01		Matrix:	Water	
Analytical Method:	SW8082A		% Moisture:	100	Decanted:
Sample Wt/Vol:	1000 Units:	mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016992.D	1	07/28/14	07/30/14	PB78073

D

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	0.5	U	0.096	0.1	0.5	ug/L
11104-28-2	Aroclor-1221	0.5	U	0.1	0.1	0.5	ug/L
11141-16-5	Aroclor-1232	0.5	U	0.1	0.1	0.5	ug/L
53469-21-9	Aroclor-1242	0.5	U	0.089	0.1	0.5	ug/L
12672-29-6	Aroclor-1248	0.5	U	0.1	0.1	0.5	ug/L
11097-69-1	Aroclor-1254	0.5	U	0.044	0.1	0.5	ug/L
11096-82-5	Aroclor-1260	0.5	U	0.081	0.1	0.5	ug/L
SURROGATES							
877-09-8	Tetrachloro-m-xylene	18		35 - 137		90%	SPK: 20
2051-24-3	Decachlorobiphenyl	16.7		40 - 135		83%	SPK: 20

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D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

8

Report of Analysis

D

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8082A	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	PCB
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO016993.D	1	07/28/14	07/30/14	PB78073

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
12674-11-2	Aroclor-1016	0.5	U	0.096	0.1	0.5	ug/L
11104-28-2	Aroclor-1221	0.5	U	0.1	0.1	0.5	ug/L
11141-16-5	Aroclor-1232	0.5	U	0.1	0.1	0.5	ug/L
53469-21-9	Aroclor-1242	0.5	U	0.089	0.1	0.5	ug/L
12672-29-6	Aroclor-1248	0.5	U	0.1	0.1	0.5	ug/L
11097-69-1	Aroclor-1254	0.5	U	0.044	0.1	0.5	ug/L
11096-82-5	Aroclor-1260	0.5	U	0.081	0.1	0.5	ug/L
SURROGATES							
877-09-8	Tetrachloro-m-xylene	18.1		35 - 137		91%	SPK: 20
2051-24-3	Decachlorobiphenyl	15.1		40 - 135		75%	SPK: 20

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	Water
Analytical Method:	SW8151A	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010704.D	1	07/29/14	08/01/14	PB78094

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	2	U	0.151	0.5	2	ug/L
SURROGATES							
19719-28-9	2,4-DCAA	387		43 - 172		77%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

5

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	Water
Analytical Method:	SW8151A	% Moisture:	100 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	10000 uL
Soil Aliquot Vol:	uL	Test:	Herbicide group1
Extraction Type:		Injection Volume :	
GPC Factor :	1.0 PH :		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PE010705.D	1	07/29/14	08/01/14	PB78094

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
93-72-1	2,4,5-TP (Silvex)	2	U	0.151	0.5	2	ug/L
SURROGATES							
19719-28-9	2,4-DCAA	430		43 - 172		86%	SPK: 500

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
P = Indicates >25% difference for detected concentrations between the two GC columns
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-01	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	8.11	J	1	4.2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-39-3	Barium	269		1	4	25.0	50	ug/L	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	3	U	1	0.7	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	3	U	1	0.5	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	1.67	J	1	1.1	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-50-8	Copper	10	U	1	2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-92-1	Lead	2.83	J	1	2.6	3.0	6	ug/L	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	166		1	1.7	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.2	U	1	0.1	0.1	0.2	ug/L	07/28/14	07/29/14	SW7470A
7440-02-0	Nickel	20	U	1	4.2	10.0	20	ug/L	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	10	U	1	4.8	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-22-4	Silver	5	U	1	1.5	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	69.4		1	6.5	10.0	20	ug/L	07/28/14	07/28/14	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-02	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	7.59	J	1	4.2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-39-3	Barium	278		1	4	25.0	50	ug/L	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	3	U	1	0.7	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	3	U	1	0.5	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	5	U	1	1.1	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-50-8	Copper	10	U	1	2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-92-1	Lead	3.77	J	1	2.6	3.0	6	ug/L	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	153		1	1.7	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.2	U	1	0.1	0.1	0.2	ug/L	07/28/14	07/29/14	SW7470A
7440-02-0	Nickel	20	U	1	4.2	10.0	20	ug/L	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	10	U	1	4.8	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-22-4	Silver	5	U	1	1.5	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	64.3		1	6.5	10.0	20	ug/L	07/28/14	07/28/14	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-2	SDG No.:	F3308
Lab Sample ID:	F3308-05	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	8.32	J	1	4.2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-39-3	Barium	269		1	4	25.0	50	ug/L	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	3	U	1	0.7	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	3	U	1	0.5	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	5	U	1	1.1	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-50-8	Copper	2.62	J	1	2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-92-1	Lead	6	U	1	2.6	3.0	6	ug/L	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	171		1	1.7	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.2	U	1	0.1	0.1	0.2	ug/L	07/28/14	07/29/14	SW7470A
7440-02-0	Nickel	20	U	1	4.2	10.0	20	ug/L	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	10	U	1	4.8	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-22-4	Silver	5	U	1	1.5	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	7.59	J	1	6.5	10.0	20	ug/L	07/28/14	07/28/14	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Dissolved Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
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OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	URS Corporation	Date Collected:	07/23/14
Project:	Bronx Psy. Center	Date Received:	07/25/14
Client Sample ID:	MW-3D	SDG No.:	F3308
Lab Sample ID:	F3308-06	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	10	U	1	4.2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-39-3	Barium	249		1	4	25.0	50	ug/L	07/28/14	07/28/14	SW6010
7440-41-7	Beryllium	3	U	1	0.7	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-43-9	Cadmium	3	U	1	0.5	1.5	3	ug/L	07/28/14	07/28/14	SW6010
7440-47-3	Chromium	5	U	1	1.1	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-50-8	Copper	10	U	1	2	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-92-1	Lead	6	U	1	2.6	3.0	6	ug/L	07/28/14	07/28/14	SW6010
7439-96-5	Manganese	135		1	1.7	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7439-97-6	Mercury	0.2	U	1	0.1	0.1	0.2	ug/L	07/28/14	07/29/14	SW7470A
7440-02-0	Nickel	20	U	1	4.2	10.0	20	ug/L	07/28/14	07/28/14	SW6010
7782-49-2	Selenium	10	U	1	4.8	5.0	10	ug/L	07/28/14	07/28/14	SW6010
7440-22-4	Silver	5	U	1	1.5	2.5	5	ug/L	07/28/14	07/28/14	SW6010
7440-66-6	Zinc	20	U	1	6.5	10.0	20	ug/L	07/28/14	07/28/14	SW6010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Dissolved Metals Group1				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
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OR = Over Range
N =Spiked sample recovery not within control limits

ATTACHMENT B

SUPPORT DOCUMENTATION

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. F3304
QUOTE NO. Q1112002
COC Number 032422

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: URS Corporation - NY
ADDRESS: 3 Corporate Dr, Suite 203
CITY: Clifton Park STATE: NY ZIP: 12065
ATTENTION: Jen Gillies
PHONE: 518.688.0015 FAX: 518.688.0022 ~~0015~~

CLIENT PROJECT INFORMATION

PROJECT NAME: Bronx PC
PROJECT NO.: LOCATION: Bronx, NY
PROJECT MANAGER: Jen Gillies
e-mail: jennifer.gillies@urs.com
PHONE: 518.688.0015 FAX: 518.688.0022

CLIENT BILLING INFORMATION

BILL TO: SAME PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: email Excel & pdf DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
* STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ LEVEL 1: Results only
☐ LEVEL 2: Results + QC
☐ LEVEL 3: Results (plus results raw data) + QC
☐ LEVEL 4: Results + QC (all raw data)
☐ EDD Format: _____
☒ Others ASP Cat B QA/QC Deliverables

ANALYSIS

1 TCL VOCs + TICs (8260B)
2 TCL SVOCs + TICs (8270C)
3 TAL Inorganics (6010B)
4 PCBs (8082)
5 Pesticides (8081A)
6 Herbicides (8151A)
7 (471B)
8
9

PRESERVATIVES

1 E, 2 E, 3 E, 4 F, 5 E, 6 E, 7, 8, 9

COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1.	T1-SB02 (0-2)	Soil		See Notes*	7/23/14	1350	2 encore	V	X	X	X	X	X			
2.	T1-SB02 (5-10)				7/23/14	1405	↓	X	X	X	X	X	X			
3.	T1-SB02 (10-WT)				7/23/14	1435		X	X	X	X	X	X			
4.	T1-SB03 (0-2)				7/23/14	844	2 encore	X	X	X	X	X	X			
5.	T1-SB03 (5-10)				7/23/14	903	1 encore	X	X	X	X	X	X			
6.	T1-SB03 (10-WT)				7/23/14	930	1 encore	X	X	X	X	X	X			
7.	T1-SB04 (0-2)				7/23/14	1630	2 encore	X	X	X	X	X	X			
8.	T1-SB04 (5-10)				7/23/14	1130	↓	X	X	X	X	X	X			
9.	T1-SB04 (10-WT)				7/23/14	1241	↓	X	X	X	X	X	X			
10.	T1-SB05 (0-2)	↓		↓	7/23/14	1235	2 encore	X	X	X	X	X	X			

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. R. Coy	7/23/14	1. Fedex
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3. FEDEX	7-24-14 10:30	3. Cassandra Rizo

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant Cooler Temp. 4°C
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: → encore (1 encore syringe)
*VOCs are grab, all others comp
Ice in Cooler?: YES

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT
Shipment Complete: ☐ YES ☐ NO

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. F3304
QUOTE NO. Q1112002
COC Number 032423

CLIENT INFORMATION
REPORT TO BE SENT TO:
COMPANY: WBS Corporation-NY
ADDRESS: 3 Corporate Dr., Suite 203
CITY: Clifton Park STATE: NY ZIP: 12065
ATTENTION: Jen Gillies
PHONE: 518.688.0015 FAX: 518.688.0022

CLIENT PROJECT INFORMATION
PROJECT NAME: Bronx PC
PROJECT NO.: LOCATION: Bronx, NY
PROJECT MANAGER: Jen Gillies
e-mail: jennifer.gillies@wbs.com
PHONE: 518.688.0015 FAX: 518.688.0022

CLIENT BILLING INFORMATION
BILL TO: Same PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: DAYS *
HARD COPY: DAYS *
EDD: excel & pdf DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
* STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ LEVEL 1: Results only
☐ LEVEL 2: Results + QC
☐ LEVEL 3: Results (plus results raw data) + QC
☐ LEVEL 4: Results + QC (all raw data)
☐ EDD Format:
☒ Others ASP Cat B QAPP/QC Checklist

ANALYSIS
1 TCL VOCs + TICs (8260C)
2 TCL SVOCs + TICs (8270D)
3 TAL Inorganics (6010C/7470A)
4 PCBs (8082)
5 Pesticides (8081A)
6 Herbicides (8151A)
7
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	~~TB~~ TI-SB05(5-10)	Soil		Encore	7/23/14	1255		E X	E X	E X	E X	E X	E X				
2.	TI-SB05(10-WT)																e
3.	TI-SB06D	Soil			7/23/14	1010	2 Encore	X	X	X	X	X	-				
4.	MS-723				7/23/14	1010		X	X	X	X	X	X				Parent TI-SB03
5.	MSD-723				7/23/14	1010		X	X	X	X	X	X				Parent TI-SB03
6.																	
7.																	
8.																	
9.																	
10.																	

PRESERVATIVES: E = ICE
COMMENTS: ← Specify Preservatives: A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY/SAMPLER:	DATE/TIME:	RECEIVED BY:
1. [signature]	7/23/14	1. Fedex
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FEDEX	DATE/TIME: 10:30	RECEIVED FOR LAB BY: 3. C. Reno

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant Cooler Temp. 4°C
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: VOCs are encore grab; all others comp
Ice in Cooler?: Yes

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT
Shipment Complete: ☐ YES ☐ NO

Revision 8/2007
F3304-VOCMS Group1

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_T were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456.The analysis performed on instrument MSVOA_R were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456The analysis performed on instrument MSVOA_D were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by SUPELCO, K (VOACARB 3000) , TEKMAR LSC-2000 Concentrator.The analysis performed on instrument MSVOA_F were done using GC column RTX-VMS, which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by Supelco, VOCARB 3000, Tekmar 2000 Concentrator.The analysis of VOCMS Group1 was based on method 8260C.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for TI-SB03(0-2)MS [Toluene-d8 - 61%].
The Internal Standards Areas met the acceptable requirements except for TI-SB04(5-10), TI-SB05(5-10), TI-SB06D and TI-SB06DRE.
There is Sample # TI-SB04(5-10) &TI-SB05(5-10) were received as Encores .
Sample # TI-SB04(5-10) has A vial has internal fail, B vial was not purge well therefore
For Sample # TI-SB05(5-10) has A vial was not purge well, B vial has internal failed therefore no other vial left for further analysis, therefore this run was reported as final analysis.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .

The RPD for {F3304-14MSD} with File ID: VD042770.D recoveries met criteria except for 1,2,4-Trimethylbenzene[23%], 1,3,5-Trimethylbenzene[21%], 1,4-Dioxane[27%], Sec-butylbenzene[22%] and Vinyl chloride[26%] .
The Blank Spike for {VD0725SBS01} with File ID: VD042768.D met requirements for all samples except for 1,2-Dichloroethane[126%], m/p-Xylenes [135%] & o-Xylene [130%].
The Blank Spike for {VR0730MBS02} with File ID: VR014404.D met requirements for all samples except for 1,4-Dioxane[46%] .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The %RSD is greater than 20% in the Initial Calibration (Method 82D072514S.M) for m/p-Xylenes & o-Xylene these compounds are passing on Quadratic regression .
The %RSD is greater than 15% in the Initial Calibration (Method 82R073014W.M) for Acetone this compound is passing on Linear regression .
The Continuous Calibration File ID VF042435.D met the requirements except for Acetone and Methylene Chloride but they were not detected in any samples .
The Tuning criteria met requirements.

E. Additional Comments:
Sample # TI-SB05(0-2) has both vial A vial and B vial were not purge well, therefore lab analyzed the data with straight medium level run.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis for instrument R.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <20% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 20% for the Initial Calibration curve for SW-846 analysis for instrument D and T.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_ Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:53 pm, Aug 06, 2014

CHEMTECH

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary
SW-846

SDG No.: F3304

Client: URS Corporation

Analytical Method: SW8260C **Datafile :** VR014404.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	RPD
VR0730MBS02	Vinyl chloride	2000	1900	ug/Kg	95			67	130	
	1,1-Dichloroethene	2000	2000	ug/Kg	100			74	130	
	Acetone	10000	7800	ug/Kg	78			57	135	
	Methyl tert-butyl Ether	2000	2100	ug/Kg	105			76	123	
	Methylene Chloride	2000	2100	ug/Kg	105			73	134	
	trans-1,2-Dichloroethene	2000	2100	ug/Kg	105			76	125	
	1,1-Dichloroethane	2000	2000	ug/Kg	100			78	124	
	2-Butanone	10000	9200	ug/Kg	92			68	132	
	Carbon Tetrachloride	2000	1900	ug/Kg	95			76	127	
	cis-1,2-Dichloroethene	2000	2100	ug/Kg	105			78	122	
	Chloroform	2000	2000	ug/Kg	100			79	122	
	1,1,1-Trichloroethane	2000	2000	ug/Kg	100			76	126	
	Benzene	2000	2000	ug/Kg	100			79	124	
	1,2-Dichloroethane	2000	1900	ug/Kg	95			78	124	
	Trichloroethene	2000	2000	ug/Kg	100			78	124	
	Toluene	2000	2000	ug/Kg	100			78	124	
	Tetrachloroethene	2000	2000	ug/Kg	100			67	134	
	Chlorobenzene	2000	2000	ug/Kg	100			80	121	
	Ethyl Benzene	2000	2000	ug/Kg	100			80	123	
	m/p-Xylenes	4000	4000	ug/Kg	100			79	126	
	o-Xylene	2000	2000	ug/Kg	100			80	122	
	N-propylbenzene	2000	2000	ug/Kg	100			80	125	
	1,3,5-Trimethylbenzene	2000	2000	ug/Kg	100			81	123	
	tert-Butylbenzene	2000	2000	ug/Kg	100			81	123	
	1,2,4-Trimethylbenzene	2000	2000	ug/Kg	100			81	122	
	Sec-butylbenzene	2000	2000	ug/Kg	100			81	126	
	1,3-Dichlorobenzene	2000	2000	ug/Kg	100			82	120	
	1,4-Dichlorobenzene	2000	2000	ug/Kg	100			81	120	
	n-Butylbenzene	2000	1900	ug/Kg	95			75	129	
	1,2-Dichlorobenzene	2000	2000	ug/Kg	100			82	118	
	1,4-Dioxane	40100	18300	ug/Kg	46		*	50	150	

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VD042759.D BFB Injection Date: 07/25/2014

Instrument ID: MSVOA_D BFB Injection Time: 08:42

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	38.2
75	30.0 - 60.0% of mass 95	56.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.2 (0.2) 1
174	50.0 - 100.0% of mass 95	72
175	5.0 - 9.0% of mass 174	5.5 (7.6) 1
176	95.0 - 101.0% of mass 174	72.1 (100.2) 1
177	5.0 - 9.0% of mass 176	4.4 (6.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICC005	VSTDICC005	VD042760.D	07/25/2014	09:50
VSTDICC010	VSTDICC010	VD042761.D	07/25/2014	10:41
VSTDICC020	VSTDICC020	VD042762.D	07/25/2014	11:07
VSTDICCC050	VSTDICCC050	VD042763.D	07/25/2014	11:33
VSTDICC100	VSTDICC100	VD042764.D	07/25/2014	12:00
VSTDICC150	VSTDICC150	VD042765.D	07/25/2014	12:26
VD0725SBL01	VD0725SBL01	VD042767.D	07/25/2014	13:51
VD0725SBS01	VD0725SBS01	VD042768.D	07/25/2014	14:23
TI-SB03(0-2)MS	F3304-13MS	VD042769.D	07/25/2014	14:49
TI-SB03(0-2)MSD	F3304-14MSD	VD042770.D	07/25/2014	15:16
TI-SB06D	F3304-12	VD042772.D	07/25/2014	16:09

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VF042434.D BFB Injection Date: 07/28/2014

Instrument ID: MSVOA_F BFB Injection Time: 09:33

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.9
75	30.0 - 60.0% of mass 95	41.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	77.7
175	5.0 - 9.0% of mass 174	4.8 (6.1) 1
176	95.0 - 101.0% of mass 174	73.8 (95.1) 1
177	5.0 - 9.0% of mass 176	4.7 (6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VF042435.D	07/28/2014	10:08
VF0728SBL01	VF0728SBL01	VF042436.D	07/28/2014	11:11
VF0728SBS01	VF0728SBS01	VF042437.D	07/28/2014	11:44
TI-SB02(0-2)	F3304-01	VF042443.D	07/28/2014	15:09
TI-SB02(10-WT)	F3304-03	VF042445.D	07/28/2014	16:04
TI-SB03(0-2)	F3304-04	VF042446.D	07/28/2014	16:31
TI-SB03(5-10)	F3304-05	VF042447.D	07/28/2014	16:59
TI-SB03(10-WT)	F3304-06	VF042448.D	07/28/2014	17:26
TI-SB06DRE	F3304-12RE	VF042449.D	07/28/2014	17:53
TI-SB02(5-10)	F3304-02	VF042450.D	07/28/2014	18:20

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VR014394.D BFB Injection Date: 07/30/2014

Instrument ID: MSVOA_R BFB Injection Time: 17:34

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.1
75	30.0 - 60.0% of mass 95	50.5
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	50.0 - 100.0% of mass 95	90.2
175	5.0 - 9.0% of mass 174	7 (7.7) 1
176	95.0 - 101.0% of mass 174	87 (96.4) 1
177	5.0 - 9.0% of mass 176	5.9 (6.7) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VR014395.D	07/30/2014	18:53
VR0730MBL01	VR0730MBL01	VR014396.D	07/30/2014	19:47
TI-SB05(0-2)	F3304-10	VR014401.D	07/30/2014	22:03
VR0730MBS02	VR0730MBS02	VR014404.D	07/30/2014	23:25

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VT009140.D BFB Injection Date: 07/28/2014

Instrument ID: MSVOA_T BFB Injection Time: 09:57

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25
75	30.0 - 60.0% of mass 95	55.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.1) 1
174	50.0 - 100.0% of mass 95	70
175	5.0 - 9.0% of mass 174	5.3 (7.6) 1
176	95.0 - 101.0% of mass 174	67.5 (96.4) 1
177	5.0 - 9.0% of mass 176	4.7 (7) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VT009141.D	07/28/2014	10:33
VT0728SBL01	VT0728SBL01	VT009142.D	07/28/2014	11:40
VT0728SBS01	VT0728SBS01	VT009143.D	07/28/2014	12:07
TI-SB04(0-2)	F3304-07	VT009145.D	07/28/2014	12:59
TI-SB04(5-10)	F3304-08	VT009146.D	07/28/2014	13:26
TI-SB04(10-WT)	F3304-09	VT009147.D	07/28/2014	13:52
TI-SB05(5-10)	F3304-11	VT009153.D	07/28/2014	16:33

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VD042763.D Date Analyzed: 07/25/2014

Instrument ID: MSVOA_D Time Analyzed: 11:33

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

	IS4 AREA #	RT #				
12 HOUR STD	254563	14.03				
UPPER LIMIT	509126	14.53				
LOWER LIMIT	127282	13.53				
EPA SAMPLE NO.						
TI-SB06D	108824 *	14.04				
TI-SB03(0-2)MS	164075	14.04				
TI-SB03(0-2)MSD	152987	14.03				
VD0725SBL01	179521	14.03				
VD0725SBS01	221364	14.04				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VF042435.D Date Analyzed: 07/28/2014

Instrument ID: MSVOA_F Time Analyzed: 10:08

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) Y

	IS4 AREA #	RT #				
12 HOUR STD	106809	12.55				
UPPER LIMIT	213618	13.05				
LOWER LIMIT	53404.5	12.05				
EPA SAMPLE NO.						
TI-SB02(0-2)	84074	12.55				
TI-SB02(5-10)	78106	12.55				
TI-SB02(10-WT)	66157	12.54				
TI-SB03(0-2)	57975	12.55				
TI-SB03(5-10)	72211	12.55				
TI-SB03(10-WT)	57201	12.54				
TI-SB06DRE	51883 *	12.55				
VF0728SBL01	99500	12.55				
VF0728SBS01	85819	12.55				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VT009141.D Date Analyzed: 07/28/2014

Instrument ID: MSVOA_T Time Analyzed: 10:33

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	885793	7.43	1409710	8.37	1207500	11.21
UPPER LIMIT	1771590	7.93	2819420	8.87	2415000	11.71
LOWER LIMIT	442897	6.93	704854	7.87	603751	10.71
EPA SAMPLE NO.						
TI-SB04(0-2)	709581	7.43	1149180	8.37	913741	11.21
TI-SB04(5-10)	681657	7.44	1078920	8.38	809688	11.21
TI-SB04(10-WT)	788805	7.42	1265250	8.38	1008650	11.21
TI-SB05(5-10)	370462 *	7.44	602130 *	8.38	437768 *	11.21
VT0728SBL01	830158	7.43	1391220	8.37	1181670	11.21
VT0728SBS01	875058	7.42	1414420	8.37	1221130	11.21

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: VT009141.D Date Analyzed: 07/28/2014

Instrument ID: MSVOA_T Time Analyzed: 10:33

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) Y

	IS4 AREA #	RT #				
12 HOUR STD	662199	13.15				
UPPER LIMIT	1324400	13.65				
LOWER LIMIT	331100	12.65				
EPA SAMPLE NO.						
TI-SB04(0-2)	415210	13.15				
TI-SB04(5-10)	311074 *	13.15				
TI-SB04(10-WT)	447239	13.15				
TI-SB05(5-10)	156402 *	13.15				
VT0728SBL01	591467	13.15				
VT0728SBS01	636534	13.15				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_D Calibration Date(s): 07/25/2014 07/25/2014

Heated Purge: (Y/N) Y Calibration Time(s): 09:50 12:26

GC Column: RTX-VMS ID: 0.18 (mm)

LAB FILE ID: RRF005 = VD042760.D RRF010 = VD042761.D RRF020 = VD042762.D
RRF050 = VD042763.D RRF100 = VD042764.D RRF150 = VD042765.D

COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD
4-Bromofluorobenzene	0.273	0.298	0.328	0.303	0.340	0.381	0.321	11.8
1,4-Dioxane	0.001	0.001	0.001	0.001	0.001	0.001	0.001	20.5

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_F Calibration Date(s): 07/10/2014 07/10/2014

Heated Purge: (Y/N) Y Calibration Time(s): 10:51 16:27

GC Column: RTX-VMS ID: 0.18 (mm)

LAB FILE ID: RRF005 = VF042270.D RRF010 = VF042271.D RRF020 = VF042272.D
RRF100 = VF042275.D RRF050 = VF042277.D RRF075 = VF042278.D

COMPOUND	RRF005	RRF010	RRF020	RRF100	RRF050	RRF075	$\overline{RRF}$	% RSD
4-Bromofluorobenzene	0.413	0.394	0.413	0.401	0.469	0.406	0.416	6.4
1,4-Dioxane	0.002	0.003	0.003	0.003	0.003	0.003	0.003	9.5

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_R Calibration Date(s): 07/30/2014 07/30/2014

Heated Purge: (Y/N) N Calibration Time(s): 12:38 16:14

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF005 = VR014387.D RRF010 = VR014388.D RRF020 = VR014389.D
RRF040 = VR014390.D RRF050 = VR014391.D RRF100 = VR014392.D

COMPOUND	RRF005	RRF010	RRF020	RRF040	RRF050	RRF100	RRF	% RSD
4-Bromofluorobenzene	0.273	0.295	0.310	0.319	0.353	0.372	0.320	11.5
1,4-Dioxane	0.001	0.001	0.001	0.001	0.001	0.001	0.001	11.7

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_T Calibration Date(s): 07/23/2014 07/23/2014

Heated Purge: (Y/N) Y Calibration Time(s): 13:15 16:21

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF005 = VT009110.D RRF010 = VT009111.D RRF020 = VT009112.D
RRF050 = VT009113.D RRF075 = VT009114.D RRF100 = VT009115.D

COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF075	RRF100	$\overline{RRF}$	% RSD
4-Bromofluorobenzene	0.443	0.387	0.402	0.458	0.475	0.485	0.442	9
1,4-Dioxane	0.002	0.002	0.002	0.002	0.003	0.002	0.002	13.1

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_F Calibration Date/Time: 07/28/2014 10:08

Lab File ID: VF042435.D Init. Calib. Date(s): 07/10/2014 07/10/2014

Heated Purge: (Y/N) Y Init. Calib. Time(s): 10:51 16:27

GC Column: RTX-VMS ID: 0.18 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.671	0.575		-14.31	20
1,1-Dichloroethene	0.441	0.401		-9.07	20
Acetone	0.207	0.251		21.26	20
Methyl tert-butyl Ether	0.765	0.813		6.28	20
Methylene Chloride	0.565	0.450		-20.35	20
trans-1,2-Dichloroethene	0.492	0.456		-7.11	20
1,1-Dichloroethane	0.981	0.938	0.1	-4.38	20
2-Butanone	0.466	0.445		-4.51	20
Carbon Tetrachloride	0.283	0.252		-10.95	20
cis-1,2-Dichloroethene	0.616	0.565		-8.28	20
Chloroform	0.863	0.829		-3.94	20
1,1,1-Trichloroethane	0.564	0.561		-0.53	20
Benzene	1.342	1.178		-12.22	20
1,2-Dichloroethane	0.323	0.295		-8.67	20
Trichloroethene	0.320	0.288		-10	20
Toluene	0.816	0.728		-10.78	20
Tetrachloroethene	0.306	0.273		-10.78	20
Chlorobenzene	0.961	0.866	0.3	-9.89	20
Ethyl Benzene	1.674	1.527		-8.78	20
m/p-Xylenes	0.643	0.585		-9.02	20
o-Xylene	0.631	0.596		-5.55	20
n-propylbenzene	4.579	3.983		-13.02	20
1,3,5-Trimethylbenzene	2.924	2.651		-9.34	20
tert-Butylbenzene	2.792	2.501		-10.42	20
1,2,4-Trimethylbenzene	2.918	2.646		-9.32	20
sec-Butylbenzene	3.862	3.446		-10.77	20
1,3-Dichlorobenzene	1.514	1.419		-6.28	20
1,4-Dichlorobenzene	1.541	1.436		-6.81	20
n-Butylbenzene	3.116	2.891		-7.22	20
1,2-Dichlorobenzene	1.391	1.326		-4.67	20
1,2-Dichloroethane-d4	0.446	0.373		-16.37	20
Dibromofluoromethane	0.283	0.262		-7.42	20
Toluene-d8	1.049	0.898		-14.4	20
4-Bromofluorobenzene	0.416	0.364		-12.5	20
1,4-Dioxane	0.003	0.003	0.05	0	50

All other compounds must meet a minimum RRF of 0.010.

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VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_R Calibration Date/Time: 07/30/2014 18:53

Lab File ID: VR014395.D Init. Calib. Date(s): 07/30/2014 07/30/2014

Heated Purge: (Y/N) N Init. Calib. Time(s): 12:38 16:14

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.610	0.589		-3.44	20
1,1-Dichloroethene	0.574	0.567		-1.22	20
Acetone	0.087	0.070		-19.54	20
Methyl tert-butyl Ether	0.842	0.830		-1.42	20
Methylene Chloride	0.412	0.399		-3.15	20
trans-1,2-Dichloroethene	0.447	0.452		1.12	20
1,1-Dichloroethane	0.868	0.865	0.1	-0.35	20
2-Butanone	0.109	0.103		-5.51	20
Carbon Tetrachloride	0.409	0.410		0.24	20
cis-1,2-Dichloroethene	0.481	0.491		2.08	20
Chloroform	0.819	0.809		-1.22	20
1,1,1-Trichloroethane	0.602	0.620		2.99	20
Benzene	1.447	1.487		2.76	20
1,2-Dichloroethane	0.371	0.362		-2.43	20
Trichloroethene	0.345	0.364		5.51	20
Toluene	0.890	0.936		5.17	20
Tetrachloroethene	0.397	0.423		6.55	20
Chlorobenzene	1.076	1.082	0.3	0.56	20
Ethyl Benzene	1.900	2.027		6.68	20
m/p-Xylenes	0.752	0.803		6.78	20
o-Xylene	0.674	0.731		8.46	20
n-propylbenzene	4.684	4.886		4.31	20
1,3,5-Trimethylbenzene	3.098	3.227		4.16	20
tert-Butylbenzene	2.538	2.654		4.57	20
1,2,4-Trimethylbenzene	3.105	3.259		4.96	20
sec-Butylbenzene	3.312	3.480		5.07	20
1,3-Dichlorobenzene	1.724	1.755		1.8	20
1,4-Dichlorobenzene	1.717	1.707		-0.58	20
n-Butylbenzene	2.222	2.402		8.1	20
1,2-Dichlorobenzene	1.388	1.370		-1.3	20
1,2-Dichloroethane-d4	0.462	0.475		2.81	20
Dibromofluoromethane	0.299	0.318		6.36	20
Toluene-d8	1.233	1.369		11.03	20
4-Bromofluorobenzene	0.320	0.365		14.06	20
1,4-Dioxane	0.001	0.001	0.05	0	50

All other compounds must meet a minimum RRF of 0.010.

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VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG No.: F3304

Instrument ID: MSVOA_T Calibration Date/Time: 07/28/2014 10:33

Lab File ID: VT009141.D Init. Calib. Date(s): 07/23/2014 07/23/2014

Heated Purge: (Y/N) Y Init. Calib. Time(s): 13:15 16:21

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.731	0.684		-6.43	20
1,1-Dichloroethene	0.589	0.610		3.57	20
Acetone	0.153	0.176		15.03	20
Methyl tert-butyl Ether	1.157	1.142		-1.3	20
Methylene Chloride	0.483	0.478		-1.03	20
trans-1,2-Dichloroethene	0.477	0.486		1.89	20
1,1-Dichloroethane	0.955	0.942	0.1	-1.36	20
2-Butanone	0.205	0.226		10.24	20
Carbon Tetrachloride	0.426	0.424		-0.47	20
cis-1,2-Dichloroethene	0.505	0.516		2.18	20
Chloroform	0.921	0.880		-4.45	20
1,1,1-Trichloroethane	0.638	0.681		6.74	20
Benzene	1.344	1.361		1.26	20
1,2-Dichloroethane	0.449	0.404		-10.02	20
Trichloroethene	0.305	0.312		2.3	20
Toluene	0.798	0.816		2.26	20
Tetrachloroethene	0.294	0.301		2.38	20
Chlorobenzene	0.969	0.993	0.3	2.48	20
Ethyl Benzene	1.814	1.903		4.91	20
m/p-Xylenes	0.673	0.710		5.5	20
o-Xylene	0.637	0.686		7.69	20
n-propylbenzene	4.212	4.462		5.93	20
1,3,5-Trimethylbenzene	2.934	3.070		4.64	20
tert-Butylbenzene	2.651	2.872		8.34	20
1,2,4-Trimethylbenzene	3.078	3.207		4.19	20
sec-Butylbenzene	3.768	4.108		9.02	20
1,3-Dichlorobenzene	1.580	1.658		4.94	20
1,4-Dichlorobenzene	1.562	1.604		2.69	20
n-Butylbenzene	3.272	3.591		9.75	20
1,2-Dichlorobenzene	1.386	1.422		2.6	20
1,2-Dichloroethane-d4	0.623	0.588		-5.62	20
Dibromofluoromethane	0.270	0.284		5.18	20
Toluene-d8	1.157	1.245		7.61	20
4-Bromofluorobenzene	0.442	0.462		4.53	20
1,4-Dioxane	0.002	0.002	0.05	0	50

All other compounds must meet a minimum RRF of 0.010.

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: SVOCMS Group1

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for SVOCMS Group1.

C. Analytical Techniques:
The samples were analyzed on instrument BNA_F using GC Column RTX-5 which is 20 meters, 0.18 mm ID, 0.36 um dfThe analysis of SVOCMS Group1 was based on method 8270D and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for TI-SB04(10-WT) [2,4,6-Tribromophenol - 3%, 2-Fluorophenol - 13%], TI-SB04(10-WT)DL [2,4,6-Tribromophenol - 2% and 2-Fluorophenol - 12%].
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD {F3304-14MSD} with File ID: BF072803.D recoveries met the acceptable requirements except for 2-Methylphenol[46%], 3+4-Methylphenols[44%], Benzo(k)fluoranthene[31%] and Hexachlorobenzene[43%] .
The RPD for {F3304-14MSD} with File ID: BF072803.D recoveries met criteria except for 3+4-Methylphenols[24%], Anthracene[21%], Benzo(k)fluoranthene[39%], Pentachlorophenol[47%] and Phenol[21%] .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The %RSD is greater than 15% in the Initial Calibration (Method 8270-BF072514.M) for Pentachlorophenol this compound is passing on Linear Regression.
The %RSD is greater than 15% in the Initial Calibration (Method 8270-BF072914.M) for Pentachlorophenol this compound is passing on Linear Regression.
The Continuous Calibration File ID BF072888.D met the requirements except for Benzo(b)fluoranthene .

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The Tuning criteria met requirements.
Samples TI-SB02(10-WT), TI-SB03(0-2), TI-SB03(5-10), TI-SB03(10-WT), TI-SB04(5-10), TI-SB04(10-WT) and TI-SB05(5-10) were diluted due to bad matrices.
Samples TI-SB02(0-2), TI-SB03(5-10), TI-SB04(5-10) and TI-SB04(10-WT) were diluted due to high concentrations.

E. Additional Comments:
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature: Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:47 pm, Aug 06, 2014

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Surrogate Summary

SW-846

SDG No.: F3304

Client: URS Corporation

Analytical Method: 8270D

Lab Sample ID	Client ID	Parameter	Spike (PPM)	Result (PPM)	Recovery (%)	Qual	Limits (%) Low	High
F3304-07	TI-SB04(0-2)	2,4,6-Tribromophenol	150	112.61	75		30	133
		Terphenyl-d14	100	82.37	82		37	115
F3304-08	TI-SB04(5-10)	2-Fluorophenol	150	100.94	67		28	127
		Phenol-d6	150	105.82	71		34	127
		Nitrobenzene-d5	100	78.80	79		31	132
		2-Fluorobiphenyl	100	71.38	71		39	123
		2,4,6-Tribromophenol	150	93.38	62		30	133
		Terphenyl-d14	100	70.68	71		37	115
F3304-08DL	TI-SB04(5-10)DL	2-Fluorophenol	150	103.80	69		28	127
		Phenol-d6	150	108.32	72		34	127
		Nitrobenzene-d5	100	87.08	87		31	132
		2-Fluorobiphenyl	100	80.52	81		39	123
		2,4,6-Tribromophenol	150	91.56	61		30	133
		Terphenyl-d14	100	66.20	66		37	115
F3304-09	TI-SB04(10-WT)	2-Fluorophenol	150	18.88	13	*	28	127
		Phenol-d6	150	75.06	50		34	127
		Nitrobenzene-d5	100	74.06	74		31	132
		2-Fluorobiphenyl	100	71.38	71		39	123
		2,4,6-Tribromophenol	150	4.56	3	*	30	133
		Terphenyl-d14	100	72.70	73		37	115
F3304-09DL	TI-SB04(10-WT)DL	2-Fluorophenol	150	18.36	12	*	28	127
		Phenol-d6	150	75.60	50		34	127
		Nitrobenzene-d5	100	76.48	76		31	132
		2-Fluorobiphenyl	100	79.80	80		39	123
		2,4,6-Tribromophenol	150	3.40	2	*	30	133
		Terphenyl-d14	100	68.64	69		37	115
F3304-10	TI-SB05(0-2)	2-Fluorophenol	150	63.18	42		28	127
		Phenol-d6	150	64.21	43		34	127
		Nitrobenzene-d5	100	50.96	51		31	132
		2-Fluorobiphenyl	100	45.26	45		39	123
		2,4,6-Tribromophenol	150	58.17	39		30	133
		Terphenyl-d14	100	44.87	45		37	115
F3304-11	TI-SB05(5-10)	2-Fluorophenol	150	97.70	65		28	127
		Phenol-d6	150	101.84	68		34	127
		Nitrobenzene-d5	100	75.60	76		31	132
		2-Fluorobiphenyl	100	53.04	53		39	123
		2,4,6-Tribromophenol	150	84.38	56		30	133
		Terphenyl-d14	100	47.76	48		37	115
F3304-12	TI-SB06D	2-Fluorophenol	150	78.38	52		28	127
		Phenol-d6	150	81.68	54		34	127
		Nitrobenzene-d5	100	64.24	64		31	132
		2-Fluorobiphenyl	100	62.66	63		39	123
		2,4,6-Tribromophenol	150	72.65	48		30	133
		Terphenyl-d14	100	61.31	61		37	115
F3304-13MS	TI-SB03(0-2)MS	2-Fluorophenol	150	96.92	65		28	127
		Phenol-d6	150	101.66	68		34	127
		Nitrobenzene-d5	100	76.20	76		31	132
		2-Fluorobiphenyl	100	70.93	71		39	123
		2,4,6-Tribromophenol	150	93.34	62		30	133
		Terphenyl-d14	100	70.65	71		37	115
F3304-14MSD	TI-SB03(0-2)MSD	2-Fluorophenol	150	75.61	50		28	127
		Phenol-d6	150	79.47	53		34	127

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB78047BL

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab File ID: BF072868.D Lab Sample ID: PB78047BL

Instrument ID: BNA_F Date Extracted: 07/25/2014

Matrix: (soil/water) SOIL Date Analyzed: 07/30/2014

Level: (low/med) LOW Time Analyzed: 15:54

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB78047BS	PB78047BS	BF072912.D	07/31/2014
TI-SB02(0-2)	F3304-01	BF072800.D	07/26/2014
TI-SB02(5-10)	F3304-02	BF072804.D	07/26/2014
TI-SB02(10-WT)	F3304-03	BF072808.D	07/27/2014
TI-SB03(0-2)	F3304-04	BF072809.D	07/27/2014
TI-SB03(5-10)	F3304-05	BF072810.D	07/27/2014
TI-SB03(10-WT)	F3304-06	BF072811.D	07/27/2014
TI-SB04(0-2)	F3304-07	BF072798.D	07/26/2014
TI-SB05(0-2)	F3304-10	BF072799.D	07/26/2014
TI-SB06D	F3304-12	BF072801.D	07/26/2014
TI-SB03(0-2)MS	F3304-13MS	BF072802.D	07/26/2014
TI-SB03(0-2)MSD	F3304-14MSD	BF072803.D	07/26/2014
TI-SB05(5-10)	F3304-11	BF072812.D	07/27/2014
TI-SB04(10-WT)	F3304-09	BF072813.D	07/27/2014
TI-SB04(5-10)	F3304-08	BF072814.D	07/27/2014

COMMENTS:

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Report of Analysis

Client:	URS Corporation			Date Collected:	
Project:	Bronx Psy. Center			Date Received:	
Client Sample ID:	PB78047BL			SDG No.:	F3304
Lab Sample ID:	PB78047BL			Matrix:	SOIL
Analytical Method:	SW8270			% Moisture:	0
Sample Wt/Vol:	30.02	Units: g		Final Vol:	1000 uL
Soil Aliquot Vol:		uL		Test:	SVOCMS Group1
Extraction Type :		Decanted : N		Level :	LOW
Injection Volume :		GPC Factor : 1.0		GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072868.D	1	07/25/14	07/30/14	PB78047

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	516585	8.2				
15067-26-2	Acenaphthene-d10	291256	10.99				
1517-22-2	Phenanthrene-d10	549918	13.37				
1719-03-5	Chrysene-d12	634234	17.07				
1520-96-3	Perylene-d12	572799	18.83				
TENTATIVE IDENTIFIED COMPOUNDS							
000077-76-9	Propane, 2,2-dimethoxy-	2800	J N			1.27	ug/Kg
	unknown1.35	75.3	J			1.35	ug/Kg
000141-79-7	3-Penten-2-one, 4-methyl-	480	A			3.28	ug/Kg
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2100	A			3.94	ug/Kg
	unknown5.96	2800	J			5.96	ug/Kg
031158-91-5	Hexadecanoic acid, 1,1-dimethyleth	110	J N			15.57	ug/Kg
000123-95-5	Octadecanoic acid, butyl ester	93.3	J N			16.49	ug/Kg

9/4/14

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: PESTICIDE Group1

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for PESTICIDE Group1.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_D. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HM-G017-11 . The rear column is ZBMR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalog # 7HM-G016-17.The analysis of PESTICIDE Group1s was based on method 8081B and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for TI-SB02(0-2)DL [Decachlorobiphenyl(1) - 0%, Decachlorobiphenyl(2) - 0%, Tetrachloro-m-xylene(1) - 0% and Tetrachloro-m-xylene(2) - 0%].
The Retention Times were acceptable for all samples except for sample # TI-SB02(0-2)DL because of high dilution of the sample.
The MS {F3304-13MS} with File ID: PD023558.D recoveries met the requirements for all compounds except for 4,4-DDE[-90%] and 4,4-DDT[-98%] .
The MSD {F3304-14MSD} with File ID: PD023559.D recoveries met the acceptable requirements except for 4,4-DDE[-84%] and 4,4-DDT[-92%] .
The RPD recoveries met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
Samples TI-SB02(0-2), TI-SB03(0-2) were diluted due to high concentrations.

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E Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:51 pm, Aug 06, 2014

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COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

TI-SB02(0-2)

Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab Sample ID: F3304-01 Date(s) Analyzed: 07/28/2014 07/28/2014

Instrument ID (1): ECD_D Instrument ID (2): ECD_D

GC Column: (1): ZB-MR2 ID: 0.32 (mm) GC Column:(2): ZB-MR1 ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDD	1	6.57	6.52	6.62	6.2	122.1
	2	5.97	5.92	6.02	1.5	
4,4'-DDT	1	6.86	6.81	6.91	160	0
	2	6.21	6.16	6.26	160	
4,4'-DDE	1	6.08	6.03	6.13	170	6.1
	2	5.46	5.41	5.51	160	
Dieldrin	1	6.22	6.17	6.27	3.7	45.8
	2	5.59	5.54	5.64	5.9	

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COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

TI-SB02(5-10)

Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab Sample ID: F3304-02 Date(s) Analyzed: 07/28/2014 07/28/2014

Instrument ID (1): ECD_D Instrument ID (2): ECD_D

GC Column: (1): ZB-MR2 ID: 0.32 (mm) GC Column:(2): ZB-MR1 ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDT	1	6.86	6.81	6.91	5.3	46.5
	2	6.20	6.15	6.25	3.3	
4,4'-DDE	1	6.08	6.03	6.13	2.1	17.4
	2	5.46	5.41	5.51	2.5	

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COMPOUND DETECTION SUMMARY

CLIENT SAMPLE NO.

TI-SB03(10-WT)

Contract: URSC05

Lab Code: CHEM Case No.: F3304 SAS No.: F3304 SDG NO.: F3304

Lab Sample ID: F3304-06 Date(s) Analyzed: 07/28/2014 07/28/2014

Instrument ID (1): ECD_D Instrument ID (2): ECD_D

GC Column: (1): ZB-MR2 ID: 0.32 (mm) GC Column:(2): ZB-MR1 ID: 0.32 (mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%RPD
4,4'-DDT	1	6.86	6.81	6.91	2.6	12.2
	2	6.21	6.16	6.26	2.3	
4,4'-DDE	1	6.08	6.03	6.13	1.2	28.6
	2	5.46	5.41	5.51	1.6	

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: PCB

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for PCB.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for TI-SB04(0-2) [Decachlorobiphenyl(2) - 59%], TI-SB05(5-10) [Decachlorobiphenyl(2) - 54%] and TI-SB03(0-2)MSD [Decachlorobiphenyl(1) - 126%].
The Retention Times were acceptable for all samples.
The MS {F3304-13MS} with File ID: PO016945.D recoveries met the requirements for all compounds except for AR1016[153%], AR1260[209%] .
The MSD {F3304-14MSD} with File ID: PO016946.D recoveries met the acceptable requirements except for AR1260[485%] .
The RPD for {F3304-14MSD} with File ID: PO016946.D recoveries met criteria except for AR1260[80%] .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:
F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:47 pm, Aug 06, 2014

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: Herbicide Group1

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for Herbicide Group1.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_E. The front column is ZB-35-HT Inferno which is 30 meters, 0.25 mm ID, 0.25 um df, Catalog # 7HG-G025-11. The rear column is ZB-XLB-HT Inferno which is 30 meters, 0.25 mm ID, 0.25 um df, Catalog # 7HG-G024-11.The analysis of Herbicide Group1s was based on method 8151A and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria except for TI-SB03(0-2)MS [2,4-DCAA(2) - 9%].
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD for {F3304-14MSD} with File ID: PE010700.D recoveries met criteria except for 2,4,5-TP(Silvex)[30%] .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration File ID PE010707.D met the requirements except for 2,4,5-TP (Silvex) and 2,4-DCAA are failing in 2nd column but passing in 1st column .

E. Additional Comments:
F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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Signature_ Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:47 pm, Aug 06, 2014

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3304
Test Name: Mercury,Metals ICP-Group1

A. Number of Samples and Date of Receipt:
14 Solid samples were received on 07/24/2014.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Herbicide Group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for Mercury,Metals ICP-Group1.

C. Analytical Techniques:
The analysis of Metals ICP-Group1 was based on method 6010C, digestion based on method 3050 (soils). The analysis of Mercury was based on method 7471A and digestion was based on method 7471B (soils).

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike(TI-SB03(0-2)MS) analysis met criteria for all samples except for Lead and Selenium.
The Matrix Spike Duplicate (TI-SB03(0-2)MSD)analysis met criteria for all samples except for Lead.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution (TI-SB03(0-2)L) met criteria for all samples except for Arsenic, Barium, Chromium, Copper, Manganese ~~and Mercury.~~
The Serial Dilution (DW-3L) met criteria for all samples except for Zinc.

E. Additional Comments:
The %Recovery was outside the acceptance limit for Barium of ICV01 in analytical sequence #LB72035 but no samples were analyzed under these calibrations.

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Signature_ Mildred V Reyes

APPROVED
By Mildred V Reyes at 4:47 pm, Aug 06, 2014

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: URS Corporation **level:** low **sdg no.:** F3304

contract: URSC05 **lab code:** CHEM **case no.:** F3304 **sas no.:** F3304

matrix: Solid **sample id:** F3304-04 **client id:** TI-SB03(0-2)MS

Percent Solids for Sample: 93.9 **Spiked ID:** F3304-13 **Percent Solids for Spike Sample:** 93.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	73 - 117	48.7		15.6		42	79		P
Barium	mg/Kg	39 - 158	252		216		10.5	343		P
Beryllium	mg/Kg	79 - 112	9.23		0.611		10.5	82		P
Cadmium	mg/Kg	73 - 114	10.51		0.277	U	10.5	100.1		P
Chromium	mg/Kg	68 - 122	41.4		22.5		21	90		P
Copper	mg/Kg	59 - 132	55.8		39.1		15.8	106		P
Lead	mg/Kg	66 - 125	274		197		52.5	147	N	P
Manganese	mg/Kg	10 - 205	318		273		10.5	429		P
Mercury	mg/Kg	34 - 153	0.362		0.161		0.22	91		CV
Nickel	mg/Kg	64 - 129	65.1		34.6		26.3	116		P
Selenium	mg/Kg	69 - 105	75.8		1.54		110	68	N	P
Silver	mg/Kg	54 - 131	3.09		0.461	U	3.9	79.2		P
Zinc	mg/Kg	67 - 127	255		218		10.5	352		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: URS Corporation **level:** low **sdg no.:** F3304

contract: URSC05 **lab code:** CHEM **case no.:** F3304 **sas no.:** F3304

matrix: Solid **sample id:** F3304-04 **client id:** TI-SB03(0-2)MSD

Percent Solids for Sample: 93.9 **Spiked ID:** F3304-14 **Percent Solids for Spike Sample:** 92.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/Kg	73 - 117	49.5		15.6		42.4	80		P
Barium	mg/Kg	39 - 158	254		216		10.6	358		P
Beryllium	mg/Kg	79 - 112	9.3		0.611		10.6	82		P
Cadmium	mg/Kg	73 - 114	10.6		0.277	U	10.6	100		P
Chromium	mg/Kg	68 - 122	41.7		22.5		21.2	91		P
Copper	mg/Kg	59 - 132	56.6		39.1		15.9	110		P
Lead	mg/Kg	66 - 125	277		197		53.1	151	N	P
Manganese	mg/Kg	10 - 205	321		273		10.6	453		P
Mercury	mg/Kg	34 - 153	0.356		0.161		0.22	89		CV
Nickel	mg/Kg	64 - 129	65.9		34.6		26.5	118		P
Selenium	mg/Kg	69 - 105	77.2		1.54		110	69		P
Silver	mg/Kg	54 - 131	3.12		0.461	U	4	78		P
Zinc	mg/Kg	67 - 127	260		218		10.6	396		P

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

TI-SB03(0-2)L

Lab Name: Chemtech Consulting Group **Contract:** URSC05

Lab Code: CHEM **Lb No.:** lb72035 **Lab Sample ID :** F3304-04L **SDG No.:** F3304

Matrix (soil/water): Solid **Level (low/med):** LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	15.6		18.7		20		P
Barium	216		250		16		P
Beryllium	0.611		0.71	J	16		P
Cadmium	0.277	U	1.38	U			P
Chromium	22.5		27.3		21		P
Copper	39.1		46.6		19		P
Lead	197		193		2		P
Manganese	273		340		25		P
Mercury	0.161		0.124		23		CV
Nickel	34.6		34.1		1		P
Selenium	1.54		4.61	U	100.0		P
Silver	0.461	U	2.31	U			P
Zinc	218		227		4		P

CHEMTECH
CHAIN OF CUSTODY RECORD

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(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. F3308
QUOTE NO. Q1112002
COC Number 032425

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: URS Corporation-NY
ADDRESS: 3 Corporate Dr, Suite 203
CITY: Clifton Park STATE: NY ZIP: 12065
ATTENTION: Jen Gillies
PHONE: 518.688.0015 FAX: 518.688.0022

CLIENT PROJECT INFORMATION

PROJECT NAME: Bronx PC
PROJECT NO.: LOCATION: Bronx, NY
PROJECT MANAGER: Jen Gillies
e-mail: jennifer.gillies@urs.com
PHONE: 518.688.0015 FAX: 518.688.0022

CLIENT BILLING INFORMATION

BILL TO: SAME PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: Excel & Pdf DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
* STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ LEVEL 1: Results only
☐ LEVEL 2: Results + QC
☐ LEVEL 3: Results (plus results raw data) + QC
☐ LEVEL 4: Results + QC (all raw data)
☐ EDD Format: _____
☒ Others ASP CatB, Non-QC Deliverables

ANALYSIS

1 TCL VOCs + TICs 8260
2 TCL SVOCs + TICs (8270)
3 TAL Inorganics (Unfiltered) (6010B)
4 Dissolved Filtered TAL Inorganics (Unfiltered) (6010B)
5 PCBs (8082)
6 Pesticides (8081A)
7 Herbicides (8151A)
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	MW-2	GW		X	7/23/14	1700	9	X	X	X	X	X	X	X			
2.	MW-3D					1710		X	X	X	X	X	X	X			
3.	MW-2MS					1730		X	X	X	X	X	X	X			
4.	MW-2MSD					1745		X	X	X	X	X	X	X			
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	7/23/14	1. FEDEX
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3. Fedex	7/25/14 930	3. RS

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: 2 coolers

Cooler Temp. 4°C
Ice in Cooler?: Yes

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☑ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

Revision 8/2007
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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
5 9 Water samples were received on 07/25/2014.

9/15/14

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_R were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456The analysis of VOCMS Group1 was based on method 8260C.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD for {VR0731WBSD01} with File ID: VR014410.D recoveries met criteria except for 1,4-Dioxane[60%].
The Blank Spike met requirements for all samples.
The Blank Spike Duplicate met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements. The %RSD is greater than 15% in the Initial Calibration (Method 82R073014W.M) for Acetone this compound is passing on Linear regression.
The Continuous Calibration met the requirements.
The Tuning criteria met requirements.

E. Additional Comments: TB-072314 was added and it is not part of COC.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial

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Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature: Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:18 pm, Aug 06, 2014

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: SVOCMS Group1

A. Number of Samples and Date of Receipt:
4 ~~9~~ Water samples were received on 07/25/2014.

9/15/14

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for SVOCMS Group1.

C. Analytical Techniques:
The samples were analyzed on instrument BNA_F using GC Column RTX-5 which is 20 meters, 0.18 mm ID, 0.36 um dfThe analysis of SVOCMS Group1 was based on method 8270D and extraction was done based on method 3510.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD recoveries met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The %RSD is greater than 15% in the Initial Calibration (Method 8270-BE070214.M) for Pentachlorophenol this compound is passing on Linear Regression.
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

E. Additional Comments:

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial

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Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:18 pm, Aug 06, 2014

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4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB78096BL

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3308 SAS No.: F3308 SDG NO.: F3308

Lab File ID: BF072844.D Lab Sample ID: PB78096BL

Instrument ID: BNA_F Date Extracted: 07/29/2014

Matrix: (soil/water) Water Date Analyzed: 07/29/2014

Level: (low/med) LOW Time Analyzed: 19:46

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB78096BS	PB78096BS	BF072845.D	07/29/2014
MW-3D	F3308-02	BF072881.D	07/30/2014
MW-2MS	F3308-03MS	BF072882.D	07/30/2014
MW-2MSD	F3308-04MSD	BF072883.D	07/30/2014
MW-2	F3308-01	BF072846.D	07/29/2014

COMMENTS:

Form IV SV

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Report of Analysis

Client:	URS Corporation	Date Collected:	
Project:	Bronx Psy. Center	Date Received:	
Client Sample ID:	PB78096BL	SDG No.:	F3308
Lab Sample ID:	PB78096BL	Matrix:	Water
Analytical Method:	SW8270	% Moisture:	100
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOCMS Group1
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF072844.D	1	07/29/14	07/29/14	PB78096

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
1146-65-2	Naphthalene-d8	730675	8.23				
15067-26-2	Acenaphthene-d10	429260	11.03				
1517-22-2	Phenanthrene-d10	861563	13.42				
1719-03-5	Chrysene-d12	828971	17.1				
1520-96-3	Perylene-d12	655689	18.8				
TENTATIVE IDENTIFIED COMPOUNDS							
000077-76-9	Propane, 2,2-dimethoxy-	36.2	J			1.3	ug/L
000141-79-7	3-Penten-2-one, 4-methyl-	6.2	A			3.33	ug/L
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	62.4	A			3.98	ug/L
	unknown5.99	90.1	J			5.99	ug/L

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3308 SAS No.: F3308 SDG No.: F3308

Instrument ID: MSVOA_R Calibration Date(s): 07/30/2014 07/30/2014

Heated Purge: (Y/N) N Calibration Time(s): 12:38 16:14

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF005 = VR014387.D RRF010 = VR014388.D RRF020 = VR014389.D
RRF040 = VR014390.D RRF050 = VR014391.D RRF100 = VR014392.D

COMPOUND	RRF005	RRF010	RRF020	RRF040	RRF050	RRF100	$\overline{RRF}$	% RSD
4-Bromofluorobenzene	0.273	0.295	0.310	0.319	0.353	0.372	0.320	11.5
1,4-Dioxane	0.001	0.001	0.001	0.001	0.001	0.001	0.001	11.7

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: URSC05

Lab Code: CHEM Case No.: F3308 SAS No.: F3308 SDG No.: F3308

Instrument ID: MSVOA_R Calibration Date/Time: 07/31/2014 09:36

Lab File ID: VR014407.D Init. Calib. Date(s): 07/30/2014 07/30/2014

Heated Purge: (Y/N) N Init. Calib. Time(s): 12:38 16:14

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.610	0.625		2.46	20
1,1-Dichloroethene	0.574	0.564		-1.74	20
Acetone	0.087	0.073		-16.09	20
Methyl tert-butyl Ether	0.842	0.774		-8.08	20
Methylene Chloride	0.412	0.373		-9.47	20
trans-1,2-Dichloroethene	0.447	0.433		-3.13	20
1,1-Dichloroethane	0.868	0.791	0.1	-8.87	20
2-Butanone	0.109	0.091		-16.51	20
Carbon Tetrachloride	0.409	0.419		2.44	20
cis-1,2-Dichloroethene	0.481	0.476		-1.04	20
Chloroform	0.819	0.758		-7.45	20
1,1,1-Trichloroethane	0.602	0.594		-1.33	20
Benzene	1.447	1.456		0.62	20
1,2-Dichloroethane	0.371	0.342		-7.82	20
Trichloroethene	0.345	0.363		5.22	20
Toluene	0.890	0.940		5.62	20
Tetrachloroethene	0.397	0.408		2.77	20
Chlorobenzene	1.076	1.100	0.3	2.23	20
Ethyl Benzene	1.900	2.002		5.37	20
m/p-Xylenes	0.752	0.807		7.31	20
o-Xylene	0.674	0.741		9.94	20
n-propylbenzene	4.684	4.917		4.97	20
1,3,5-Trimethylbenzene	3.098	3.306		6.71	20
tert-Butylbenzene	2.538	2.726		7.41	20
1,2,4-Trimethylbenzene	3.105	3.338		7.5	20
sec-Butylbenzene	3.312	3.496		5.56	20
1,3-Dichlorobenzene	1.724	1.820		5.57	20
1,4-Dichlorobenzene	1.717	1.737		1.16	20
n-Butylbenzene	2.222	2.357		6.08	20
1,2-Dichlorobenzene	1.388	1.397		0.65	20
1,2-Dichloroethane-d4	0.462	0.409		-11.47	20
Dibromofluoromethane	0.299	0.302		1	20
Toluene-d8	1.233	1.300		5.43	20
4-Bromofluorobenzene	0.320	0.338		5.63	20
1,4-Dioxane	0.001	0.001	0.05	0	50

All other compounds must meet a minimum RRF of 0.010.

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: Herbicide group1

A. Number of Samples and Date of Receipt:
4 Water samples were received on 07/25/2014.

B. Parameters
9/15/14
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for Herbicide group1.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_E. The front column is ZB-35-HT Inferno which is 30 meters, 0.25 mm ID, 0.25 um df, Catalog # 7HG-G025-11. The rear column is ZB-XLB-HT Inferno which is 30 meters, 0.25 mm ID, 0.25 um df, Catalog # 7HG-G024-11.The analysis of Herbicide group1s was based on method 8151A and extraction was done based on method 3510.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD recoveries met criteria.
The Blank Spike met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration File ID PE010707.D met the requirements except for 2,4,5-TP (Silvex) and 2,4-DCAA are failing in 2nd column but passing in 1st column.

E. Additional Comments:

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I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:18 pm, Aug 06, 2014

CHEMTECH
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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: Dissolved ICP-Group Metals,Dissolved Mercury,Mercury,Metals ICP-Group1

A. Number of Samples and Date of Receipt:
8 ~~9~~ Water samples were received on 07/25/2014.

B. Parameters:
9/15/14
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for Dissolved ICP-Group Metals,Dissolved Mercury,Mercury,Metals ICP-Group1.

C. Analytical Techniques:
The analysis of Dissolved ICP-Group Metals,Metals ICP-Group1 was based on method 6010C, digestion based on method 3010 (waters). The analysis and digestion of Dissolved Mercury,Mercury was based on method 7470A.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
The %Recovery was outside the acceptance limit for Barium of ICV01 in analytical sequence #LB72035 but no samples were analyzed under these calibrations.
Sample #F3308-05 and #F3308-06 were analyzed as Dissolved Metals.

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Signature Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:17 pm, Aug 06, 2014

CHEMTECH
284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: PCB

A. Number of Samples and Date of Receipt:
4 9 Water samples were received on 07/25/2014.

B. Parameters
9/15/14 a
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for PCB.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.The analysis of PCBs was based on method 8082A and extraction was done based on method 3510.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds.
The MSD recoveries met the acceptable requirements.
The RPD recoveries met criteria.
The Blank Spike met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.
The Continuous Calibration File ID PO017000.D met the requirements except for Decachlorobiphenyl is failing in 1st column but passing in 2nd column.

E. Additional Comments:

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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Signature_ Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:17 pm, Aug 06, 2014

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CASE NARRATIVE

URS Corporation
Project Name: Bronx Psy. Center
Project # N/A
Chemtech Project # F3308
Test Name: PESTICIDE Group1

A. Number of Samples and Date of Receipt:
4 ~~9~~ Water samples were received on 07/25/2014.

B. Parameters
9/15/14
According to the Chain of Custody document, the following analyses were requested: Dissolved ICP-Group Metals, Dissolved Mercury, Dissolved Metals Group1, Herbicide group1, Mercury, Metals Group1, Metals ICP-Group1, PCB, PESTICIDE Group1, SVOCMS Group1 and VOCMS Group1. This data package contains results for PESTICIDE Group1.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_D. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HM-G017-11 . The rear column is ZBMR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalog # 7HM-G016-17.The analysis of PESTICIDE Group1s was based on method 8081B and extraction was done based on method 3510.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD recoveries met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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Signature_ Mildred V Reyes

APPROVED
By Mildred V Reyes at 3:17 pm, Aug 06, 2014

APPENDIX D

AVAILABLE SOIL SAMPLE DESCRIPTIONS AND SOIL BORING LOGS

APPENDIX D
BUILDING 1-TRANSFORMER ROOMS
SOIL SAMPLE DESCRIPTIONS
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Sample Location	Sample Date	Depth (feet)	Description
Room No. 1 (North)			
Drain	8/29/00	0-2	Brown sand and silt, brown/gray fine sand, trace of rock fragments with silt, moist, trace of chemical odor.
	8/29/00	2-4	Dark brown fine sand, fragments of schist, brick, and concrete. Trace of chemical odor. Trace of silt, dry/damp.
	8/30/00	4-6	Dark-gray-brown, fill with grayish silt grading into brown coarse sand and fine gravel and brick fragments, yellow fire-brick, gray at top coarse sand; wet poorly sorted, no odor.
N15W0	8/29/00	0-2	Brown poorly sorted sand, some silt, moist. Trace of rock and brick fragments.
	8/29/00	2-4	Brown poorly sorted sand, some silt, moist. Trace of rock and brick fragments with pieces of wood and coal.
	8/29/00	4-6	Wet at 5.8'; brown poorly sorted sand with brick fragments.
	8/30/00	6-8	Brown-gray silt fine medium sand; fragments of brick and glass no odor, wet.
N15W5	8/29/00	0-2	Brown poorly sorted sand, fragments of rock and brick.
	8/29/00	2-4	Light brown silt and sand; gray clay.
	8/30/00	4-6	Dark brown fine sand some silt, of red brick fragments, trace of glass fragments.
	8/30/00	6-8	Brick/cobble red in top with grayish brown tight silty-sand; saturated from 6' to 7'. No odor.
N25W0	8/29/00	0-2	Brown sand, silt, red brick, trace of concrete. Damp, no odor.
	8/30/00	2-4	Refusal; No recovery.
N25W15	8/30/00	0-2	Fill; brown fine coarse sand; trace of tan silt, some red brick fragments, trace of glass and rock fragments, damp, no odor.
	8/30/00	2-4	No recovery.
	8/30/00	4-6	Fill; 5.5-6' wet 4-5'; dark gray brown crushed stone and fine-medium sand, moist, some red and yellow bricks and traces of concrete. 5-6' wet brown coarse-medium sand; some silt; rock and red brick fragments.
N30W5	8/29/00	0-2	Brown to light brown poorly sorted sand trace of rock fragments, no odor.
	8/29/00	2-4	Brown fine sand, trace of silt, trace of concrete, brick and rock fragments. Dry-damp.
	8/30/00	4-6	Wet at 5.8'; no odor poorly sorted sand, fragments of rock.
	8/31/00	6-8	Brown-light brown silt

APPENDIX D
BUILDING 1-TRANSFORMER ROOMS
SOIL SAMPLE DESCRIPTIONS
PRELIMINARY SITE ASSESSMENT
BRONX PSYCHIATRIC CENTER

Sample Location	Sample Date	Depth (feet)	Description
N40W5	8/29/00	0-2	Dark brown fine sand and silt, red brick fragments, traces of concrete.
	8/29/00	2-4	Dark brown fine sand, red brick, concrete, rock schist fragment, trace of coal, and trace of silt; dry.
	8/30/00	4-6	Refusal; No recovery.
N40W15	8/29/00	0-2	Brown poorly sorted fine sand, fragments of coal and brick.
	8/29/00	2-4	Brown fine grain sand, fragments of coal and brick.
	8/29/00	4-6	Brown poorly sorted fine sand, fragments of coal and brick, gray wet poorly sorted fine sand.

URS Corporation Soil Boring Log

PROJECT INFORMATION		SOIL BORING INFORMATION			
Project:	Bronx Psychiatric Center	**Boring/Well ID:**	T1-SB02	**Depth to GW:**	N/A
Address:	1500 Waters Place, Bronx, NY 10461	**Sheet:**	1 of 1	**Borehole Depth:**	15'
Client:	DASNY-OMH	**Date Started:**	7/23/2014	**Geologist:**	Michael Kuzia-Carmel
Project No:	38395331.00000	**Date Finished:**	7/23/2014	**Reviewed By:**	J. Gillies
NYSDEC Spill No:	N/A	**Borehole Dia:**	5"		

DRILLING INFORMATION	
Drilling Company:	Associated Environmental Services, Ltd.
Driller:	John V., Jose G.
Drilling Method:	Geoprobe 7822-DH with Automatic Drop Hammer
Sampler:	2" Dia. Split Spoon
Sampler Length:	2'

DEPTH (FT)	SAMPLE STRATA	REC	BLOWS PER 6"		USCS	PID (ppm)	DESCRIPTION Color	MATERIAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM	DEPTH (FT)
		N/A	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	0-2' - SAND: Fine to medium-grained sand, trace silt. Fill material (fragments of brick, cement, and rock).		
			N/A	N/A						
		N/A	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	2-5' - SAND: SAA.		
			N/A	N/A						
5			N/A	N/A		0.0				5
		6/24	6	6	SP		Strong Brown 7.5 YR 4/6	5-7' - SAND: SAA.		
			10	8		0.0				
		N/A	21	12	SP		Strong Brown 7.5 YR 4/6	7-9' - SAND: SAA.		
			9	5		0.0				
10		N/A	9	6	SP		Strong Brown 7.5 YR 4/6	9-11' - SAND: SAA.		10
			4	7		0.0				
▼		14/24	6	4	SP		Strong Brown 7.5 YR 4/6	11-12.5' - SAND: SAA		
			1	1		0.0				
		18/24	18	9	CH		Reddish Gray 5 YR 6/1	12.5-15' - CLAY: Medium to high plasticity clay layer approximately 20" thick. Water table observed at upper margin of clay layer.		
15			4	3		0.0				15
	EOB									
20										20
25										25
30										30
35										35

SAMPLES COLLECTED: Soil samples T1-SB02 (0'-2'), T1-SB02 (5'-10'), and T1-SB02 (10'-WT) were collected and sent to ChemTech Laboratories (ChemTech) of Mountainside, NJ for analysis of TCL VOCs + TICs by EPA Method 8260C, TCL SVOCs + TICs by EPA Method 8270D, TAL Inorganics by EPA Method 6010C/7471B, PCBs by EPA Method 8082, pesticides by EPA Method 8081A, and herbicides by EPA Method 8151A.

COMMENTS: Hand auger used to collect soil sample from 0-2 ft bgs. Driller augered through interval from 2ft-5ft bgs due to obstruction.

LEGEND:

- Sand (G.S. #200 - #4 sieve)
- Gravel (G.S. #4 sieve - 3/4")
- Cobble (G.S. >3")
- Silt (G.S. <#200 sieve)
- Clay (G.S. <#200 sieve)
- Peat/Organic Soils
- Cement/Bentonite Grout
- Seal
- Fill Material/RCA
- water table

SAA: Same As Above
NA: Not Applicable
PID: Photo-ionization Detector
G.S.: Grain Size
EOB: End of Boring

ppm: parts per million
ft: feet
ND: Not Determined
NAPL: Non-Aqueous Phase Liquid

URS Corporation Soil Boring Log

PROJECT INFORMATION		SOIL BORING INFORMATION			
Project:	Bronx Psychiatric Center	**Boring/Well ID:**	T1-SB03	**Depth to GW:**	N/A
Address:	1500 Waters Place, Bronx, NY 10461	**Sheet:**	1 of 1	**Borehole Depth:**	16'
Client:	DASNY-OMH	**Date Started:**	7/23/2014	**Geologist:**	Michael Kuzia-Carmel
Project No:	38395331.00000	**Date Finished:**	7/23/2014	**Reviewed By:**	J. Gillies
NYSDEC Spill No:	N/A	**Borehole Dia:**	5"		

DRILLING INFORMATION	
Drilling Company:	Associated Environmental Services, Ltd.
Driller:	John V., Jose G.
Drilling Method:	Geoprobe 7822-DH with Automatic Drop Hammer
Sampler:	2" Dia. Split Spoon
Sampler Length:	2'

DEPTH (FT)	SAMPLE STRATA	REC	BLOWS PER 6"		USCS	PID (ppm)	Color	DESCRIPTION MATERIAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM	DEPTH (FT)
		8/24	8	8	SP	0.0	Dark Reddish Brown 5 YR 3/3	0-2' - SAND: Fine to medium-grained sand, trace silt. Fill material (fragments of brick, cement, and rock).		
			4	5						
		8/24	4	6	SP	0.0	Dark Reddish Brown 5 YR 3/3	2-4' - SAND: SAA.		
			21	11						
5		6/24	4	5	SP	0.0	Dark Reddish Brown 5 YR 3/3	4-6' - SAND: SAA.		5
			3	2						
		6/24	3	11	SP	0.0	Dark Reddish Brown 5 YR 2.5/2	6-8' - SAND: SAA.		
			5	4						
		8/24	5	7	SP	0.0	Dark Reddish Brown 5 YR 3/3	8-10' - SAND: SAA.		
10			2	4						10
		N/A	6	7	SP	0.0	Dark Reddish Brown 5 YR 3/3	10-12' - SAND: SAA.		
			7	11						
		3/24	17	28	SP	0.0	Dark Reddish Brown 5 YR 3/3	12-14' - SAND: SAA.		
			14	29						
15		N/A	6	4	SP	0.0	Dark Reddish Brown 5 YR 3/3	14-15.5' - SAND: SAA.		15
▼			5	8	CH		Reddish Gray 5 YR 6/1	15.5-16' - CLAY: Medium to high plasticity. Water table observed at upper margin of clay layer.		
	EOB									
20										20
25										25
30										30
35										35

SAMPLES COLLECTED: Soil samples T1-SB03 (0'-2'), T1-SB03 (5'-10'), and T1-SB03 (10'-WT) were collected and sent to ChemTech Laboratories (ChemTech) of Mountainside, NJ for analysis of TCL VOCs + TICs by EPA Method 8260C, TCL SVOCs + TICs by EPA Method 8270D, TAL Inorganics by EPA Method 6010C/7471B, PCBs by EPA Method 8082, pesticides by EPA Method 8081A, and herbicides by EPA Method 8151A.

COMMENTS: Three attempts to sample 0-2' interval. Blow count on boring log is from first attempt. Duplicate sample T1-SB06D, Matrix Spike sample MS-723, and Matrix Spike Duplicate sample MSD-723 were all collected from interval 0-2' bgs.

LEGEND:

- Sand (G.S. #200 - #4 sieve)
- Gravel (G.S. #4 sieve - 3/4")
- Cobble (G.S. >3")
- Silt (G.S. <#200 sieve)
- Clay (G.S. <#200 sieve)
- Peat/Organic Soils
- Cement/Bentonite Grout
- Seal
- Fill Material/RCA
- water table

SAA: Same As Above
NA: Not Applicable
PID: Photo-ionization Detector
G.S.: Grain Size
EOB: End of Boring
ppm: parts per million
ft: feet
ND: Not Determined
NAPL: Non-Aqueous Phase Liquid

URS Corporation Soil Boring Log

PROJECT INFORMATION		SOIL BORING INFORMATION			
Project:	Bronx Psychiatric Center	**Boring/Well ID:**	T1-SB04	**Depth to GW:**	N/A
Address:	1500 Waters Place, Bronx, NY 10461	**Sheet:**	1 of 1	**Borehole Depth:**	15'
Client:	DASNY-OMH	**Date Started:**	7/23/2014	**Geologist:**	Michael Kuzia-Carmel
Project No:	38395331.00000	**Date Finished:**	7/23/2014	**Reviewed By:**	J. Gillies
NYSDEC Spill No:	N/A	**Borehole Dia:**	5"		

DRILLING INFORMATION	
Drilling Company:	Associated Environmental Services, Ltd.
Driller:	John V., Jose G.
Drilling Method:	Geoprobe 7822-DH with Automatic Drop Hammer
Sampler:	2" Dia. Split Spoon
Sampler Length:	2'

DEPTH (FT)	SAMPLE STRATA	REC	BLOWS PER 6"		USCS	PID (ppm)	DESCRIPTION Color	MATERIAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM	DEPTH (FT)
		N/A	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	0-1' - SAND: Fine to medium-grained sand, trace silt. Fill material (fragments of brick, rock, and cement).		
			N/A	N/A	CH		Reddish Gray 5 YR 6/1	1-1.5' - CLAY: 6" thick layer of medium-high plasticity clay.		
		6/24	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	1.5-4' - SAND: Fine to medium-grained sand, trace silt. Fill material (fragments of brick, cement, and rock).		
			N/A	N/A						
5		12/24	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	4-6' - SAND: SAA.		5
			30	18						
		14/24	5	4	SP	0.0	Reddish Brown 5 YR 4/3	6-8' - SAND: SAA.		
			3	5						
		13/24	8	7	SP	0.0	Reddish Brown 5 YR 4/3	8-10' - SAND: SAA.		
10			4	3						10
		12/24	2	3	SP	0.0	Reddish Brown 5 YR 4/3	10-12' - SAND: SAA.		
			3	4						
▼		12/24	3	5	SP	0.0	Reddish Brown 5 YR 4/3	12-13' - SAND: SAA.		
			2	1	CH		Reddish Gray 5 YR 6/1	13-15' - CLAY: Medium to high plasticity clay. Water table observed at upper margin of clay layer.		
15		10/12	16	29		0.0				15
	EOB									
20										20
25										25
30										30
35										35

SAMPLES COLLECTED: Soil samples T1-SB04 (0'-2'), T1-SB04 (5'-10'), and T1-SB04 (10'-WT) were collected and sent to ChemTech Laboratories (ChemTech) of Mountainside, NJ for analysis of TCL VOCs + TICs by EPA Method 8260C, TCL SVOCs + TICs by EPA Method 8270D, TAL Inorganics by EPA Method 6010C/7471B, PCBs by EPA Method 8082, pesticides by EPA Method 8081A, and herbicides by EPA Method 8151A.

COMMENTS: Hand auger to collect soil sample from 0-2' bgs. Blow counts for interval 2-5' bgs were not recorded as Associated Environmental encountered obstructions.

LEGEND:

- Sand (G.S. #200 - #4 sieve)
- Gravel (G.S. #4 sieve - 3/4")
- Cobble (G.S. >3")
- Silt (G.S. <#200 sieve)
- Clay (G.S. <#200 sieve)
- Peat/Organic Soils
- Cement/Bentonite Grout
- Seal
- Fill Material/RCA
- water table
- SAA: Same As Above
- NA: Not Applicable
- PID: Photo-ionization Detector
- G.S.: Grain Size
- EOB: End of Boring
- ppm: parts per million
- ft: feet
- ND: Not Determined
- NAPL: Non-Aqueous Phase Liquid

URS Corporation Soil Boring Log

PROJECT INFORMATION		SOIL BORING INFORMATION			
Project:	Bronx Psychiatric Center	**Boring/Well ID:**	T1-SB05	**Depth to GW:**	N/A
Address:	1500 Waters Place, Bronx, NY 10461	**Sheet:**	1 of 1	**Borehole Depth:**	15'
Client:	DASNY-OMH	**Date Started:**	7/23/2014	**Geologist:**	Michael Kuzia-Carmel
Project No:	38395331.00000	**Date Finished:**	7/23/2014	**Reviewed By:**	J. Gillies
NYSDEC Spill No:	N/A	**Borehole Dia:**	5"		

DRILLING INFORMATION	
Drilling Company:	Associated Environmental Services, Ltd.
Driller:	John V., Jose G.
Drilling Method:	Geoprobe 7822-DH with Automatic Drop Hammer
Sampler:	2" Dia. Split Spoon
Sampler Length:	2'

DEPTH (FT)	SAMPLE STRATA	REC	BLOWS PER 6"		USCS	PID (ppm)	Color	DESCRIPTION MATERIAL DESCRIPTION	WELL CONSTRUCTION DIAGRAM	DEPTH (FT)
		N/A	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	0-2' - SAND: Fine to medium-grained sand, trace silt. Fill material (fragments of brick, cement, and rock).		
			N/A	N/A						
		N/A	N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3	2-5' - SAND: SAA.		
			N/A	N/A						
5			N/A	N/A	SP	0.0	Reddish Brown 5 YR 4/3			5
		16/24	2	2				5-7' - SAND: SAA.		
			2	3	SP	0.0	Reddish Brown 5 YR 4/3			
		11/24	2	5				7-9' - SAND: SAA.		
			3	1	SP	0.0	Reddish Brown 5 YR 4/3			
10		14/24	14	4				9-11' - SAND: SAA. Water table observed at approximately 11' bgs.		10
▼			7	6	SP	0.0	Reddish Brown 5 YR 4/3			
		8/24	37	21				11-13 - SAND: SAA.		
			14	6	SP	0.0	Reddish Brown 5 YR 4/3			
		4/24	12	7				13-15 - SAND: SAA.		
15			6	5	SP	0.0				15
	EOB									
20										20
25										25
30										30
35										35

SAMPLES COLLECTED: Soil samples T1-SB05 (0'-2'), and T1-SB05 (5'-10') were collected and sent to ChemTech Laboratories (ChemTech) of Mountainside, NJ for analysis of TCL VOCs + TICs by EPA Method 8260C, TCL SVOCs + TICs by EPA Method 8270D, TAL Inorganics by EPA Method 6010C/7471B, PCBs by EPA Method 8082, pesticides by EPA Method 8081A, and herbicides by EPA Method 8151A.

COMMENTS: Hand auger to collect soil sample from 0-2' bgs. Driller augered through interval from 2-5' bgs due to repeated obstruction.

LEGEND:

- Sand (G.S. #200 - #4 sieve)
- Gravel (G.S. #4 sieve - 3/4")
- Cobble (G.S. >3")
- Silt (G.S. <#200 sieve)
- Clay (G.S. <#200 sieve)
- Peat/Organic Soils
- Cement/Bentonite Grout
- Seal
- Fill Material/RCA
- water table

SAA: Same As Above
NA: Not Applicable
PID: Photo-ionization Detector
G.S.: Grain Size
EOB: End of Boring
ppm: parts per million
ft: feet
ND: Not Determined
NAPL: Non-Aqueous Phase Liquid

APPENDIX E – MARCH 2026 PRE-REMEDIAL TRANSFORMER ROOM SAMPLING REPORT

PRE REMEDIAL TRANSFORMER ROOM SAMPLING REPORT

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461
DASNY Project Number 3816609999

Prepared For:

New York State Office of Mental Health
75 New Scotland Avenue
Albany NY 12208

Prepared by:
TRC Engineers, Inc.
1407 Broadway, 33rd Floor
New York, New York 10018
Phone: (212) 221-7822
TRC Project No. 411323.0000.0022

March 30, 2026

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Limitations 2

2.0 CHARACTERIZATION RESULTS 2

2.1 Asbestos Sampling 2
2.1.1 Asbestos Sampling Procedures 3
2.1.2 Asbestos Laboratory Analysis 4
2.2 Lead Paint Survey 4
2.3 RCRA Metal Sampling 5
2.4 PCB Sampling 6
2.4.1 Background 6
2.4.2 Sediment and Building Material Sampling 6
2.4.3 PCB Wipe Samples 7
2.4.4 Transformer PCB Oil Sampling 7
2.4.5 PCB Wipe Sampling on Empty Transformers 8
2.5 Light Ballasts Inspections 9
2.6 Universal Waste Inspection 9
2.6.1 Refrigerant-Containing Equipment 10
2.6.2 Fire Extinguishers 10
2.6.3 Oil-Containing Equipment 10
2.6.4 Used Electronic Equipment 10
2.6.5 Miscellaneous Equipment and Stored Containers 10

3.0 SUMMARY OF FINDINGS 10

4.0 RECOMMENDATIONS 12

4.1 Asbestos-Containing Material 12
4.2 Lead-Based Paint 13
4.3 RCRA Metals Waste Characterization 13
4.4 PCB-Containing Building Materials 13
4.5 PCB-Contaminated Sediment and Porous Debris 14
4.6 Universal Waste 14
4.7 Non-PCB Transformers 14

5.0 CONCLUSION 14

TABLES

1 Summary of Asbestos Bulk Samples for Transformer Rooms 1 & 2
2 XRF Lead Paint Survey Results for Transformer Rooms 1 & 2
3 Lead Paint Sample Results for Transformer Rooms 1 & 2
4 RCRA Non-Metallic Porous Debris Sampling Results for Transformer Rooms 1 & 2
5 Sediment & Building Material PCB Sampling Results for Transformer Rooms 1 & 2
6 Summary of PCB Wipe Sampling Results for Transformer Rooms 1 & 2
7 Summary of PCB Sampling Results for Transformer Oil in Transformer Room 1
8 Summary of PCB Wipe Sampling Results for Transformer in Transformer Room 2
9 Summary of Regulated Materials in Transformer Rooms 1 & 2

FIGURES

1 Asbestos Bulk Samples - Transformer Room 1
2 Asbestos Bulk Samples - Transformer Room 2
3 XRF Lead Paint Readings - Transformer Room 1
4 XRF Lead Paint Readings - Transformer Room 2
5 Lead Paint Samples & TCLP RCRA Metals - Transformer Room 1
6 Lead Paint Samples & TCLP RCRA Metals - Transformer Room 2
7 PCB Sediment, Bulk, Transformer Oil, Wipe Samples - Transformer Room 1
8 PCB Sediment, Bulk, Transformer Oil, Wipe Samples - Transformer Room 2

APPENDICES

A Photographs
B Laboratory Results and Chain of Custody Records
C Company, Personnel and Laboratory Licenses

1.0 INTRODUCTION

TRC Engineers, Inc. (TRC) on behalf of Dormitory Authority of the State of New York (DASNY) and the New York State Office of Mental Health (OMH) performed a pre-remedial survey for asbestos and regulated materials in Transformer Room No. 1 and Transformer Room No. 2 located inside Building No. 1 Medical Surgical Building 101 (Thomson Building), at the Bronx Psychiatric Center located at 1500 Waters Place in Bronx County of New York City, tax block 4226, lot 30. The transformers, associated electrical equipment and impacted materials will be removed as part of the work specified in the Remedial Work Plan for Transformer Rooms 1&2 – Building 1 (RWP), dated January 2026, approved by NYSDEC on January 23, 2026.

TRC provided notification to the New York State Department of Environmental Conservation and scheduled and performed the survey of suspect asbestos-containing materials (ACM), lead paint, RCRA metals, polychlorinated biphenyls (PCBs), and universal and hazardous waste on February 4 and March 19, 2026, as required in the Pre Remedial Transformer Room Sampling Plan (Sampling Plan) of the RWP. The transformers and associated equipment were inspected and sampled to perform a further characterization of the materials being impacted and potential waste streams being generated under this project. The number of samples collected for each type of material was consistent with the Sampling Plan and based upon the quantity and types of suspect ACM, RCRA metals, and PCB containing material identified during the survey.

The proposed survey and sampling did not include an assessment of concrete, sub-slab soil or groundwater impacts beneath the transformers which was previously performed prior to the Administrative Record of Decision (ROD) governing the cleanup of Hazardous Waste at this Site according to New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

As part of the survey, facility components and materials identified, quantified, and/or sampled included:

- Asbestos-containing materials including
  - Miscellaneous Materials - suspect ACM including, but not limited to, electrical wire and cable insulation, electrical panel insulation, cable conduit sealant, and ventilation louvre caulk.
- Lead containing and lead based paint coated materials
- RCRA metals–non-metallic porous floor debris materials
- PCB floor sediment/floor debris (no liquid present at the time of the investigation)
- PCB-containing manufactured building materials included ventilation louver caulk and black sealant on main electrical service panel, PCB wipe sampling of non-porous surfaces
- Transformer PCB oil sampling
- Regulated materials including:
  - Potentially PCB-containing materials, such as light-fixture ballasts, oil-filled switches, transformers, and capacitors;
  - Lamps, such as fluorescent, mercury vapor, and metal halide;
  - Mercury-containing equipment, such as thermostats, hydrostats, manometers, natural gas meters, reed, float, and tilt-switches;
  - Fire extinguishers and fire suppression systems; and,
  - Miscellaneous equipment.

At the time of the investigation there was no standing water or liquid of any kind observed in the transformer rooms. Due to the freezing temperatures observed during this investigation, temporary heating was provided inside the two (2) transformer rooms prior to the sampling activities performed. After a sufficient period of time to raise the inside temperature above freezing, the sampling was performed. The floor areas were inspected and were determined to be relatively dry except for some residual oil stains, and some wet debris. The rooms were inspected and no observed drains or sumps were identified and consisted of concrete slabs and raised steps without any measurable quantities of standing liquid or water available in sufficient quantities for sampling and laboratory analysis.

TRC performed the investigation and sampling in the transformer rooms with the assistance of a licensed electrician following OSHA guidelines and lock-out tag out procedures.

This Pre Remedial Transformer Room Sampling Report (Report) summarizes the results of the implementation of the Sampling Plan in the RWP that was performed on February 4 and March 19, 2026. Follow-up surveys may be performed, and this report may be modified based on those results.

1.1 Limitations

The findings presented in this Report are based upon reasonably available information and observed Site conditions at the time of the assessment. Conditions may have changed since that time, and the findings and conclusions of this Report are not meant to be indicative of future conditions at the Site. This report does not warrant against conditions that were not evident from visual observations or historical information obtained, or conditions that could only be determined by physical sampling or other intrusive investigation techniques that are outside the proposed scope of work.

Due to the potential for concealed asbestos-containing materials (ACM) or other regulated materials, this report should not be construed to represent all ACM and regulated materials within the Transformer Room No. 1 and Transformer Room No. 2 located inside Building No. 1. All quantities of ACM and other regulated materials are identified and all dimensions in this report are approximate and shall be verified on-Site. This survey was limited to accessible materials which will likely be disturbed during the removal of all equipment and materials inside the Transformer Rooms to permit the removal of the concrete slab and excavation of sub-slab soil as specified in the revised RWP.

The analysis of the samples obtained with respect to the presence and amount of asbestos, PCBs, RCRA metals and lead is limited to the discrete area and quantity of material sampled at the sampling location. Different analytical results may be obtained at adjacent areas due to variations in the material type and consistency.

2.0 CHARACTERIZATION RESULTS

The following sections detail the approach and results of the Sampling Plan implementation conducted on February 4 and March 19, 2026.

2.1 Asbestos Sampling

Occupational Safety and Health Administration (OSHA) defines asbestos-containing material (ACM), as any material containing more than one percent asbestos.

The Environmental Protection Agency (EPA) defines ACM as follows:

1. Friable asbestos-containing material (ACM), is defined by the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations for Asbestos, as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.
2. Nonfriable ACM is any material containing more than one percent (1%) asbestos as determined using the PLM method that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. The EPA further defines two categories of nonfriable ACM:
    a. Category I (Cat I) - Category I nonfriable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent (1%) asbestos as determined using PLM according to the method specified in Appendix A, Subpart F, 40 CFR Part 763, and
    b. Category II (Cat II) - Category II nonfriable ACM is any material, excluding Category I nonfriable ACM, containing more than one percent (1%) asbestos as determined using PLM according to the methods specified in Appendix A, Subpart F, 40 CFR Part 763 that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
3. Regulated Asbestos-Containing Material (RACM) is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

The New York State Department of Labor (NYSDOL) Industrial Code Rule 56 defines ACM as any material containing greater than one percent (1%) of asbestos.

2.1.1 Asbestos Sampling Procedures

Survey, sampling and analytical procedures were performed in general accordance with the U.S. Environmental Protection Agency's (EPA's) NESHAP 40 CFR 61 Subpart M and Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763, New York State Department of Labor Industrial Code Rule 56 (ICR 56), and New York City Department of Environmental Protection Title 15, Chapter 1 Asbestos Regulations.

Survey activities began with visual observation of the project area to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color and texture that does not extend to other buildings or floors. Visual assessments were conducted in accessible areas of Transformer Rooms 1 and 2. Building materials identified as glass, wood or metal were not considered suspect ACM.

2.1.2 Asbestos Laboratory Analysis

Samples collected by TRC were submitted for laboratory analysis following proper chain-of-custody procedures to Atlas Environmental Lab Corporation (Atlas) in New York, New York. Atlas is an independent laboratory certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP #11999) and the National Voluntary Laboratory Accreditation Program (NVLAP Lab Code: 500092-0). The samples were analyzed by the EPA recommended and ELAP required methodology of analysis utilizing Polarized Light Microscopy (PLM) followed by Transmission Electron Microscopy (TEM) analysis, as necessary. Analytical methodologies included ELAP PLM 198.1, PLM NYS 198.6 NOB, and/or TEM NYS 198.4 NOB. If the analytical result of a bulk sample that was analyzed using PLM NYS 198.6 NOB was inconclusive (non-detected), the same sample was further analyzed using TEM NYS 198.4 NOB.

The bulk samples were collected of representative suspect building materials to be potentially impacted by the remedial work as described by the RWP. The results of the sampling and analysis are presented in Table 1. There were three materials found to be ACM, including wire insulation and sealant materials. As a result, it is expected that the removal of these materials must be performed by a licensed asbestos abatement contractor.

The sample location drawing(s) are presented in Figure 1 & 2, photographs are presented in Appendix A, and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.2 Lead Paint Survey

The remedial activities which may impact lead-based coatings are regulated for worker exposure under the Lead Occupational Safety and Health Administration (OSHA) Standard and for disposal of materials under the USEPA Resource Conservation and Recovery Act (RCRA) and New York State Department of Environmental Conservation (NYSDEC) Hazardous Waste Standards.

A TRC USEPA certified Lead-Based Paint Risk Assessor for the State of New York conducted a lead paint survey (utilizing a Viken Detection Pb200e) of the interior and portions of the exterior of the building areas where remedial work will be performed to determine lead content in painted surfaces. The Viken Pb200e is a state-of-the-art handheld X-ray fluorescence (XRF) analyzer designed for rapid and accurate lead detection in paint and other materials used for EPA and HUD approved lead risk assessments. The Viken Pb200e utilizes a Cobalt-57 (Co-57) isotope source, ensuring highly reliable readings with minimal radiation exposure.

Exposure levels for lead in the construction industry are regulated by the United States Department of Labor's Occupational Safety and Health Administration (OSHA) regulation for the Construction Industry, 29 Code of Federal Regulations (CFR) 1926.62. Construction activities disturbing surfaces containing lead containing paint, such as grinding, cutting, and demolishing have been known to expose workers to airborne levels of lead in excess of the OSHA Permissible Exposure Limit (PEL) of 50 $\mu g/m^3$ (8-hour time-weighted average [TWA]) and must be conducted in accordance with the requirements of the OSHA Lead in Construction regulations.

In addition to the XRF field analyzer readings, TRC collected four (4) paint chip samples of suspect coated materials, which were containerized in pre-cleaned glassware provided by the laboratory, and submitted under proper chain of custody to the Pace Analytical Services, Inc. (Pace) Westborough laboratory located

at 8 Walkup Dr., Westborough, MA 01581 for lead analysis. Pace is a NYSDOH ELAP-certified (No. 11148) analytical laboratory for USEPA Method EPA ICP 6010D.

The paint chip samples collected for laboratory analysis after XRF field testing were taken from selected materials (e.g., coated steel, wallboard, and concrete) to determine their lead content for Quality Control and Quality Assurance (QA/QC).

The results of the XRF survey are presented in Table 2 and the results of the lead paint sample analysis are presented in Table 3. Locations of XRF and lead paint sampling are presented in Figures 3 to 6. Although coated steel is exempt from lead disposal regulations if recycled by a certified recycling facility, steel coatings were surveyed and sampled for lead to determine if any of these materials contain lead and would require the remedial contractor to comply with 29 CFR 1926.62 Lead in Construction rule.

The XRF and lead sampling in anticipation of remedial work described by the RWP has determined that the painted equipment and materials contain lead in concentrations which would mandate compliance with the OSHA Lead in Construction standard.

Photographs of the paint chip sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.3 RCRA Metal Sampling

Disposal of porous floor debris may contain lead-based paint, as well as other regulated heavy metals and are subject to the requirements under both the NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371) and the USEPA RCRA Hazardous Waste Management regulations (40 CFR Parts 260 through 268).

Samples of non-metallic porous debris on the Transformer Rooms floors were collected for Toxicity Characteristic Leaching Procedure (TCLP) RCRA 8 Metals analysis. The bulk samples collected were selected to be representative of the porous debris on the Transformer Rooms floors to determine initial waste characterization of this material. Total Metals analysis was also performed by the laboratory for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver and Mercury.

TRC collected two (2) samples, one (1) bulk sample of representative porous floor debris from each Transformer Room. The samples were packaged and delivered to Pace Analytical Services, Inc. (Pace), for analysis. Pace is a NYSDOH ELAP-certified (No. 11148) analytical laboratory for USEPA Method EPA ICP 6010D. The TCLP analysis provides a preliminary characterization of the projected waste stream material as either hazardous or non-hazardous construction and demolition (C&D) waste prior to implementation of the remedial work. Total Metals analysis provides the concentration of metals in the material. The results of analysis are presented in Table 4. RCRA Metals sample locations are presented in Figures 5 & 6.

The TCLP results for Transformer Room 1 indicated elevated levels of Cadmium in the material. TCLP sample results for Transformer Room 2 indicated elevated levels of Cadmium and Lead. Total Metals analysis indicated detectable levels of Barium, Cadmium, Chromium, Lead, Mercury, and Silver. As a result, it is expected that the anticipated removal of porous debris and sediment material on the floor of the transformer rooms prior to demolition of the concrete slab would be characterized as hazardous waste for leachable lead and cadmium. Additionally, porous debris samples were also analyzed for PCBs as described below.

Based on review of RCRA Total Metals results for the sediment and debris sampled in the transformer rooms, there is a risk of potential exposure to metals in dust generated during remedial work. Therefore, any remedial activities which may disturb sediments, dust and debris on the floor areas of the transformer rooms could potentially expose workers to airborne levels of metals above OSHA Permissible Exposure Limits.

Photographs of the RCRA Metals sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.4 PCB Sampling

2.4.1 Background

Polychlorinated biphenyls (PCBs) are commonly found in electrical equipment that require dielectric fluid such as transformers, oil-static cables and capacitors as well as hydraulic machinery, vacuum pumps, compressors and heat exchanger fluids. PCBs were also used in fluorescent lighting ballasts and caulking.

Although the Sampling Plan contemplated aqueous liquid sampling, the areas were dry on the date of the investigation, and no liquids were present for sampling.

2.4.2 Sediment and Building Material Sampling

Porous debris/sediment were observed on the surface of concrete in sufficient quantities for sampling and laboratory analysis during the investigation performed in the transformer rooms. A total of two (2) porous debris/sediment samples were collected for PCB analysis, one (1) sample from each transformer room using a dedicated disposable Teflon scoop for each sediment sample.

Two (2) bulk samples of representative manufactured building materials with suspect PCBs were collected from the transformer rooms including one (1) suspect homogenous caulk sample collected from the louver in Transformer Room 1 and one (1) suspect sealant material sample field composited from homogeneous sealant material collected in Transformer Room 1 and 2 which were submitted for PCB analysis. The samples were containerized in appropriately labeled and sealed laboratory-supplied glassware and packaged for delivery to Pace Analytical Services, Inc. (Pace), for analysis by USEPA SW846 Method 8082A. Pace is a NYSDOH ELAP-certified (No. 11148) analytical laboratory for USEPA Method EPA 8082A.

The PCB results for the porous debris/sediment and the building material sample analyses are presented in Table 5. The sample locations are identified on Figures 7 & 8.

The analysis of both porous debris/sediment samples showed levels of PCBs greater than one part per million (ppm) and therefore are considered TSCA PCB remediation waste. The analysis of the sample collected in Transformer Room 1 resulted in a concentration of 62.8 ppm, which is greater than the New York State Hazardous Waste classification of 50 ppm for PCB. As a result, it is expected that the anticipated removal of porous debris/sediment material on the floor of the transformer rooms prior to demolition of the concrete slab should be characterized as PCB hazardous waste in NYS as well as TSCA PCB regulated in Transformer Room 1, and TSCA PCB regulated non-hazardous in Transformer Room 2. This is in addition to the RCRA waste characterization noted above.

One of the two (2) bulk samples of representative manufactured building materials with suspect PCBs collected from the transformer rooms contained elevated levels of PCBs. The black sealant at main electric

service panels in Transformer Rooms 1 and 2 was found to contain 61.1 ppm PCB and therefore regulated as a TSCA Bulk Product Waste material and is considered a hazardous waste in NYS. as well as TSCA PCB regulated in Transformer Room 1 and 2.

Photographs of the PCB sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.4.3 PCB Wipe Samples

A total of twelve (12) discrete PCB wipe samples were collected from non-porous surfaces identified within Transformer Rooms 1 and 2 which include vandalized equipment and materials which will be removed for off-site recycling and/or disposal. Samplers wore phthalate-free gloves (> 8-hour breakthrough for PCBs) for handling all PCB samples. An additional two (2) field blanks plus one (1) duplicate PCB wipe sample were submitted to the laboratory.

The wipe samples were collected using the cotton gauze wipes treated with 1:4 acetone: hexane solution provided in pre-cleaned containers and then submitted following proper chain-of-custody procedures, to Pace Analytical Services, Inc for analysis by USEPA SW846 Method 8082A. Pace is a NYSDOH ELAP-certified (No. 11148) analytical laboratory for USEPA Method EPA 8082A.

The wipe samples collected to determine the concentrations of PCBs on the surface of non-porous metallic materials. Surface wipe samples were compared to EPA's high occupancy wipe sample criteria of 10 µg/100 cm^2 in 40 CFR 761.61(a)(4)(ii) and NYSDEC 6 NYCRR 371.4(e). The wipe sample results are presented in Table 6. Wipe sample locations are presented on Figures 7 & 8. Three (3) out of the twelve (12) samples were found to be elevated above the high occupancy wipe sample criteria. As a result, it is expected that the anticipated removal of scrap metal, electrical equipment and non-porous metallic material in the transformer rooms prior to demolition of the concrete slab will need to be treated as PCB contaminated and addressed as part of the work in these Transformer Rooms due to elevated levels of PCBs on the surface of these materials.

Photographs of the PCB wipe sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.4.4 Transformer PCB Oil Sampling

TRC collected samples of the di-electric or silicone-based oil inside the transformers for laboratory analysis with the assistance of a transformer sampling technician. Oil samples were submitted to the laboratory for PCB analysis. Although the site records indicate they are non-PCB transformers, the sampling of these transformers was performed to confirm current conditions.

The sampling technician located the sampling valve or port, located at the bottom of each transformer, and prepared all necessary sampling equipment, including clean containers, gloves and safety goggles. Sampling was performed including proper sample collection, preservation, and transportation to the accredited laboratory for analysis. A general approach was followed which involved filling pre-cleaned glassware containers to a specific level and persevered by placing them in coolers with ice for transport to the laboratory for analysis via USEPA SW846 Method 8082A.

The transformers along with electrical equipment were inspected by a licensed electrician following OSHA safety guidelines. The transformers were labelled Westinghouse transformers with visible serial numbers 1091218 and 1091219 in Transformer Room 1 and serial numbers 1291023 and 1291024 in Transformer

Room 2, respectively. Based on available research these serial numbers appear to correspond Circa dates 2010 and 2012, respectively. As of July 1, 1979, the EPA mandated that all new distribution transformers contain less than 50 parts per million (PPM) of PCBs, defining them as "PCB non-contaminated". Transformers produced in the 2010s are considered to have no traceable amount of PCBs and are generally labeled as "Non-PCB".

The two (2) transformers located in Transformer Room 1 reportedly contain silicone di-electric oil and indicated a capacity of 262 gallons. Samples of di-electric-silicone oil were collected from each transformer and submitted for laboratory analysis. The two (2) transformers located in Transformer Room 2 were found to be empty without drain plugs and were opened and inspected and found to be in good condition and there was no visible or measurable quantity of di-electric oil for sampling. Therefore, PCB wipe samples were collected from the interior of each transformer and submitted for laboratory analysis. Refer to Section 2.4.5 below for PCB wipe sample discussion.

The two (2) transformer liquid oil samples from Transformer Room 1 were placed in containers following proper chain-of-custody procedures, and delivered to Pace Analytical Services, Inc. (Pace), for analysis by USEPA SW846 Method 8082A. Pace is a NYSDOH ELAP-certified (No. 11148) analytical laboratory for USEPA Method SW-846 Method 8082A for Polychlorinated Biphenyls by Gas Chromatography. In addition, two (2) duplicate transformer liquid oil samples from Transformer Room 1 were placed in containers following proper chain-of-custody procedures, and delivered to Long Island Analytical Laboratories, Inc. (LIAL), 110 Colin Dr, Holbrook, NY 11741 for analysis by ASTM D4059-91, a standard test method used for the quantitative determination of Polychlorinated Biphenyls (PCBs) in mineral insulating oil and askarels using gas chromatography.

The transformer liquid oil sample analyses results are presented in Table 7. The sample locations are represented on Figures 7 & 8.

The liquid oil samples collected in Transformer Room 1 were from the transformers to be removed as part of the remedial work. The results of these samples were found to be below the method detection limit for PCB analysis. As a result, it is expected that the anticipated removal of the transformers prior to demolition of the concrete slab would not be considered regulated materials in Transformer Room 1.

Photographs of the transformer PCB oil sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.4.5 PCB Wipe Sampling on Empty Transformers

The two (2) transformers located in Transformer Room 2 were found to be empty and were sampled for PCBs by collecting wipe samples from the interior sidewalls of the transformer. TRC collected the PCB wipes samples for laboratory analysis with the assistance of a transformer sampling technician. A total of four (4) wipe samples were collected using hexane-rinsed cotton gauze wipes which were placed in a separate, pre-cleaned glass jar with a Teflon-lined cap, preserved with ice and submitted to the laboratory under standard chain-of-custody procedures for laboratory analysis according to New York State Department of Health (NYSDOH) ELAP program procedures. The transformer PCB wipe sample analyses results are presented in Table 8. The sample locations are represented on Figures 7 & 8.

The wipe samples were collected using the cotton gauze wipes treated with 1:4 acetone: hexane solution provided in the pre-cleaned containers and then submitted to the laboratory following proper chain-of-custody procedures, preserved. Two (2) PCB samples were submitted to Pace and analyzed via SW-846 Method 8082A, Analysis of Polychlorinated Biphenyls by Gas Chromatography, utilizing the Soxhlet

extraction method. In addition, two (2) duplicate PCB samples were submitted following proper chain-of-custody procedures, and delivered to Long Island Analytical Laboratories, Inc. (LIAL), 110 Colin Dr, Holbrook, NY 11741 for analysis via SW-846 Method 8082A

The wipe samples collected In Transformer Room 2 were from the transformers to be removed as part of the remedial work. The wipe sample analysis results were determined to be below remediation standards adopted by both New York State and TSCA based on PCB analysis in Transformer Room 2. As a result, it is expected that the anticipated removal of the transformers prior to demolition of the concrete slab would not be considered regulated materials in Transformer Room 2.

Photographs of the transformer PCB wipe sample locations are presented in Appendix A and laboratory results of analysis and chain of custody documentation are presented in Appendix B.

2.5 Light Ballasts Inspections

TRC estimated the quantity of ballasts within each transformer room. At the time of the survey, suspect potentially PCB-containing ballasts were inspected and some ballasts were labelled as no PCBs.

Light fixtures (e.g., fluorescent, neon, high-pressure sodium lamps, mercury-vapor lamps and metal halide lamps, etc.) with assumed PCB-containing ballasts (not marked with "No PCBs" label) were identified within each of the transformer rooms as listed in Table 9. TRC assumed that there were two (2) ballasts for each eight (8)-foot or twelve (12)-foot fluorescent light fixture and one (1) ballast for each four (4)-foot fluorescent light fixture present.

In this instance, unless ballasts are labelled as non-PCB it is more cost effective to assume materials contain the contaminant of concern than to perform extensive sampling to prove that they do not. For instance, TRC typically assumes that all fluorescent light ballasts contain over 50 parts per million (ppm) of PCBs, and all ballasts must be removed in 55-gallon drum(s) disposed pursuant to 40 CFR 761.60-62. This is cost effective even for those ballasts labeled "No PCB", as it has been determined by the USEPA that although ballasts may not contain PCBs the potting material must be considered suspect as the potting materials have been found to contain greater than 50 ppm PCBs in ballasts labeled "No PCB". Consequently, it is recommended that, during demolition activities, all ballasts, including those labeled "No PCB" be containerized for disposal as PCB waste due to the presence of potting material or capacitor oil.

2.6 Universal Waste Inspection

40 CFR Part 273 and 6 NYCRR Section 374-3 established requirements for managing universal wastes. Universal wastes are those wastes that would reasonably be expected to be classified as hazardous wastes but, due to their universal use in industrial and residential properties, regulations were created to ensure that they are managed in a manner that prevents harm to the environment while reducing the regulatory burden on generators of these wastes. Per the Universal Waste regulations, analytical testing is not required to determine classification as Universal Waste.
Universal wastes inspected within the transformer rooms included the following waste types:

1. Pesticides as described in 40 CFR Section 273.3 and 6 NYCRR 374-3.1(c);
2. Batteries as described in 40 CFR Section 273.2 and 6 NYCRR 374-3.1(b);
3. Mercury-containing equipment as described in 40 CFR Section 273.4 and 6 NYCRR 374-3.1(d);
4. Lamps as described in 40 CFR section 273.5 and 6 NYCRR 374-3.1(e); and,
5. Pesticides and batteries were not identified on Site.

Mercury-containing equipment could include pneumatic valves, heater switches, thermometers, thermostats, switch gears, meters, sprinkler systems, etc. None of these types of equipment were present or observed to be mercury-containing equipment.

Lamp types anticipated to be generated during the remedial action include fluorescent lamps. The locations and quantities of lamps identified in each transformer room are listed in Table 9.

2.6.1 Refrigerant-Containing Equipment

TRC did not identify any refrigerant-containing equipment during the survey. Refrigerant-containing units, which would typically include water coolers, air conditioning (AC) units, freezers, condensers, refrigerators, water fountains, and containers of R22.

2.6.2 Fire Extinguishers

TRC did not identify any fire extinguishers at these transformer room locations.

2.6.3 Oil-Containing Equipment

TRC identified only non-PCB Transformers in Transformer Room 1 and 2 and did not observe other equipment which would contain residual oil.

2.6.4 Used Electronic Equipment

Used electronic equipment can encompass a variety of equipment including, but not limited to computers, cathode ray tubes (CRTs), wireless telephones, electronic keyboards, mice, televisions, printers, monitors, portable digital music players, video cassette recorders, DVD players, Blu-ray disc players, digital video recorders, digital converter boxes, cable or satellite receivers, electronic game consoles, PDAs, facsimile machines, and photocopiers, etc. These types of electronic equipment were not observed or present inside the transformer rooms.

2.6.5 Miscellaneous Equipment and Stored Containers

The transformer rooms were inspected to identify miscellaneous equipment/containers which do not fit into the categories of typical building components as defined in the sections above. There were no drums, storage tanks, compressed gas, or other miscellaneous equipment or materials identified during the survey of the transformer rooms.

3.0 SUMMARY OF FINDINGS

Based on the results of the results of the Pre-Remedial Transformer Room survey, the findings are summarized below:

1. TRC performed asbestos inspections of the suspect building materials along with the wire insulation and electrical equipment with the assistance of a licensed electrician following OSHA guidelines and lock-out tag out procedures. A total of twenty-four (24) homogeneous materials/areas were identified in Transformer Rooms 1 and 2 and subsequently sampled and submitted for laboratory analysis. No other suspect materials were observed at the time of the survey. A total of four (4) homogenous materials/areas were confirmed to contain greater than 1.0% Chrysotile Asbestos which includes:

- Friable Black Fabric Wire Insulation in Electrical Cabinet – approximately 300 linear feet on standard gauge wire present in a total of two (2) electric cabinets, one (1) located between the two (2) transformers present in both transformer rooms 1 and 2.
- Friable Black Fabric Thick Wire Insulation on Cables to Street (Main Service Panel) – 3 linear feet on power cables to the main electrical service panels for transformer rooms 1 and 2.
- Non-Friable Black Sealant in Conduit for Cables to Street (Main Service Panel) 2 square feet on power cables to the main electrical service panels for transformer rooms 1 and 2.
- Non-Friable Black Electrical Panel Board – approximately 160 square feet in transformer rooms 1 and 2.

2. The lead containing paint survey of the transformer rooms included approximately one hundred five (105) XRF lead paint readings, inclusive of twelve (12) calibration checks, on various painted surfaces. The survey also included a total of four (4) lead paint samples collected for laboratory analysis. Results of both the XRF readings and paint chip sample analyses confirmed that the transformer rooms have various locations of lead containing paint (LCP) and lead based paint (LBP), which could potentially expose workers to airborne levels of lead in excess of the OSHA Lead in Construction limits during the remedial activities.

3. TRC collected one (1) bulk sample of representative non-metallic porous floor sediment/debris materials being removed from each Transformer Room. The two (2) samples were analyzed for TCLP and Total RCRA eight (8) Metals. Both cadmium and lead were reported above the USEPA and NYSDEC TCLP Hazardous Waste Regulatory Limits for the sample collected in Transformer Room 2 and cadmium was elevated for the sample collected in Transformer Room 1. Chromium, silver, mercury, lead and cadmium were detected in concentrations above the NYSDEC Unrestricted Use Soil Cleanup Objectives (SCO) in samples collected from both Transformer Rooms and barium was also found to be above the SCO in Transformer Room 2.

   As a result, it is expected that the anticipated cleanup of the porous debris and sediment material on the floor of the transformer rooms prior to demolition of the concrete slab would be characterized as hazardous waste for leachable lead and cadmium. Additionally, the remedial clean-up of these materials anticipated during the remedial actions could potentially expose workers to airborne levels of barium, chromium, silver, mercury, lead and cadmium which exceed OSHA Permissible Exposure Limits. In addition, this porous debris/sediment material was found to also contain PCB's as described below.

4. In addition to the Metals analysis of porous floor sediment/debris samples described above, TRC collected one (1) bulk sample of representative porous floor sediment/debris materials from each Transformer Room for PCB analysis. The laboratory analysis of the two samples determined this material to be hazardous waste in New York State and TSCA PCB remediation waste based on PCB analysis in Transformer Room 1, and New York State non-hazardous and TSCA PCB remediation waste in Transformer Room 2.

5. Representative bulk samples were collected of suspected PCB caulk from the louvre vent in Transformer Room 1 and thermal sealant on the power cables entering both Transformer Rooms and analyzed for PCBs. PCBs were detected in both the caulk and thermal sealant compound sampled. The suspect thermal sealant material in Transformer Rooms 1 and 2 was found to contain concentrations of PCB greater than 50 ppm and therefore is considered a hazardous waste in NYS as well as regulated TSCA Bulk Product Waste. The sampled louver vent caulking in Transformer

Room 2 was found to be less than 50 ppm and therefore considered a non-TSCA regulated excluded PCB product and NYS non-hazardous material.

6. A total of twelve (12) discrete PCB wipe samples were collected from non-porous metallic surfaces identified within Transformer Rooms 1 and 2 which include vandalized equipment and materials which will be removed for off-site recycling and/or disposal. Laboratory analysis has determined that some of the PCB concentrations were above remediation standards adopted by both New York State and TSCA based on PCB analysis in Transformer Room 1 and Transformer Room 2. Out of twelve (12) discrete PCB wipe samples collected, three (3) of the wipes collected exceeded the cleanup criteria of ≤10 µg/100 cm^2 for high occupancy areas.

7. TRC performed sampling of the transformer oil for PCBs in Transformer Rooms 1 and 2. The two (2) transformers located in Transformer Room 1 reportedly contain silicone di-electric oil and indicated a capacity of 262 gallons. Laboratory analysis has determined these transformers are considered non-PCB transformers and are below applicable PCB standards adopted by both New York State and TSCA based on PCB analysis in Transformer Room 1.

   The two (2) transformers located in Transformer Room 2 were found to be empty without drain plugs and were opened by an environmental technician and inspected and found to be in good condition with no visible or measurable quantity of di-electric oil for sampling. Therefore, PCB wipe samples were collected from the interior of each transformer and submitted for laboratory analysis. Laboratory analysis has determined these transformers are considered non-PCB transformers and below remediation standards adopted by both New York State and TSCA based on PCB analysis in Transformer Room 2.

8. TRC performed inspections of the lighting fixtures in the transformer rooms with the assistance of a licensed electrician following OSHA guidelines and lock-out tag out procedures. TRC identified sixteen (16) light ballasts, that were assumed to be PCB-containing.

9. Universal waste was identified which was limited to mercury-containing fluorescent lamps. Fourteen (14) fluorescent lamps were identified, some of which were damaged or broken.

10. No other regulated materials were observed.

4.0 RECOMMENDATIONS

Based on the results of this Pre Remedial sampling effort, implementing the measures listed below is recommended as part of the transformer room remedial activities:

4.1 Asbestos-Containing Material

Asbestos Removal: Prior to conducting work in the building transformer rooms, all ACMs affected by such activities must be removed by a licensed and accredited asbestos abatement contractor and handled and disposed prior to planned activities in accordance with the USEPA NESHAP (40 CFR Part 61), New York State Industrial Code Rule 56 Asbestos Regulations (ICR 56) and New York City Department of Environmental Protection Title 15, Chapter 1 Asbestos Regulations, as applicable. TRC recommends that Plans and Specifications be prepared to properly address abatement of ACM identified. The NYSDOL and NYCDEP also require third party air and project monitoring during asbestos abatement activities by a firm licensed to perform such services.

All suspect ACMs not sampled during this survey should be considered asbestos containing until sampled and proven to be non-ACM. Advance notification of the asbestos project to the applicable regulatory agencies will be required.

Concealed ACM: In addition to the ACMs identified, there is a possibility that concealed ACMs may exist at the subject facility. As such, if any concealed suspect ACM is encountered during the future remedial activities, the work impacting these suspect ACMs should immediately stop. Prior to resuming the work impacting these materials, the suspect ACM should either be:

- Sampled by an appropriately-certified asbestos professional and the samples submitted to a state or appropriately certified laboratory for asbestos analysis; or,
- Assumed to be asbestos-containing, removed by a licensed asbestos abatement contractor, and disposed of in accordance with the applicable regulations.

4.2 Lead-Based Paint

Construction activities involving lead-based coatings are regulated for worker exposure under the Lead Occupational Safety and Health Administration (OSHA) Standard and for disposal of materials under the USEPA Resource Conservation and Recovery Act (RCRA) and New York State Department of Environmental Conservation (NYSDEC) Hazardous Waste Standards.

Coated steel is exempt from lead disposal regulations if recycled by a certified recycling facility. Steel coatings were surveyed and sampled for lead and any of these materials which contain lead shall mean that the remedial contractor shall comply with 29 CFR 1926.62, the "Lead in Construction" rule.

The XRF and lead sampling have determined that the removal of painted equipment and materials contain lead in concentrations which would mandate compliance with OSHA regulation for the Construction Industry, 29 Code of Federal Regulations (CFR) 1926.62. Therefore, any remedial activities which may disturb surfaces containing lead paint which may be employed, such as grinding, cutting, and demolishing could potentially expose workers to airborne levels of lead in excess of the OSHA Permissible Exposure Limit.

4.3 RCRA Metals Waste Characterization

Disposal of waste and debris during the remediation of the transformer rooms which contain lead paint materials and debris containing both lead and cadmium which are subject to regulation under both the NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371) and USEPA RCRA Hazardous Waste Management regulations (40 CFR Parts 260 through 274). Hazardous Waste materials identified should be managed as part of the remediation. Workers shall be protected during remedial activities from potential exposure to airborne levels of barium, chromium, silver, mercury, lead and cadmium which exceed OSHA Permissible Exposure Limits.

4.4 PCB-Containing Building Materials

PCB-Containing Building Materials: PCB-containing building material should be removed, handled and disposed of in accordance with applicable local, state and federal rules and regulations as part of the remedial activities. PCB bulk product and remediation waste should be segregated, and contactors should avoid commingling PCB bulk product and PCB remediation waste with other regulated materials such as ACM waste or Toxicity Characteristic (e.g., leachable lead and cadmium) hazardous waste. These

materials should be included in the anticipated Self-Implementation Plan (SIP) to be submitted to the USEPA.

PCB-containing light ballasts, some of which were marked non-PCB ballasts in both transformer rooms should be assumed to contain PCBs due to potential PCB potting materials and recycled/managed as TSCA PCB regulated waste as well as NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371).

4.5 PCB-Contaminated Sediment and Porous Debris

PCB-Contaminated Sediment and Porous Debris: PCB-contaminated sediment and porous debris building material should be removed, handled and disposed of in accordance with applicable local, state and federal rules and regulations as part of remedial activities. This PCB waste may be considered both hazardous waste in NYS and TSCA regulated based on laboratory analysis and have been comingled with other contaminants such as lead and cadmium hazardous waste, by reported vandalism which has occurred in these transformer rooms. These materials should be included in the anticipated Self-Implementation Plan (SIP) to be submitted to the USEPA.

4.6 Universal Waste

Universal wastes identified within the building transformer rooms included mercury-containing fluorescent lamps. It is assumed that all lamps contain elemental mercury. Therefore, these materials should be removed as Universal Waste in approved containers and managed pursuant to the USEPA Universal Waste Regulations (40 CFR Part 273). Per the universal waste regulations, analytical testing is not required to determine classification as universal waste.

Some of the light fixtures and bulbs have been damaged by vandalism. Two damaged fluorescent lamps were observed on the floor. In addition, three fixtures were missing fluorescent lamps and it is assumed that these were damaged during the vandalism. These materials should be handled along with the floor debris hazardous waste materials identified in sections 3.0 (3) and 4.3.

4.7 Non-PCB Transformers

Based on laboratory analysis and review of the transformer identification labels, the following methods for removal and office disposal should be considered:

- Recycling as Scrap Metal to licensed recycling facility approved to accept non-PCB transformers.
- Oil Recycling: The mineral oil or dielectric fluid from non-PCB equipment can be drained and recycled as used oil as specified by NYSDEC solid waste regulations.
- Resale to Rebuilders: If the unit is still in good condition or is a surplus item, the owner should consider transporting the transformers to rebuilder in lieu of recycling as scrap material.
- Landfill Disposal: Based on NYSDEC Non-PCB Transformers which contain concentrations of PCBs below 1.0 ppm and below 0.1 ppm may be unrestricted and can disposed of in a municipal non-hazardous waste landfill, though only if recycling is not feasible or permitted.

5.0 CONCLUSION

This Pre Remedial Sampling identified regulated and hazardous materials that need to be addressed as part of the remedial efforts in the transformer rooms. All ACM and regulated materials, transformers, electrical equipment, scrap metal and debris from the floor areas should be removed from the transformer rooms prior

to implementing remedial work involving the removal of the PCB contaminated concrete slabs, and excavation of PCB contaminated soil as stipulated by the Remedial Work Plan approved by NYSDEC.

The results of this survey should not be utilized as a scope of work for abatement and remediation. Specifications and procedures tailored to this project should be developed to define a scope of abatement and remediation work for review and approval by DASNY and OMH.

TABLES

Table 1 - Asbestos Containing Materials in Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1

Sample ID	Homogenous Material Description Located in Transformer Rooms 1 & 2	Type of Homogenous Material	ACM Friability	Condition	Date Sample Collected	PLM Friable (NYS 198.1)	PLM NOB (NYS 198.6)	TEM NOB (NYS 198.4)	Estimated Quantity
1	Red Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
2	Red Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
3	Red Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
4	Black Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
5	Black Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
6	Black Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
7	White Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
8	White Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
9	White Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
10	Yellow Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
11	Yellow Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
12	Yellow Wire Insulation	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
13	Black Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	20 LF
14	Black Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	
15	Black Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	
16	White Wire Insulation Hanging on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
17	White Wire Insulation Hanging on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
18	White Wire Insulation Hanging on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
19	Blue Wire Insulation Handing on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
20	Blue Wire Insulation Handing on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
21	Blue Wire Insulation Handing on Ceiling	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
22	Balck Fabric Textured Wire Insulation in Circuit Panel	Miscellaneous		Good	2/4/2026	NAD	X	X	10 LF
23	Balck Fabric Textured Wire Insulation in Circuit Panel	Miscellaneous		Good	2/4/2026	NAD	X	X	
24	Balck Fabric Textured Wire Insulation in Circuit Panel	Miscellaneous		Good	2/4/2026	NAD	X	X	
25	**Black Fabric Wire Insulation Electric Cabinet Between Transformers**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**10% Chrysotile**	**X**	**X**	**259 LF**
26	**Black Fabric Wire Insulation Electric Cabinet Between Transformers**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**10% Chrysotile**	**X**	**X**	
27	**Black Fabric Wire Insulation Electric Cabinet Between Transformers**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**10% Chrysotile**	**X**	**X**	
28	Red Fibrous Board In Switch Panels	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	240 SF
29	Red Fibrous Board In Switch Panels	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
30	Red Fibrous Board In Switch Panels	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
31	Blue Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	20 LF
32	Blue Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	
33	Blue Fabric Wire Insulation on Switch	Miscellaneous		Good	2/4/2026	NAD	X	X	
34	**Black Fabric Thick Wire Insulation Cables to Street (Main Service Panel)**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**44% Chrysotile**	**X**	**X**	**3 LF**
35	**Black Fabric Thick Wire Insulation Cables to Street (Main Service Panel)**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**50% Chrysotile**	**X**	**X**	
36	**Black Fabric Thick Wire Insulation Cables to Street (Main Service Panel)**	**Miscellaneous**	**Friable**	**Good**	**2/4/2026**	**44% Chrysotile**	**X**	**X**	
37	Black Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
38	Black Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
39	Black Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	

Table 1 - Asbestos Containing Materials in Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1

Sample ID	Homogenous Material Description Located in Transformer Rooms 1 & 2	Type of Homogenous Material	ACM Friability	Condition	Date Sample Collected	PLM Friable (NYS 198.1)	PLM NOB (NYS 198.6)	TEM NOB (NYS 198.4)	Estimated Quantity
40	White Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
41	White Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
42	White Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
43	Yellow Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	40 LF
44	Yellow Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
45	Yellow Thin Wire Insulation (Light Fixtures)	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
46	**Black Sealant in Conduit for Cables to Street (Main Service Panel)***	**Miscellaneous**	**Non-Friable**	**Good**	**2/4/2026**	**X**	**4.7% Chrysotile**	**X**	**2 SF**
47	**Black Sealant in Conduit for Cables to Street (Main Service Panel)***	**Miscellaneous**	**Non-Friable**	**Good**	**2/4/2026**	**X**	**4.6% Chrysotile**	**X**	
48	**Black Sealant in Conduit for Cables to Street (Main Service Panel)***	**Miscellaneous**	**Non-Friable**	**Good**	**2/4/2026**	**X**	**5.2% Chrysotile**	**X**	
49	Caulk On Louvre Vent in Transformer Room 1 Only	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	5 SF
50	Caulk On Louvre Vent in Transformer Room 1 Only	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
51	Caulk On Louvre Vent in Transformer Room 1 Only	Miscellaneous		Good	2/4/2026	X	NAD (Inconclusive)	NAD	
52	Yellow Horse Hair Insulation Behind Black Sealant (Main Service Panel)	Miscellaneous		Damaged	2/4/2026	NAD	X	X	5 SF
53	Yellow Horse Hair Insulation Behind Black Sealant (Main Service Panel)	Miscellaneous		Damaged	2/4/2026	NAD	X	X	
54	Yellow Horse Hair Insulation Behind Black Sealant (Main Service Panel)	Miscellaneous		Damaged	2/4/2026	NAD	X	X	
55	Red Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	85 SF
56	Red Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
57	Red Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
58	**Black Electrical Panel Board**	**Miscellaneous**	**Non-Friable**	**Good**	**3/19/2026**	**X**	**NAD (Inconclusive)**	**0.28% Chrysotile**	**160 SF**
59	**Black Electrical Panel Board**	**Miscellaneous**	**Non-Friable**	**Good**	**3/19/2026**	**X**	**NAD (Inconclusive)**	**0.40% Chrysotile**	
60	**Black Electrical Panel Board**	**Miscellaneous**	**Non-Friable**	**Good**	**3/19/2026**	**X**	**NAD (Inconclusive)**	**1.1% Chrysotile**	
61	**Black Electrical Panel Board**	**Miscellaneous**	**Non-Friable**	**Good**	**3/19/2026**	**X**	**NAD (Inconclusive)**	**Not Analyzed**	
62	**Black Electrical Panel Board**	**Miscellaneous**	**Non-Friable**	**Good**	**3/19/2026**	**X**	**NAD (Inconclusive)**	**Not Analyzed**	
63	Green Glue on Metal Door Lining on Styrafoam	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	168 SF
64	Green Glue on Metal Door Lining on Styrafoam	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
65	Green Glue on Metal Door Lining on Styrafoam	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
66	Grey Fuse Filler Material	Miscellaneous		Good	3/19/2026	NAD	X	X	4 SF
67	Grey Fuse Filler Material	Miscellaneous		Good	3/19/2026	NAD	X	X	
68	Grey Fuse Filler Material	Miscellaneous		Good	3/19/2026	NAD	X	X	
69	Grey Fuse Core Material	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	4 SF
70	Grey Fuse Core Material	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
71	Grey Fuse Core Material	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
72	Brown Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	40 SF
73	Brown Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	
74	Brown Electrical Panel Board	Miscellaneous		Good	3/19/2026	X	NAD (Inconclusive)	NAD	

Notes:

SF = Square Feet, LF = Linear Feet

Shaded (Bold) = Exceeds 1% asbestos

NAD= No Asbestos Detected

X = PLM NOB (NYS 198.6) Not Performed on Friable Materials

X =TEM NOB (NYS 198.4) Not Performed on Friable Materials

*** =PCB Bulk Product Waste**

Table 2 - XRF Lead Paint Survey Results for Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1 on February 4, 2026

XRF Reading #	Component	Substrate	Side	Coating Condition	Color	Sample Location	mg/cm^2	Result*
1	-	-	Calibrate	-	-	-	1	CAL
2	-	-	Calibrate	-	-	-	1.1	CAL
3	-	-	Calibrate	-	-	-	1.1	CAL
4	-	-	Calibrate	-	-	-	0	CAL
5	-	-	Calibrate	-	-	-	0	CAL
6	-	-	Calibrate	-	-	-	0	CAL
7	Wall	Concrete	A	Poor	Gray	Transformer Room 1	0	ND
8	**Column**	**Concrete**	**A**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
9	Door	Metal	A	Poor	Blue	Transformer Room 1	0	ND
10	**Door Buck**	**Metal**	**A**	**Poor**	**Blue**	**Transformer Room 1**	**0.3**	**LCP**
11	Transom	Metal	A	Poor	Blue	Transformer Room 1	-0.1	ND
12	**Beam**	**Concrete**	**Ceiling**	**Fair**	**Gray**	**Transformer Room 1**	**0.3**	**LCP**
13	**Wall**	**Concrete**	**B**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
14	**Wall**	**Brick**	**B**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
15	Electrical Conduit	Metal	B	Intact	White	Transformer Room 1	-0.1	ND
16	Door	Metal	B	Fair	Brown	Transformer Room 1	0	ND
17	**Door Buck**	**Metal**	**B**	**Fair**	**Brown**	**Transformer Room 1**	**0.3**	**LCP**
18	**Landing**	**Metal**	**B**	**Poor**	**Brown**	**Transformer Room 1**	**4.2**	**LBP**
19	**Stair Tread**	**Metal**	**B**	**Poor**	**Brown**	**Transformer Room 1**	**1.2**	**LBP**
20	**Stair Stringer**	**Metal**	**B**	**Fair**	**Brown**	**Transformer Room 1**	**8.5**	**LBP**
21	**Handrail**	**Metal**	**C**	**Poor**	**Brown**	**Transformer Room 1**	**9.3**	**LBP**
22	**Baluster**	**Metal**	**B**	**Fair**	**Brown**	**Transformer Room 1**	**9.1**	**LBP**
23	**Ceiling**	**Concrete**	**Ceiling**	**Fair**	**Gray**	**Transformer Room 1**	**0.4**	**LCP**
24	**Floor**	**Concrete**	**Floor**	**Fair**	**Gray**	**Transformer Room 1**	**0.2**	**LCP**
25	**Wall**	**Concrete**	**C**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
26	**Wall**	**Brick**	**C**	**Fair**	**Gray**	**Transformer Room 1**	**0.2**	**LCP**
27	Wall	Brick	D	Fair	Gray	Transformer Room 1	0	ND
28	Wall	Concrete	D	Fair	Gray	Transformer Room 1	0	ND
29	**Angle Iron**	**Metal**	**A**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
30	**Exhaust Fan**	**Metal**	**A**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
31	**Electrical Box**	**Metal**	**A**	**Fair**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
32	Kitchen Main Disconnect	Metal	B	Fair	Gray	Transformer Room 1	-0.2	ND
33	Kitchen Condensing Unit	Metal	B	Fair	Gray	Transformer Room 1	-0.1	ND
34	Kitchen Panel	Metal	B	Fair	Gray	Transformer Room 1	-0.2	ND
35	Electrical Box	Metal	B	Fair	Gray	Transformer Room 1	0	ND
36	**Equipment 1**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
37	**Equipment 2**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
38	**Electrical Box**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.2**	**LCP**
39	**Equipment 3**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
40	**Equipment 4**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
41	Equipment 5	Metal	Room Center	Poor	Gray	Transformer Room 1	0	ND
42	**Equipment 6**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**

Table 2 - XRF Lead Paint Survey Results for Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1 on February 4, 2026

XRF Reading #	Component	Substrate	Side	Coating Condition	Color	Sample Location	mg/cm^2	Result*
43	**Equipment 7**	**Metal**	**Room Center**	**Poor**	**Gray**	**Transformer Room 1**	**0.1**	**LCP**
44	Equipment 8	Metal	D	Poor	Gray	Transformer Room 1	-0.1	ND
45	**Door**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**0.1**	**LCP**
46	**Door Buck**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**0.2**	**LCP**
47	**Transom**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**1.0**	**LBP**
48	**Door Lintel**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**3.5**	**LBP**
49	**Vent Panel**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**1.3**	**LBP**
50	**Stair Tread**	**Metal**	**B**	**Poor**	**Black**	**Exterior Room 1**	**0.1**	**LCP**
51	**Stair Stringer**	**Metal**	**B**	**Poor**	**Black**	**Exterior Room 1**	**0.6**	**LCP**
52	**Handrail**	**Metal**	**B**	**Poor**	**Blue**	**Exterior Room 1**	**2.5**	**LBP**
53	**Baluster**	**Metal**	**B**	**Fair**	**Blue**	**Exterior Room 1**	**2.1**	**LBP**
54	**Landing**	**Metal**	**B**	**Poor**	**Black**	**Exterior Room 1**	**0.2**	**LCP**
55	**Fence - Bar**	**Metal**	**B**	**Poor**	**Blue**	**Exterior Room 1**	**4.9**	**LBP**
56	**Post**	**Metal**	**B**	**Poor**	**Black**	**Exterior Room 1**	**1.2**	**LBP**
57	**Wall**	**Concrete**	**A**	**Fair**	**Gray**	**Transformer Room 2**	**0.2**	**LCP**
58	**Column**	**Concrete**	**A**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
59	Door	Metal	A	Poor	Blue	Transformer Room 2	0	ND
60	**Door Buck**	**Metal**	**A**	**Poor**	**Blue**	**Transformer Room 2**	**1.8**	**LBP**
61	**Transom**	**Metal**	**A**	**Poor**	**Blue**	**Transformer Room 2**	**0.1**	**LCP**
62	**Beam**	**Concrete**	**Ceiling**	**Fair**	**Gray**	**Transformer Room 2**	**0.2**	**LCP**
63	**Electrical Box**	**Metal**	**A**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
64	**Equipment 1**	**Metal**	**Room Center**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
65	Equipment 2	Metal	Room Center	Poor	Gray	Transformer Room 2	0	ND
66	Equipment 3	Metal	Room Center	Fair	Gray	Transformer Room 2	0	ND
67	Equipment 4	Metal	Room Center	Fair	Gray	Transformer Room 2	0	ND
68	**Equipment 5**	**Metal**	**Room Center**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
69	**Equipment 6**	**Metal**	**Room Center**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
70	**Equipment 7**	**Metal**	**Room Center**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
71	Exhaust Fan	Metal	A	Fair	Gray	Transformer Room 2	-0.1	ND
72	Angle Iron	Metal	A	Fair	Gray	Transformer Room 2	-0.1	ND
73	Wall	Concrete	B	Fair	Gray	Transformer Room 2	0	ND
74	**Wall**	**Brick**	**B**	**Fair**	**Gray**	**Transformer Room 2**	**0.2**	**LCP**
75	**Wall**	**Brick**	**C**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
76	**Wall**	**Concrete**	**C**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
77	**Wall**	**Concrete**	**D**	**Fair**	**Gray**	**Transformer Room 2**	**0.1**	**LCP**
78	Wall	Brick	D	Fair	Gray	Transformer Room 2	0	ND
79	**Stair Tread**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**5.2**	**LBP**
80	**Stair Stringer**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**8.5**	**LBP**
81	**Handrail**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**5.6**	**LBP**
82	**Baluster**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**10.4**	**LBP**
83	**Landing**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**3.4**	**LBP**
84	Door	Metal	D	Fair	Brown	Transformer Room 2	0	ND

Table 2 - XRF Lead Paint Survey Results for Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1 on February 4, 2026

XRF Reading #	Component	Substrate	Side	Coating Condition	Color	Sample Location	mg/cm^2	Result*
85	**Door Buck**	**Metal**	**D**	**Fair**	**Brown**	**Transformer Room 2**	**0.9**	**LBP**
86	**Ceiling**	**Concrete**	**Ceiling**	**Fair**	**Gray**	**Transformer Room 2**	**0.2**	**LCP**
87	**Floor**	**Concrete**	**Floor**	**Fair**	**Gray**	**Transformer Room 2**	**0.2**	**LCP**
88	**Door**	**Metal**	**A**	**Fair**	**Blue**	**Exterior Room 2**	**0.1**	**LCP**
89	**Door Buck**	**Metal**	**A**	**Fair**	**Blue**	**Exterior Room 2**	**0.1**	**LCP**
90	**Transom**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 2**	**0.2**	**LCP**
91	**Door Lintel**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 2**	**0.1**	**LCP**
92	**Panel**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 2**	**2.6**	**LBP**
93	**Stair Tread**	**Metal**	**D**	**Poor**	**Black**	**Exterior Room 2**	**0.4**	**LCP**
94	**Stair Stringer**	**Metal**	**D**	**Poor**	**Black**	**Exterior Room 2**	**0.6**	**LBP**
95	**Handrail**	**Metal**	**D**	**Poor**	**Blue**	**Exterior Room 2**	**2.1**	**LBP**
96	**Baluster**	**Metal**	**D**	**Poor**	**Blue**	**Exterior Room 2**	**3.3**	**LBP**
97	**Landing**	**Metal**	**D**	**Poor**	**Black**	**Exterior Room 2**	**1.5**	**LBP**
98	**Fence - Bar**	**Metal**	**D**	**Poor**	**Blue**	**Exterior Room 2**	**0.4**	**LCP**
99	**Post**	**Metal**	**D**	**Poor**	**Black**	**Exterior Room 2**	**1.1**	**LBP**
100	-	-	Calibrate	-	-	-	1	CAL
101	-	-	Calibrate	-	-	-	1	CAL
102	-	-	Calibrate	-	-	-	0.9	CAL
103	-	-	Calibrate	-	-	-	0	CAL
104	-	-	Calibrate	-	-	-	0	CAL
105	-	-	Calibrate	-	-	-	-0.1	CAL

Notes:

*** CAL – Calibration; ND – Non-Detect; LCP – Lead-containing Paint; LBP – Lead-based Paint**

Table 3 - Lead Paint Sample Results for Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Component	Substrate	Side	Coating Condition	Color	Sample Location	mg/kg	%Weight	Result*
TR1-LCP-01	**Post**	**Metal**	**B**	**Poor**	**Black**	**Exterior Room 1**	**19,400**	**1.94**	**LBP**
TR1-LCP-02	**Door Buck**	**Metal**	**A**	**Poor**	**Blue**	**Exterior Room 1**	**29,000**	**2.90**	**LBP**
TR2-LCP-01	**Door**	**Metal**	**A**	**Poor**	**Blue**	**Transformer Room 2**	**401**	**0.0401**	**LCP**
TR2-LCP-02	**Handrail**	**Metal**	**D**	**Poor**	**Brown**	**Transformer Room 2**	**90,600**	**9.06**	**LBP**

Notes:

*** LCP – Lead-containing Paint; LBP – Lead-based Paint**

Table 4 - RCRA Non-Metallic Porous Debris Sampling Results for
Transformer Rooms Nos. 1 and 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Sample Location	Metal	Totals Reporting Limit (mg/Kg)	Totals Method Detection Limit (mg/Kg)	Total Metal (mg/kg)	Unrestricted SCO for RCRA Metals (ppm)	TCLP Reporting Limit (mg/Kg)	TCLP Method Detection Limit (mg/Kg)	TCLP (mg/L) Leachate	NYSDEC Haz Waste Regulatory Limit (mg/L)
TR1-MT1	Transformer Room 1 - Floor Area	Arsenic	7.66	3.31	7.60 J	**13.0**				
		Arsenic					1.0	0.019	ND	**5.0**
		Barium	7.66	0.812	**483**	**350.0**				
		Barium					0.5	0.021	0.528	**100.0**
		Cadmium	7.66	0.421	**1,160**	**2.5**				
		Cadmium					0.1	0.01	**7.36**	**1.0**
		Chromium	7.66	6.49	**54.0**	**30.0**				
		Chromium					0.2	0.021	ND	**5.0**
		Lead	38.3	1.82	**4,840**	**63.0**				
		Lead					0.5	0.027	0.707	**5.0**
		Mercury	0.065	0.042	0.178	**0.18**				
		Mercury					0.001	0.0005	ND	**0.2**
		Selenium	15.3	2.52	ND	**3.9**				
		Selenium					0.5	0.035	ND	**1.0**
		Silver	3.83	2.28	**6.54**	**2.0**				
		Silver					0.1	0.028	ND	**5.0**
TR2-MT1	Transformer Room 2 - Floor Area	Arsenic	19.6	8.46	ND	**13.0**				
		Arsenic					1.0	0.019	ND	**5.0**
		Barium	19.6	2.08	187	**350.0**				
		Barium					0.5	0.021	0.171 J	**100.0**
		Cadmium	19.6	1.08	**91.5**	**2.5**				
		Cadmium					0.1	0.01	**1.28**	**1.0**
		Chromium	19.6	16.6	**103**	**30.0**				
		Chromium					0.2	0.021	ND	**5.0**
		Lead	98.0	4.66	**25,900**	**63.0**				
		Lead					0.5	0.027	**15.0**	**5.0**
		Mercury	0.069	0.045	**0.19**	**0.18**				
		Mercury					0.001	0.0005	ND	**0.2**
		Selenium	39.2	6.44	ND	**3.9**				
		Selenium					0.5	0.035	0.0592	**1.0**
		Silver	9.80	5.84	**7.54 J**	**2.0**				
		Silver					0.1	0.028	ND	**5.0**

Notes:

mg/L = milligrams per liter

mg/kg = milligrams per kilograms

ND = Non- Detect

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit

Sediment from the Floor does not meet guidelines in Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives for RCRA Metals Metals based on Rural Soil Background concentrations from NYSDOH and will be remediated as required in the Remedial Work Plan.

NYSDEC regulates the "RCRA 8" metals under 6 NYCRR Part 371, which is consistent with federal EPA hazardous waste standards.

Each sample was analyzed following the Toxicity Characteristic Leaching Procedure (TCLP) for RCRA 8 Metals along with Total Metals analysis. The samples were collected from Transformer Rooms 1 and 2 as composite of non-metallic building materials and sediments from each separate transformer floor area. The samples did not include any metal components, as metal items should be recycled to promote waste minimization efforts, rather than disposed of, and the recycling operation is exempt from the USEPA RCRA and NYSDEC Hazardous Waste regulations. These RCRA 8 Metals samples are intended to represent the waste disposal stream for floor debris associated with the building materials, electrical equipment and transformer materials being removed from the transformer rooms. The samples did not include foundation or slab materials (concrete/stone/etc.), as these materials will be managed separetly during the demolition and excavation of the concrete slab and excavation of subsurface soils.

Table 5 - Sediment Building Material PCB Sampling Results for Transformer Rooms 1 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Description	Sample Location	Reporting Limit (mg/Kg)	Total PCBs (mg/kg)	Unrestricted SCO for PCBs (ppm)	NYSDEC Hazardous Waste Classification	USEPA TSCA Waste Classification
TR1-Caulk-01	Grey Caulking on Louver Vent	Transformer Room 1	0.260	11.0	N/A	Non-Haz Waste	NR
TR2-Sealant-01	**Black Sealant at Main Electric Service Panels***	**Transformer Rooms 1 & 2**	**2.36**	**61.1**	N/A	**B007**	**BPW**
TR1-SD1	**Sediment on Floor Area**	**Transformer Room 1**	**4.92**	**62.8**	**0.1**	**B007**	**RW**
TR2-SD1	**Sediment on Floor Area**	**Transformer Room 2**	**4.84**	**19.0**	**0.1**	Non-Haz Waste	**RW**

Notes:

N/A - Not Applicable to Soil Restrictions

NR - Not Regulated as TSCA Waste and classified as an Excluded PCB Product as defined under 761.3 or NYSDEC Hazardous Waste

Non-Haz Waste - NYSDEC (PCB-containing materials with concentrations of less than 50 ppm)

Bulk Product Waste - BPW (Manufactured with PCB Concentration ≥ 50 mg/kg), PCB Remediation Waste - RW (Potentially Contaminated by Bulk Product Waste ≥ 1.0 mg/Kg)

New York State, PCB-containing materials with concentrations of 50 ppm or greater are regulated as listed hazardous wastes under 6 NYCRR 371.4(e), specifically assigned "B" codes (B001–B007) B007: Other PCB-containing materials (e.g., soil, debris).

Sediment from the Floor does not meet guidelines in Table 375-6.8(a): Unrestricted Use Soil Cleanup Objectives for Polychlorinated biphenyls (PCBs) is 0.1 ppm (0.1 mg/kg) and will be remediated as required in the Remedial Work Plan.

***Asbestos Containing Material**

Table 6 - Summary of PCB Wipe Sampling Results for Transformer Rooms 1 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Description	Sample Location	Reporting Limit (µg)	Method Detection Limit (µg)	Total PCBs (µg/100cm^2)	NYSDEC Hazardous Waste Classification	USEPA TSCA Waste Classification
TR1-01W	Electrical Panel	Transformer Room 1	0.5	0.044	0.375	Non-Haz Waste	BHOA
TR1-02W	Steel Panel	Transformer Room 1	2.5	0.222	**24.9**	Non-Haz Waste	**AHOA**
TR1-03W	Electrical Panel	Transformer Room 1	0.5	0.044	0.469	Non-Haz Waste	BHOA
TR1-04W	Steel Panel	Transformer Room 1	0.5	0.044	3.33	Non-Haz Waste	BHOA
TR1-05W	Steel Panel	Transformer Room 1	0.5	0.044	0.305	Non-Haz Waste	BHOA
TR1-06W	Steel Panel	Transformer Room 1	0.5	0.044	**10.6**	Non-Haz Waste	**AHOA**
TR2-03W*	Electric Cabinet	Transformer Room 2	0.5	0.044	0.407	Non-Haz Waste	BHOA
TR2-04W*	Electric Cabinet	Transformer Room 2	0.5	0.044	0.451	Non-Haz Waste	BHOA
TR2-05W	Scrap Metal	Transformer Room 2	0.5	0.044	9.88	Non-Haz Waste	BHOA
TR2-06W	Metal Panel Leaning on Wall	Transformer Room 2	0.5	0.044	0.718	Non-Haz Waste	BHOA
TR2-07W	Metal Plate on Floor	Transformer Room 2	0.5	0.044	4.34	Non-Haz Waste	BHOA
TR2-08W	Metal Cabinet	Transformer Room 2	0.5	0.044	0.128	Non-Haz Waste	BHOA
TR2-09W	Scrap Metal on the Floor	Transformer Room 2	2.5	0.222	**18.8**	Non-Haz Waste	**AHOA**
BLANK 1	Field Blank	Transformer Room 1	0.5	0.044	ND	N/A	N/A
BLANK 2	Field Blank	Transformer Room 2	0.5	0.044	ND	N/A	N/A

Notes:

ND = Non- Detect

N/A = Not Applicable

AHOA - Above TSCA High Occupancy Area Criteria

BHOA - Below TSCA High Occupancy Criteria

Non-Haz Waste - NYSDEC (PCB-containing materials with concentrations of less than 50 ppm)

***Field Duplicate Wipe Samples Collected - RPD= (S1-S2)/(Avg (S1+S2) = (0.451-0.407)/((0.451+0.407/2))x 100% = 10.2% - Acceptable Error (10–30%): Standard for field conditions where uneven contaminant distribution can cause natural variance.**

Non-porous surfaces. In high occupancy areas, the surface PCB cleanup standard is ≤10 µg/100 cm^2 of surface area. In low occupancy areas, the surface cleanup standard is <100 µg/100 cm^2 of surface area under Toxic Substance Control Act (TSCA) and 40 CFR Part 761.

New York State, PCB-containing materials with concentrations of 50 ppm or greater are regulated as listed hazardous wastes under 6 NYCRR 371.4(e), specifically assigned "B" codes (B001–B007) B007: Other PCB-containing materials (e.g., soil, debris). Non-Detect: Results reported as "less than ≤1.0 µg/100 cm^2 of surface area" are considered clean or non-detect for the purposes of many occupancy standards.

Table 7 - Summary of PCB Sampling Results for Transformer Oil in Transformer Room 1
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Description	Sample Location	Reporting Limit (mg/Kg)	Method Detection Limit (mg/Kg)	Total PCBs (mg/kg)	NYSDEC Hazardous Waste Classification	USEPA TSCA Waste Classification
TR1-01	Transformer Oil	Transformer Rm 1 - Transformer Serial No. 1091218*	0.730	0.324	ND	Non-Haz Waste	Non-PCB
TR1-02	Transformer Oil	Transformer Rm 1 - Transformer Serial No. 1091219*	0.709	0.315	ND	Non-Haz Waste	Non-PCB
TR-1	Transformer Oil	Transformer Rm 1 - Transformer Serial No. 1091219*	0.962**		ND	Non-Haz Waste	Non-PCB
TR-2	Transformer Oil	Transformer Rm 1 - Transformer Serial No. 1091218*	0.920**		ND	Non-Haz Waste	Non-PCB

Notes:

ND = Non- Detect

Non-Haz Waste - NYSDEC (PCB-containing materials with concentrations of less than 50 ppm)

PCB transformers (>500 ppm) are under strict EPA oversight, including registration, inspections, and specific marking.

Less than <50 ppm (Non-PCB), 50-500 ppm (PCB-Contaminated), >500 ppm (PCB Transformer) under Toxic Substance Control Act (TSCA) and 40 CFR Part 761.

***Westinghouse transformer serial numbers typically use the first two digits to indicate the year of manufacture (e.g., "10" for 2010). Date Coding (Post-1972): The first two digits signify the year. Date of Manufacture: Any transformer manufactured after July 2, 1979, is generally assumed to be non-PCB (<50 ppm)**

****Method Detection Limit not specified so the reference used is the LOQ**

Table 8 - Summary of PCB Wipe Sampling Results for Transformer in Transformer Room 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Sample Number	Description	Sample Location	Reporting Limit (µg)	Method Detection Limit (µg)	Total PCBs (µg/100cm^2)	NYSDEC Hazardous Waste Classification	USEPA TSCA Waste Classification
TR2-01W	Interior Wall Surface Area	Transformer Rm 2 - Transformer Serial No. 1291023*	0.5	0.044	0.844	Non-Haz Waste	BHOA
TR2-02W	Interior Wall Surface Area	Transformer Rm 2 - Transformer Serial No. 1291024*	0.5	0.044	ND	Non-Haz Waste	BHOA
BLANK 2	Field Blank	Transformer Room 2	0.5	0.044	ND	N/A	N/A
TR-3	Interior Wall Surface Area	Transformer Rm 2 - Transformer Serial No. 1291023*	1.5**		9.18	Non-Haz Waste	BHOA
TR-4	Interior Wall Surface Area	Transformer Rm 2 - Transformer Serial No. 1291024*	1.5**		ND	Non-Haz Waste	BHOA

Notes:

ND = Non- Detectable

NR - Not Regulated by TSCA Waste or NYSDEC Hazardous Waste

N/A = Not Applicable

BHOA - Below TSCA High Occupancy Criteria

Non-Haz Waste - NYSDEC (PCB-containing materials with concentrations of less than 50 ppm)

***Westinghouse transformer serial numbers typically use the first two digits to indicate the year of manufacture (e.g., "12" for 2012). Date Coding (Post-1972): The first two digits signify the year. Date of Manufacture: Any transformer manufactured after July 2, 1979, is generally assumed to be non-PCB (<50 ppm)**

Non-porous surfaces. In high occupancy areas, the surface PCB cleanup standard is ≤10 µg/100 cm^2 of surface area. In low occupancy areas, the surface cleanup standard is <100 µg/100 cm^2 of surface area under Toxic Substance Control Act (TSCA) and 40 CFR Part 761.

New York State, PCB-containing materials with concentrations of 50 ppm or greater are regulated as listed hazardous wastes under 6 NYCRR 371.4(e), specifically assigned "B" codes (B001–B007) B007: Other PCB-containing materials (e.g., soil, debris). Non-Detect: Results reported as "less than ≤1.0 µg/100 cm2 of surface area" are considered clean or non-detect for the purposes of many occupancy standards.

****Method Detection Limit not specified so the reference used is the LOQ**

Table 9 - Summary of Regulated Materials in Transformer Rooms Nos. 1 2
Bronx Psychiatric Center Building 1 on February 4, 2026

Location	Material / Item Description	Quantity	Size	Potential Hazard
Potentially PCB-Containing Light Ballasts				
Transformer Room 1	Light Fixture Ballasts	9	>3 lbs	HW - PCB
Transformer Room 2	Light Fixture Ballasts	7	>3 lbs	HW - PCB
Potentially Mercury-Containing Lamps				
Transformer Room 1	Fluorescent Lamps	6	4 Ft T8/T6 Tubes	UW - Hg Lamps
Transformer Room 1	Fluorescent Lamps	4	8 Ft T8/T6 Tubes	UW - Hg Lamps
Transformer Room 1	Fluorescent Lamps	2	12 Ft T8/T6 Tubes	UW - Hg Lamps
Transformer Room 2	Fluorescent Lamps	4	4 Ft T8/T6 Tubes	UW - Hg Lamps
Transformer Room 2	Fluorescent Lamps	2	20 Ft T8/T6 Tubes	UW - Hg Lamps

Notes:

1. Transformer Room 1 - One (1) Damaged 8-foot bulb (on ground), Transformer Room 2 - One (1) damaged 4-foot bulb (on ground), three (3) missing bulbs not present.

2. All quantities and sizes listed are approximate or estimated. Contractor must field verify all.

3. Contractor is responsible for all known and unknown oil filled equipment, tanks, appurtenances and piping.

4. Materials may be removed and additional materials may be present at time of performance of work.

5. Assumed 2 PCB ballasts per 8 ft, 12 ft or 20 ft light fixture and 1 PCB ballast per 4 ft fixture.

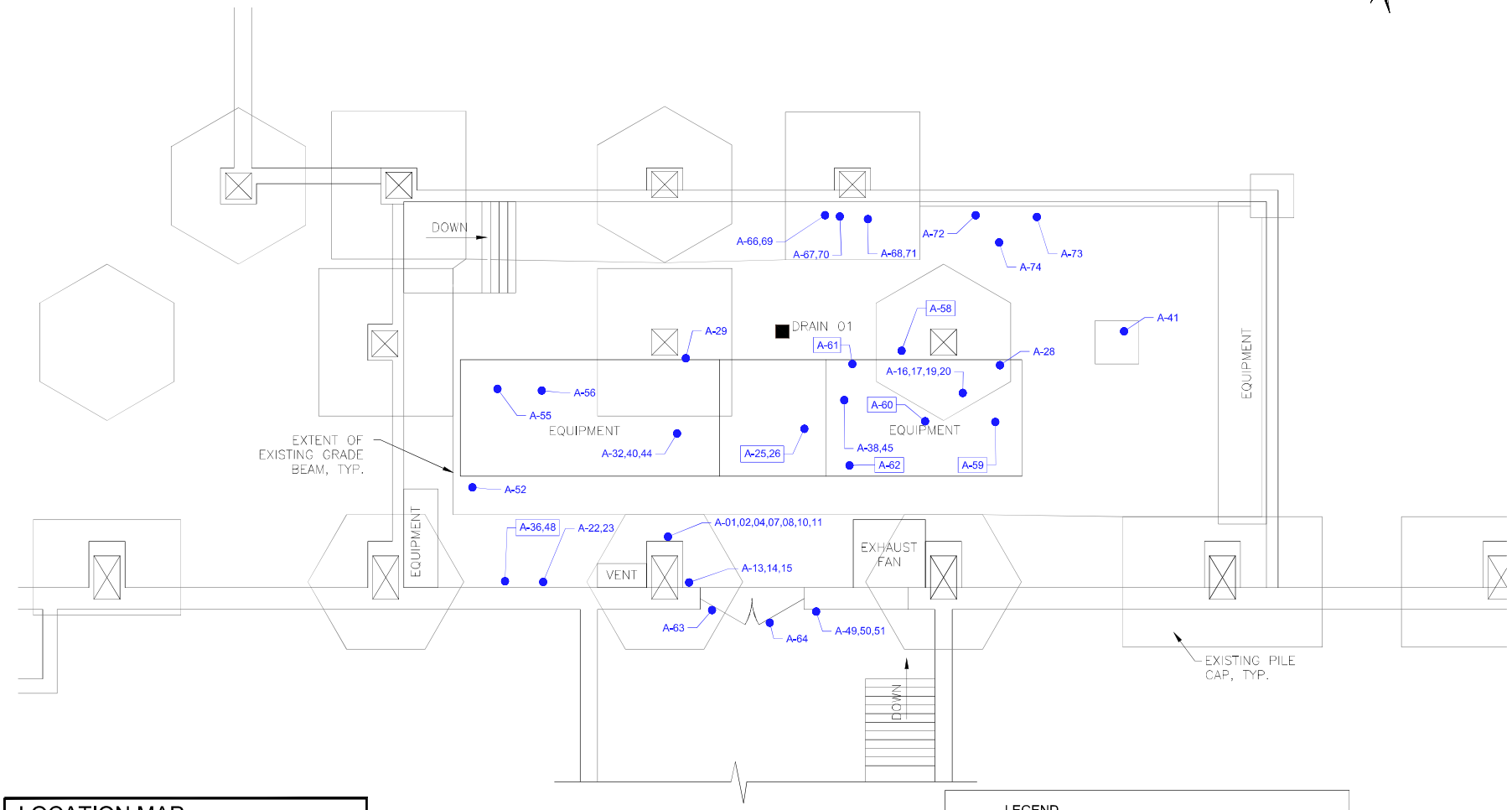
HW: Hazardous Waste

Nonhazardous Regulated - Chemicals and or materials that are regulated by EPA and or DOT

Non-haz. - Non-hazardous as it is expected that the fire extinguishers will be returned to their manufacturers.

HW - PCB: Hazardous Waste; assumed PCBs >50 parts per million (ppm). PCBs can be found in potting material or capacitor oil.

FIGURES



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- A-XX ACM Sample Location
- A-XX ACM Sample Location Positive for ACM

NOTES:
All locations are approximate.

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ALBANY, NY 12208

Project Title:
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TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

ACM SAMPLE LOCATIONS TRANSFORMER ROOM 1

Phase: 100% SUBMISSION

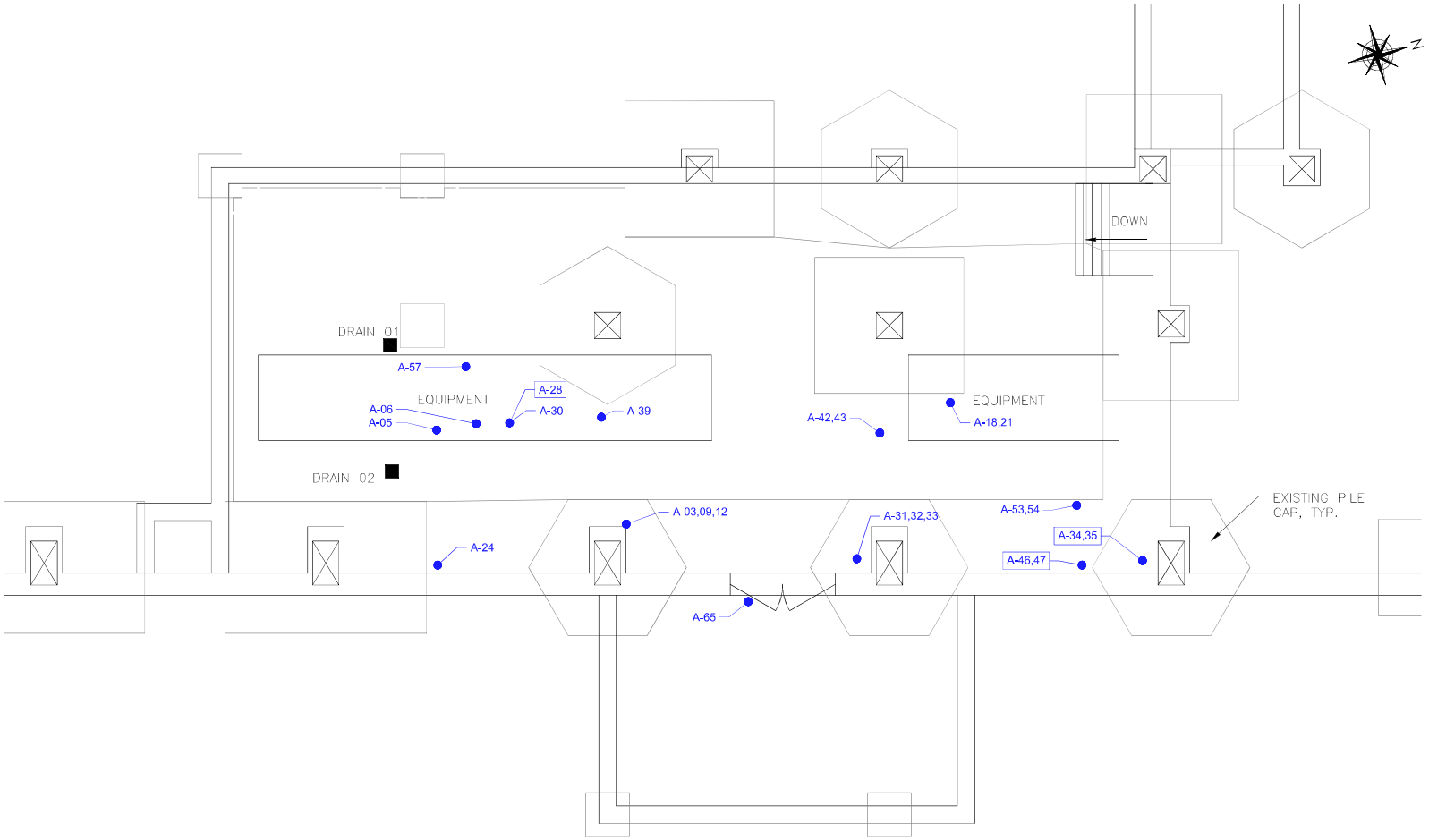
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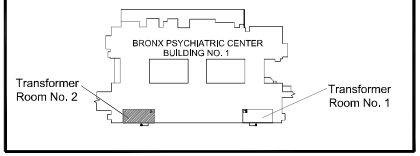
FIGURE 1

Drawing 1 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

LEGEND

- Structural Column
- Former Drain
- A-XX ACM Sample Location
- A-XX ACM Sample Location Positive for ACM

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

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1500 WATER PLACE
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ACM SAMPLE LOCATIONS TRANSFORMER ROOM 2

Phase: 100% SUBMISSION

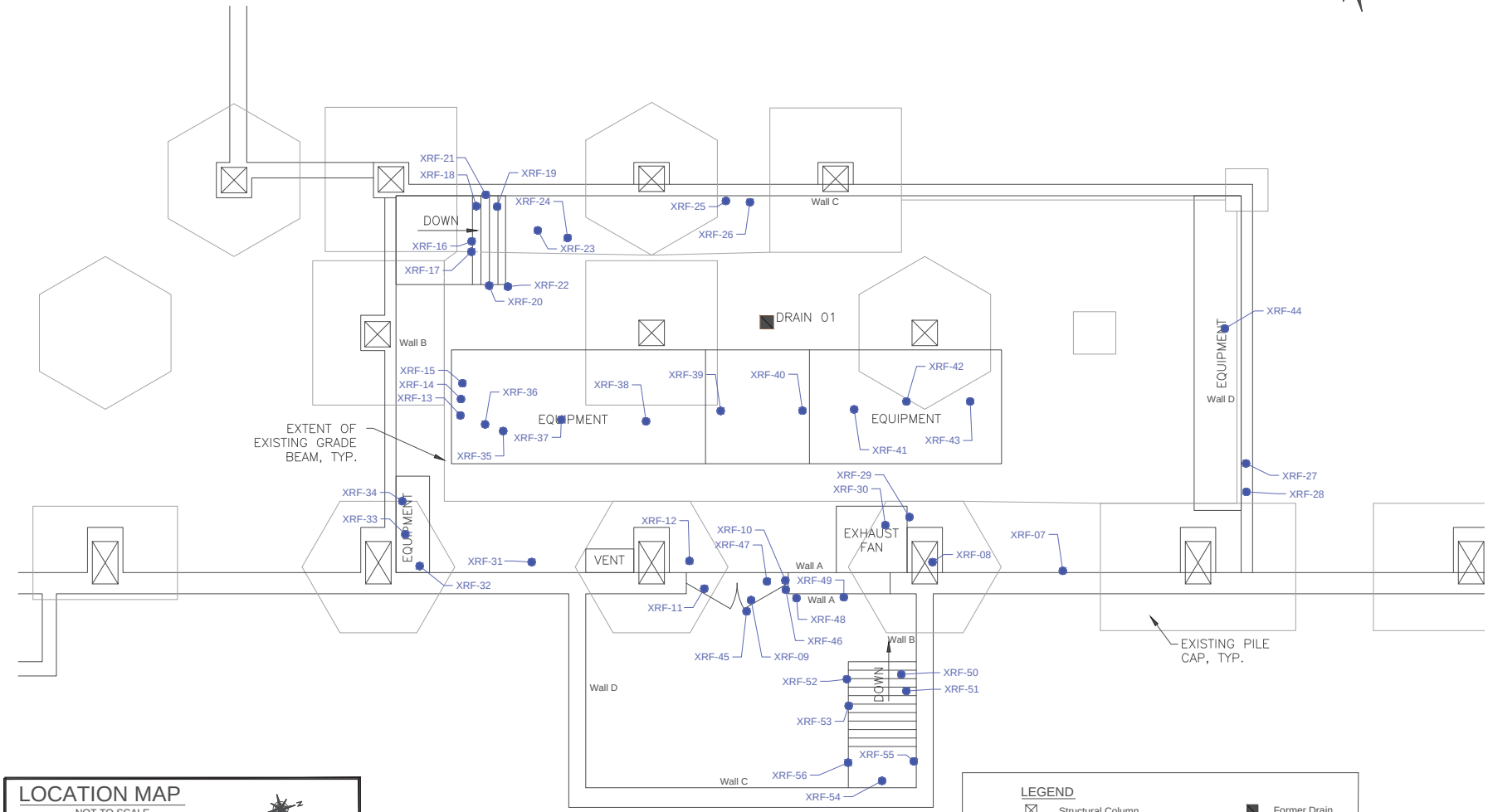
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FIGURE 2

Drawing 2 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- XRF-XX XRF Sample Location

NOTES:
All locations are approximate.

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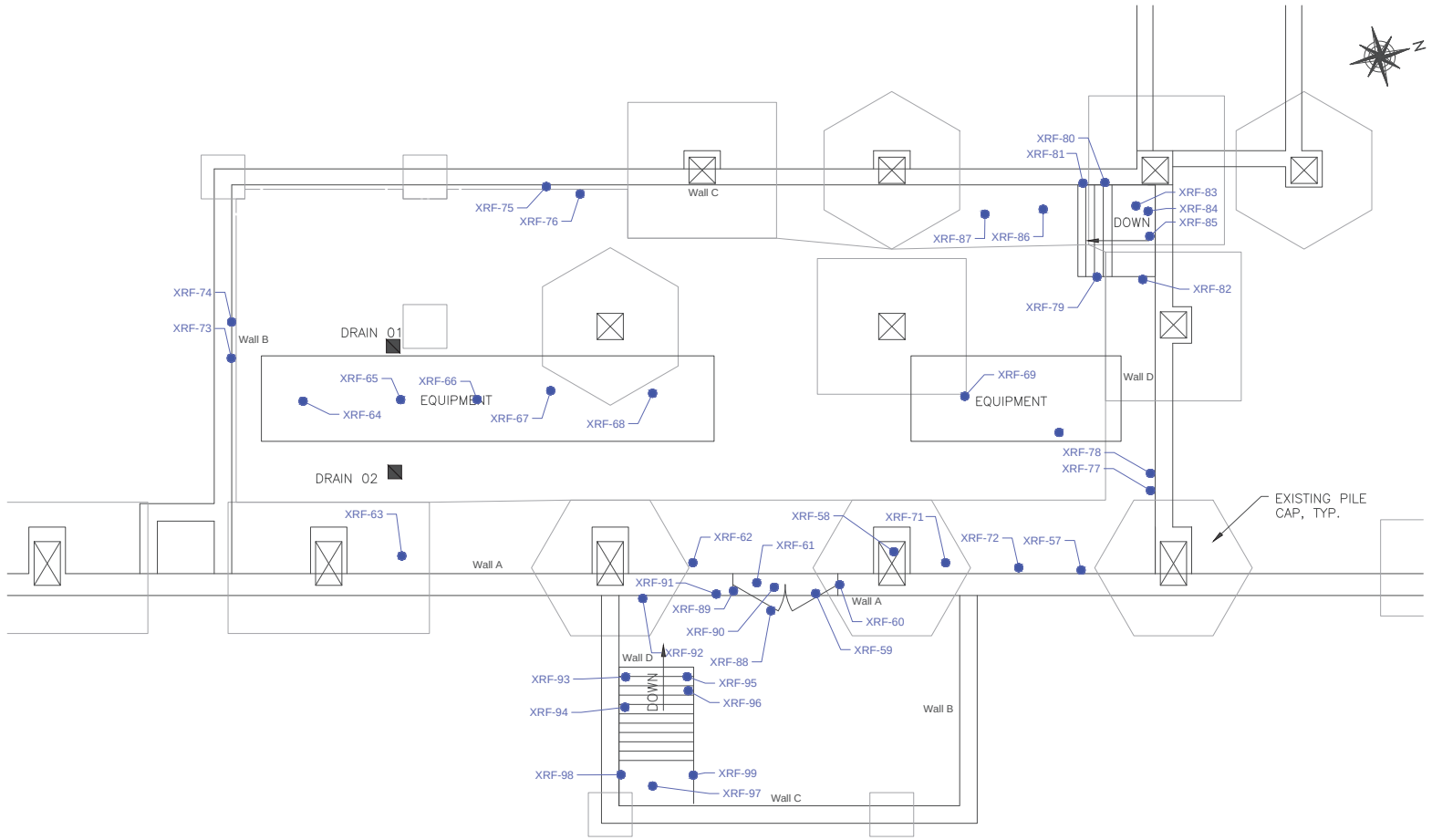
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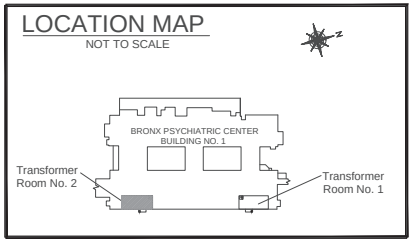
XRF SAMPLE LOCATIONS
TRANSFORMER ROOM 1

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FIGURE 3
Drawing 3 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

LEGEND

- Structural Column
- Former Drain
- XRF-XX XRF Sample Location

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

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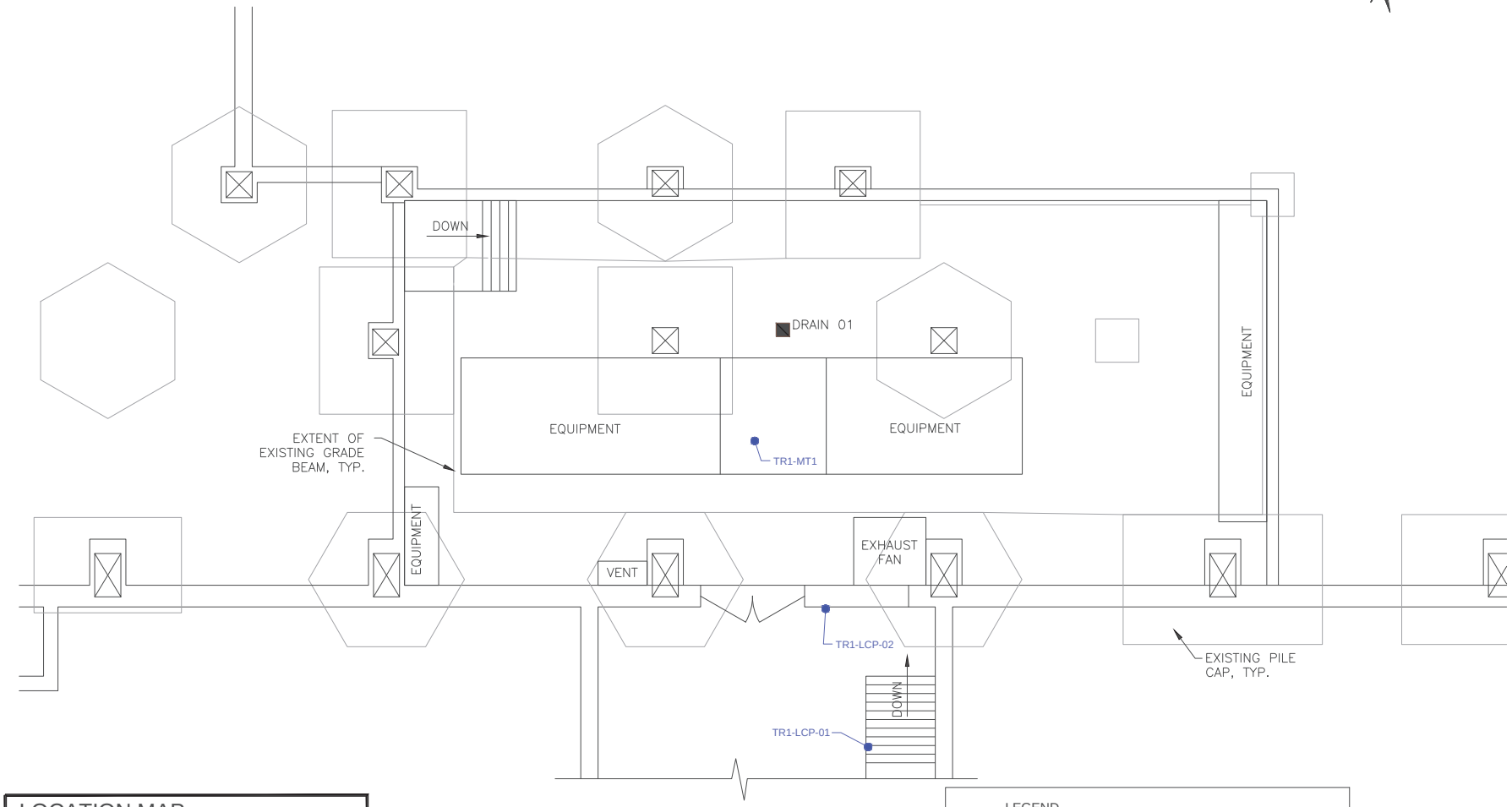
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XRF SAMPLE LOCATIONS
TRANSFORMER ROOM 2

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FIGURE 4
Drawing 4 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- TR1-LCP-XX Lead Paint Sample Location
- TR1-MT1 TCLP RCRA Metals Sample Location

NOTES:
All locations are approximate.

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LEAD PAINT AND TCLP RCRA METALS SAMPLE LOCATIONS
TRANSFORMER ROOM 1

Phase: 100% SUBMISSION

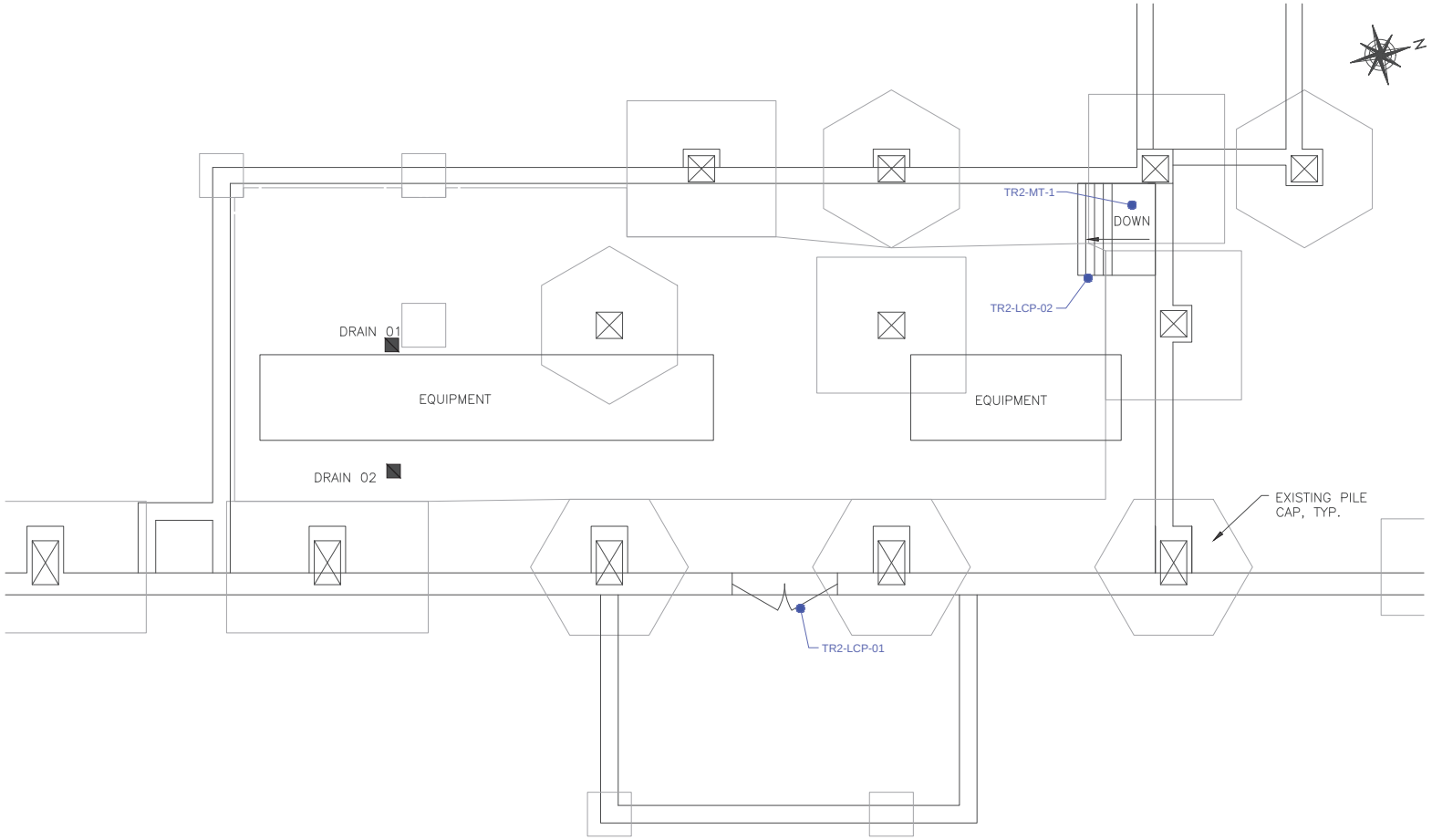
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FIGURE 5

Drawing 5 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

LEGEND

- Structural Column
- Former Drain
- TR2-LCP-XX Lead Paint Sample Location
- TR2-MT1 TCLP RCRA Metals Sample Location

NOTES:
All locations are approximate.

BASE MAP SOURCE:
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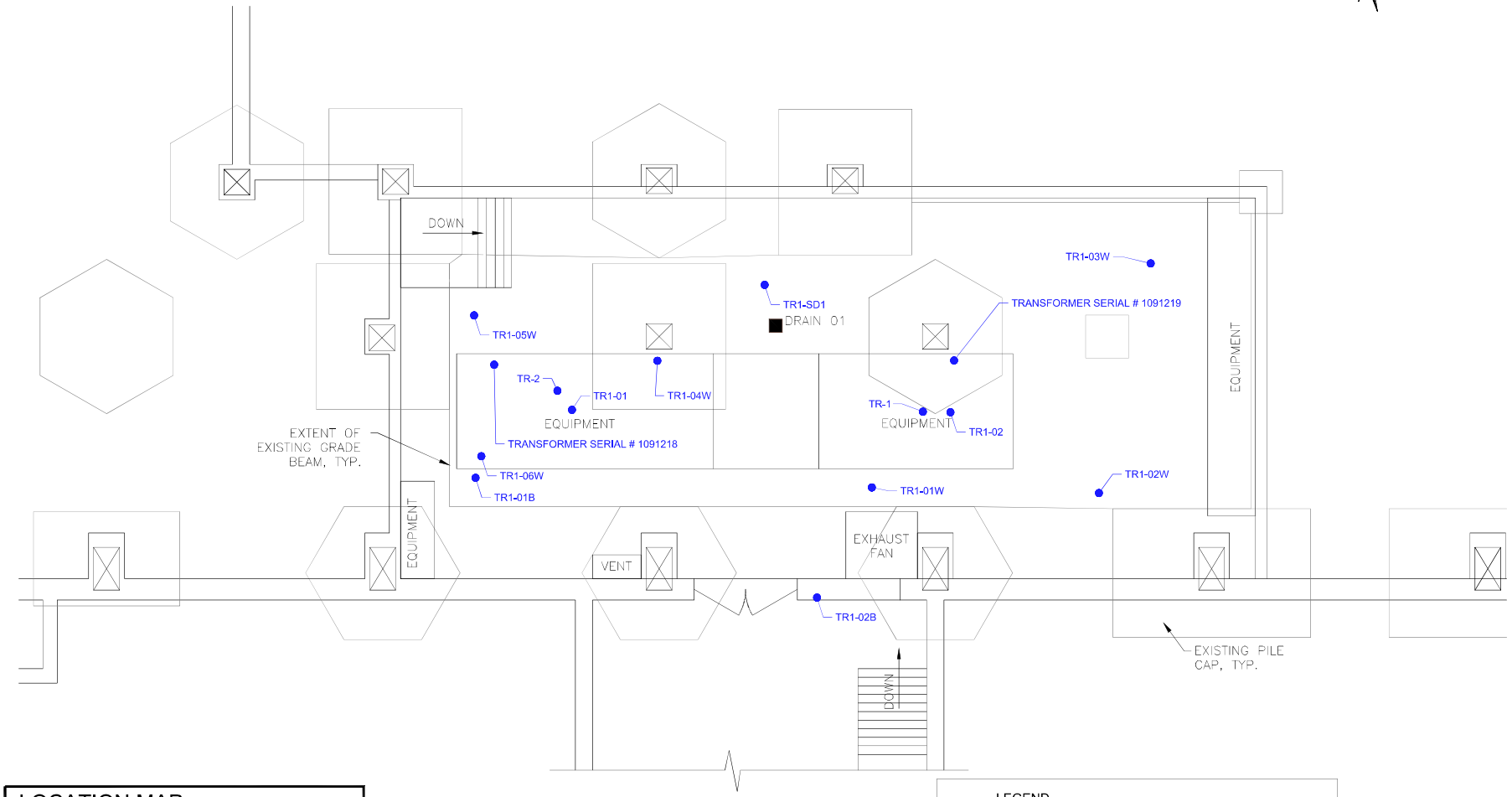
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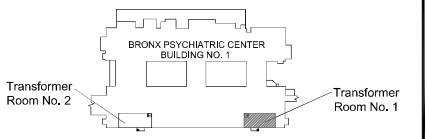
LEAD PAINT AND TCLP RCRA METALS SAMPLE LOCATIONS
TRANSFORMER ROOM 2

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FIGURE 6
Drawing 6 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- TR1-SD1 PCB Sediment Sample Location
- TR1-0X Transformer Liquid (PCB) Sample Location
- TR-X Duplicate Transformer Liquid (PCB) Sample Location
- TR1-0XW PCB Wipe Sample Location
- TR1-0XB PCB Bulk Sample Location

NOTES:
All locations are approximate.

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PCB SEDIMENT, PCB TRANSFORMER LIQUID AND PCB WIPE SAMPLE LOCATIONS TRANSFORMER ROOM 1

Phase: 100% SUBMISSION

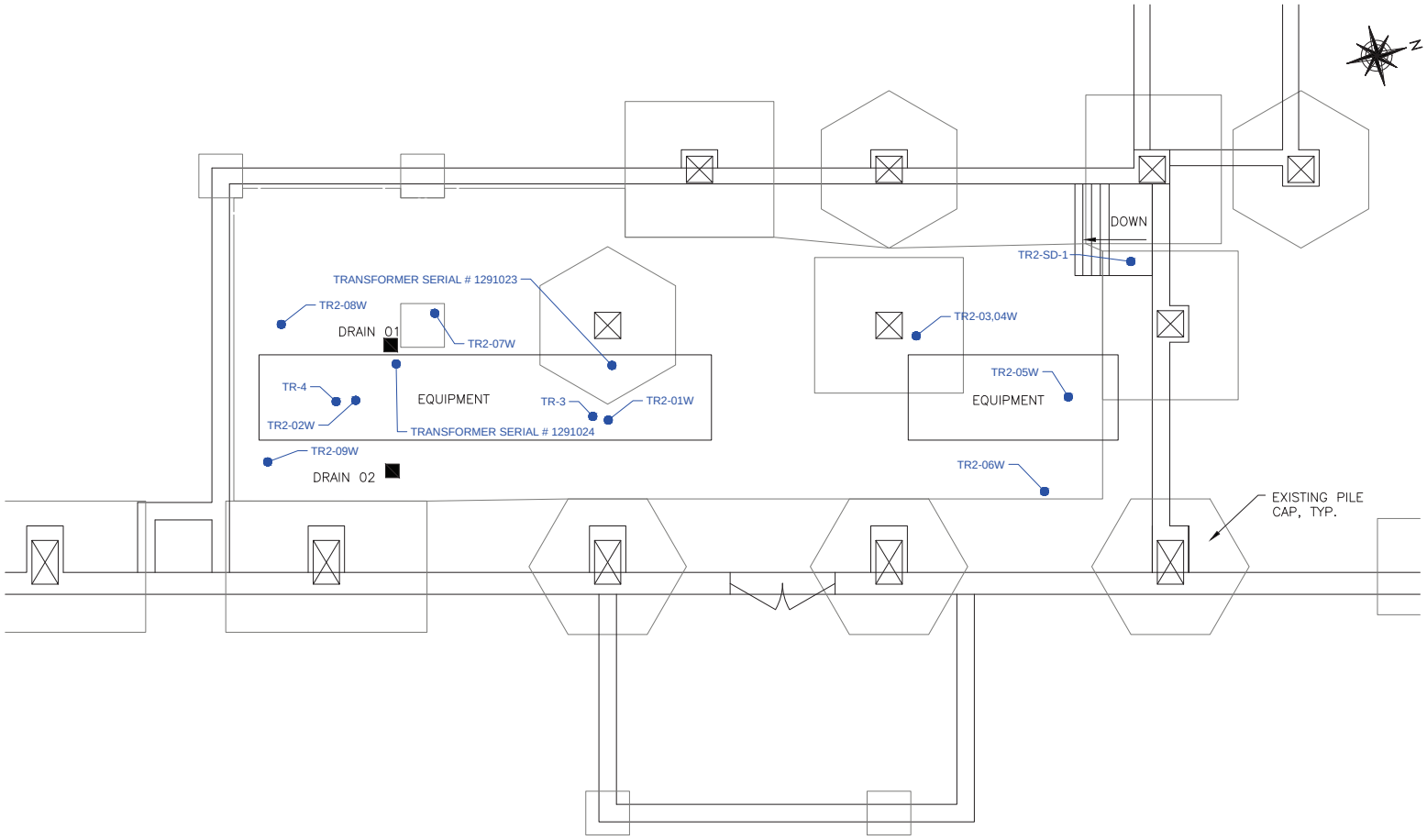
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FIGURE 7

Drawing 7 of 8



LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

LEGEND

- Structural Column
- Former Drain
- TR2-SD1 PCB Sediment Sample Location
- TR2-0XW PCB Wipe Sample Location
- TR-X Duplicate PCB Wipe Sample Location

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

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BRONX, NY

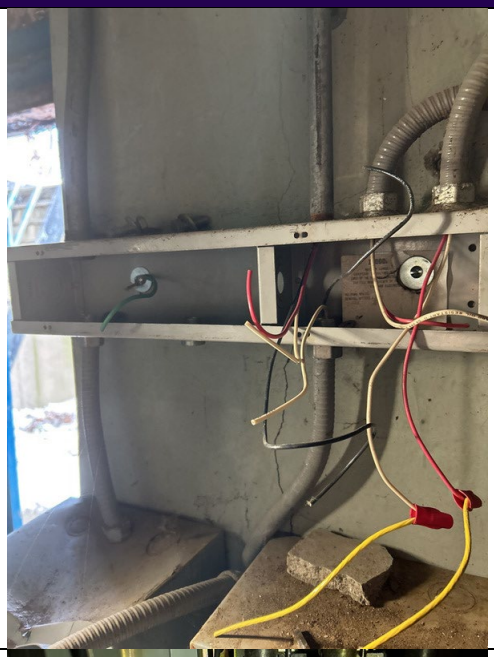
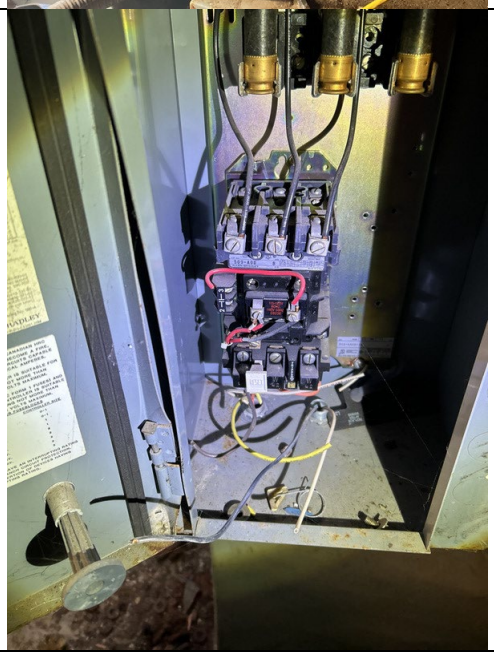
PCB SEDIMENT, PCB TRANSFORMER LIQUID AND PCB WIPE SAMPLE LOCATIONS TRANSFORMER ROOM 2

Phase: 100% SUBMISSION
Drawn By: FS
Checked By: AS
Date: 02/16/2026
Seal & Signature
DASNY Project No.: 3393409999
FIGURE 8
Drawing 8 of 8

APPENDIX A

PHOTOGRAPHS

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 1-3 **Material Description:** Wire Insulation **Material Color:** Red **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Rooms 1 & 2 **Total Approximate Quantity:** 40 LF **Condition:** Good **Material Type:** Misc	
Sample Numbers: 4-6 **Material Description:** Wire Insulation **Material Color:** Black **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Rooms 1 & 2 **Total Approximate Quantity:** 40 LF **Condition:** Good **Material Type:** Misc	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 7-9 **Material Description:** Wire Insulation **Material Color:** White **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Rooms 1 & 2 **Total Approximate Quantity:** 40 LF **Condition:** Good **Material Type:** Misc	
Sample Numbers: 10-12 **Material Description:** Wire Insulation **Material Color:** Yellow **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Rooms 1 & 2 **Total Approximate Quantity:** 40 LF **Condition:** Good **Material Type:** Misc	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 13-15
Material Description: Wire Insulation at Light Switch
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 20 LF
Condition: Good
Material Type: Misc



Sample Numbers: 16-18
Material Description: Wire Insulation on Ceiling
Material Color: White
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 40 LF
Condition: Good
Material Type: Misc

Sample Numbers: 19-21
Material Description: Wire Insulation on Ceiling
Material Color: Blue
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 40 SF
Condition: Good
Material Type: Misc



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

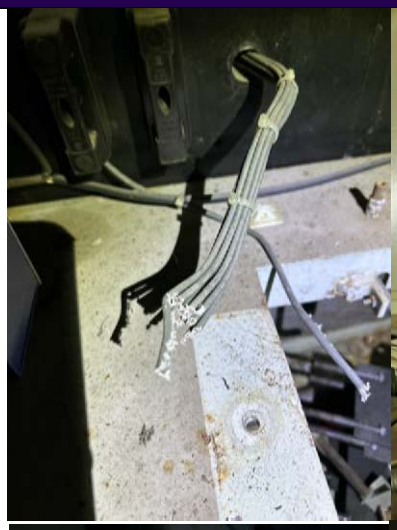
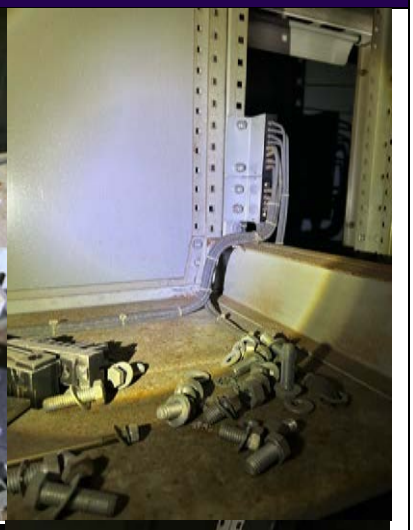
Sample Numbers: 22-24
Material Description: Wire Insulation in Circuit Panel
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 10 LF
Condition: Good
Material Type: Misc



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 25-27
Material Description: Wire Insulation in Cabinets
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 10% Chrysotile
Homogeneous Area: *Transformer Rooms 1 & 2 Electric Cabinet Between Two (2) Transformers*
Total Approximate Quantity: 259 LF
Condition: Good
Material Type: Misc
NESHAP Category: RACM



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

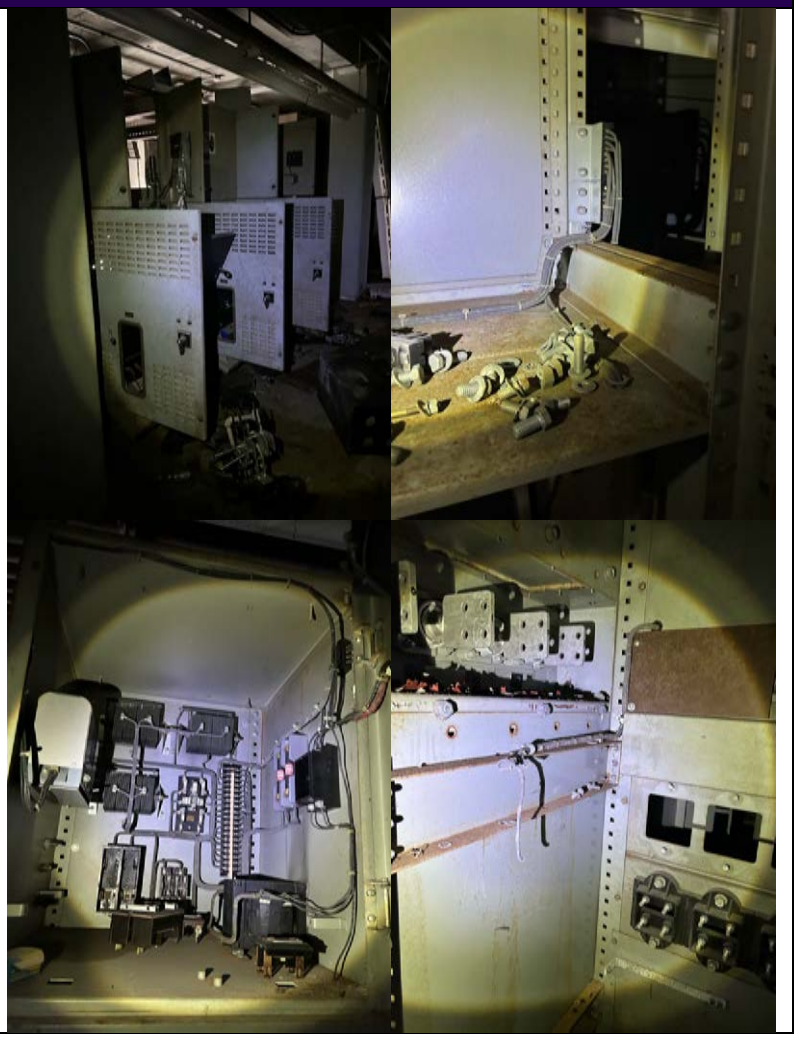
Sample Numbers: 25-27
Material Description: Wire Insulation in Cabinets
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 10% Chrysotile
Homogeneous Area: *Transformer Rooms 1 & 2*
Electric Cabinet Between Two (2) Transformers
Total Approximate Quantity: 259 LF
Condition: Good
Material Type: Misc
NESHAP Category: RACM



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1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 25-27
Material Description: Wire Insulation in Cabinets
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 10% Chrysotile
Homogeneous Area: *Transformer Rooms 1 & 2*
Electric Cabinet Between Two (2) Transformers
Total Approximate Quantity: 259 LF
Condition: Good
Material Type: Misc
NESHAP Category: RACM



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 28-30 **Material Description:** Fibrous Board in Switch Panels **Material Color:** Red **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Rooms 1 & 2 **Total Approximate Quantity:** 240 SF **Condition:** Good **Material Type:** Misc.	
Sample Numbers: 31-33 **Material Description:** Wire Insulation in Light Switch **Material Color:** Blue **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 2 **Total Approximate Quantity:** 20 LF **Condition:** Good **Material Type:** Misc	

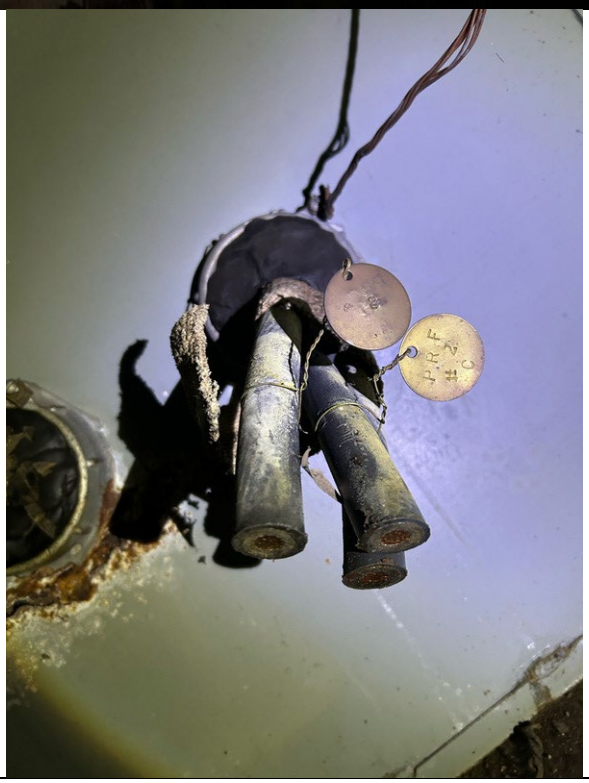
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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 34-36
Material Description: Wire Insulation (Heavy Gauge)
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 50% Chrysotile
Homogeneous Area: *Transformer Rooms 1 & 2*
Main Electric Service Panel
Total Approximate Quantity: 3 LF
Condition: Good
Material Type: Misc
NESHAP Category: RACM

Note: *Additional ACM Wire Insulation Assumed from Buried Electrical Conduit to Building from Manhole*

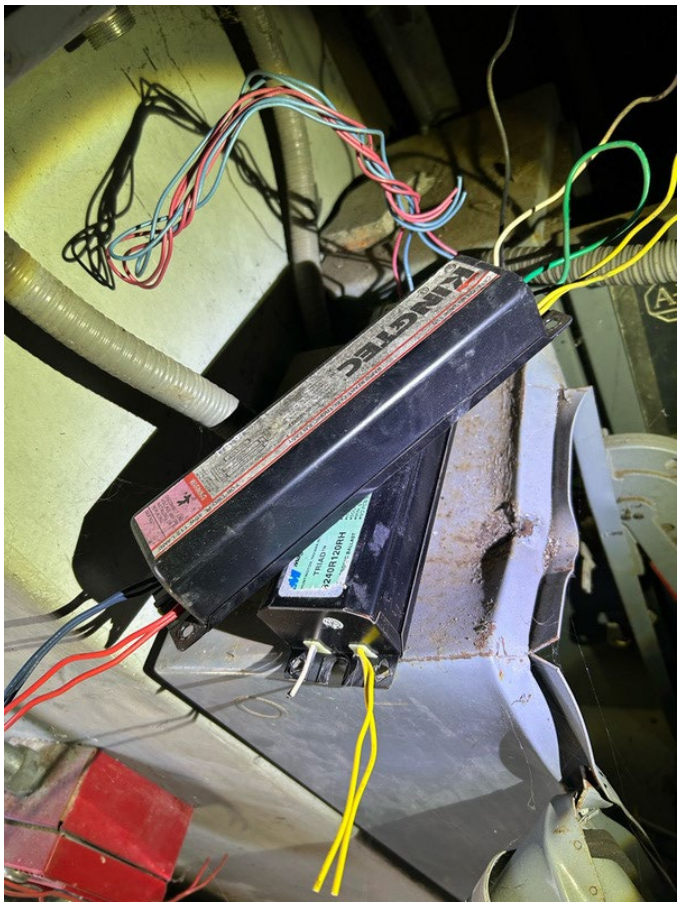




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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 37-39
Material Description: Wire Insulation to Light Fixtures
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 40 LF
Condition: Good
Material Type: Misc



Sample Numbers: 40-42
Material Description: Wire Insulation to Light Fixtures
Material Color: White
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 40 LF
Condition: Good
Material Type: Misc

Sample Numbers: 43-45
Material Description: Wire Insulation to Light Fixtures
Material Color: Yellow
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Total Approximate Quantity: 40 LF
Condition: Good
Material Type: Misc

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 46-48
Material Description: Thermal Sealant in Conduit
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 5.2% Chrysotile
Homogeneous Area: *Transformer Rooms 1 & 2 Main Electric Service Panel – Electrical Conduits*
Total Approximate Quantity: 2 SF
Condition: Good
Material Type: Misc
NESHAP Category: RACM

Note: *Additional ACM Thermal Sealant in Conduit Assumed from Buried Electrical Conduit to Building from Manhole*



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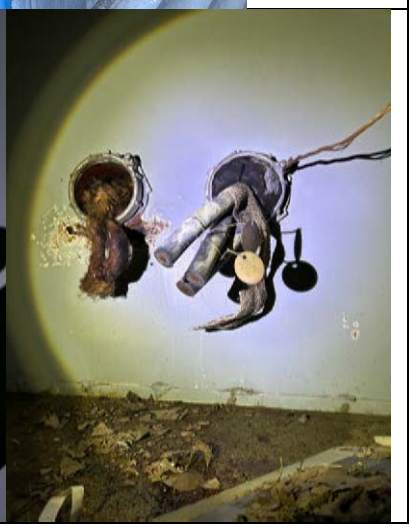
Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Asbestos Sampling Photographic Log

Sample Numbers: 49-51
Material Description: Caulk On Louvre Vent
Material Color: Grey
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Room 1
Total Approximate Quantity: 5 SF
Condition: Good
Material Type: Misc.



Sample Numbers: 52-54
Material Description: Yellow Horsehair Insulation
Material Color: Yellow
Accessible Material: Accessible
Asbestos Detected: Negative
Asbestos Type: No Asbestos Detected
Homogeneous Area: Transformer Rooms 1 & 2
Present Behind Black Sealant (Main Service Panel)
Total Approximate Quantity: 5 SF
Condition: Good
Material Type: Misc.





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Sample Numbers: N/A **Material Description:** Styrofoam Door Insulation **Material Color:** White **Accessible Material:** Non-Suspect **Asbestos Detected:** Non-Suspect **Asbestos Type:** Non-Suspect **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 4 Each	
Sample Numbers: 55,56,57 **Material Description:** Electrical Panel **Material Color:** Red **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 85 SF **Condition:** Good **Material Type:** Misc.	

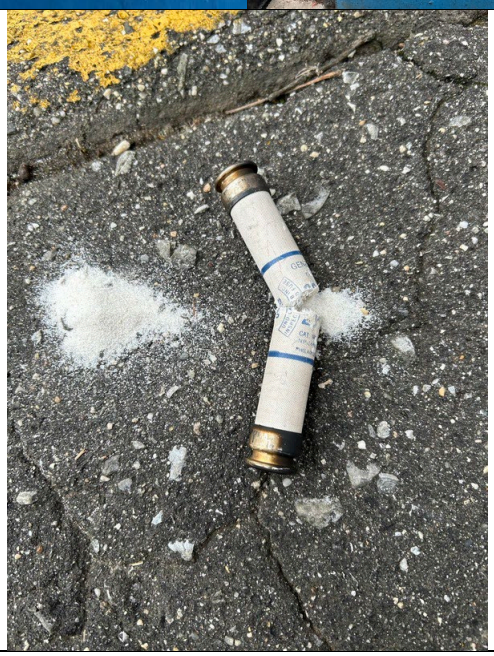
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Sample Numbers: 58,59,60,61,62
Material Description: Electrical Panel
Material Color: Black
Accessible Material: Accessible
Asbestos Detected: Positive
Asbestos Type: 1.1% Chrysotile
Homogeneous Area: Transformer Room 1 & 2
Total Approximate Quantity: 160 SF
Condition: Good/Friable
Material Type: Misc.
NESHAP Category: RACM





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Sample Numbers: 63,64,65 **Material Description:** Glue on Metal Door Lining on Styrofoam **Material Color:** Green **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 168 SF **Condition:** Good **Material Type:** Misc.	 
Sample Numbers: 66,67,68 **Material Description:** Fuse Filler Material **Material Color:** Grey **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 4 SF **Condition:** Good **Material Type:** Misc.	

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Sample Numbers: 69,70,71 **Material Description:** Fuse Core Material **Material Color:** Grey **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 4 SF **Condition:** Good **Material Type:** Misc.	
Sample Numbers: 72,73,74 **Material Description:** Electrical Panel **Material Color:** Brown **Accessible Material:** Accessible **Asbestos Detected:** Negative **Asbestos Type:** No Asbestos Detected **Homogeneous Area:** Transformer Room 1 & 2 **Total Approximate Quantity:** 40 SF **Condition:** Good **Material Type:** Misc.	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Lead Paint Sampling Photographic Log

Sample Numbers: TR1-LCP-01 **Sample Location:** Post **Description:** Black **Laboratory Result** 19,400 mg/kg (1.94% by Weight) **Substrate:** Metal **Paint Locations:** Exterior Stairway Landing Area at Transformer Room Entrance	
Sample Numbers: TR1-LCP-02 **Sample Location:** Door Buck **Description:** Blue **Laboratory Result** 29,000 mg/kg (2.90% by Weight) **Substrate:** Metal **Paint Locations:** Exterior Transformer Room Entrance	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Lead Paint Sampling Photographic Log

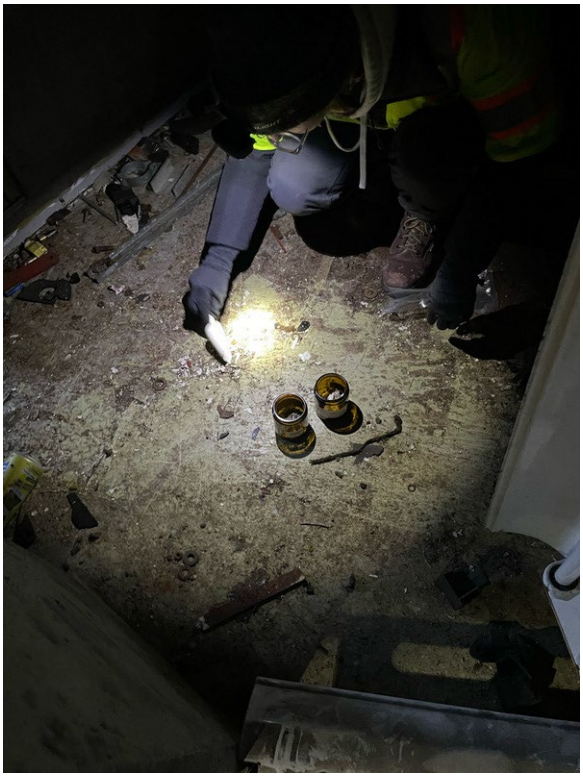
Sample Numbers: TR2-LCP-01 **Sample Location:** Door **Description:** Blue **Laboratory Result** 401 mg/kg (0.0401% by Weight) **Substrate:** Metal **Paint Locations:** Exterior Transformer Room Entrance	
Sample Numbers: TR2-LCP-02 **Sample Location:** Handrail **Description:** Brown **Laboratory Result** 90,600 mg/kg (9.06% by Weight) **Substrate:** Metal **Paint Locations:** Exterior Stairway at Transformer Room Entrance	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
TCLP RCRA Metals Photographic Log

Sample Number: TR1-MT1
Description: Sediment
Percentage: Dust & Debris
Transformer Room 1 - Floor Area
Notes: The maximum concrete slab area to be removed is estimated to be 850 square feet in Transformer Room 1

Metal	Reporting Limit (mg/Kg)	Method Detection Limit (mg/Kg)	Total Metal (mg/kg)	TCLP (mg/L) Leachate
Arsenic	7.66	3.31	7.60 J	
Arsenic	1.0	0.019		ND < 0.019
Barium	7.66	0.812	**483**	
Barium	0.5	0.021		0.528
Cadmium	7.66	0.421	**1,160**	
Cadmium	0.1	0.01		**7.36**
Chromium	7.66	6.49	**54.0**	
Chromium	0.2	0.021		ND < 0.021
Lead	38.3	1.82	**4,840**	
Lead	0.5	0.027		0.707
Mercury	0.065	0.042	0.178	
Mercury	0.001	0.0005		ND < 0.0005
Selenium	15.3	2.52	ND < 2.52	
Selenium	0.5	0.035		ND < 0.035
Silver	3.83	2.28	**6.54**	
Silver	0.1	0.028		ND < 0.028

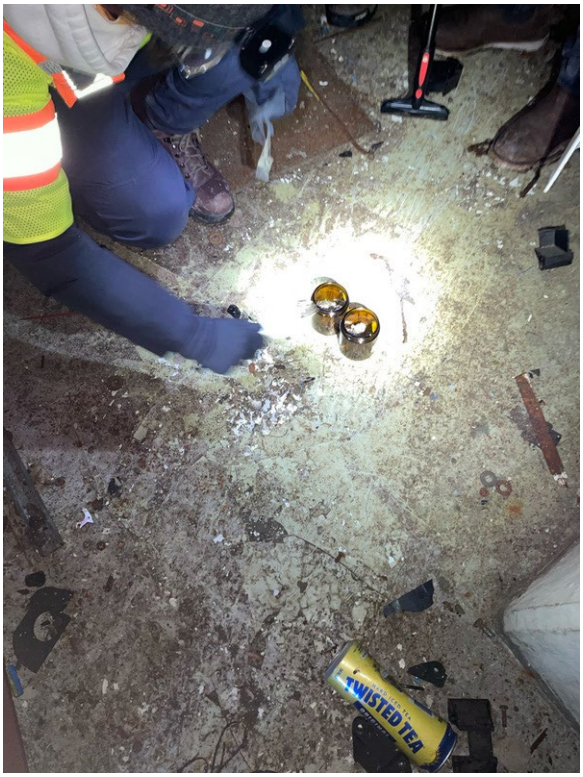


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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
TCLP RCRA Metals Photographic Log

Sample Number: TR2-MT1
Description: Sediment
Percentage: Dust & Debris
Transformer Room 2 - Floor Area
Notes: The maximum concrete slab area to be removed is estimated to be 875 square feet in Transformer Room 2

Metal	Reporting Limit (mg/Kg)	Method Detection Limit (mg/Kg)	Total Metal (mg/kg)	TCLP (mg/L) Leachate
Arsenic	19.6	8.46	ND < 8.46	
Arsenic	1.0	0.019		ND < 0.019
Barium	19.6	2.08	187	
Barium	0.5	0.021		0.171 J
Cadmium	19.6	1.08	**91.5**	
Cadmium	0.1	0.01		**1.28**
Chromium	19.6	16.6	**103**	
Chromium	0.2	0.021		ND < 0.021
Lead	98.0	4.66	**25,900**	
Lead	0.5	0.027		**15.0**
Mercury	0.069	0.045	**0.19**	
Mercury	0.001	0.0005		ND < 0.0005
Selenium	39.2	6.44	ND < 6.44	
Selenium	0.5	0.035		0.0592
Silver	9.80	5.84	**7.54 J**	
Silver	0.1	0.028		ND < 0.028



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-01
Accessible Material: Yes
Material Description: Di-electric Oil Liquid Silicone
Substrate Adjacent to Material: Metal
Reporting Limit: 0.73 mg/kg
Method Detection Limit: 0.324 mg/Kg
Total PCBs: ND < 0.324 mg/kg

Transformer Room 1
Transformer Serial Number 1091218



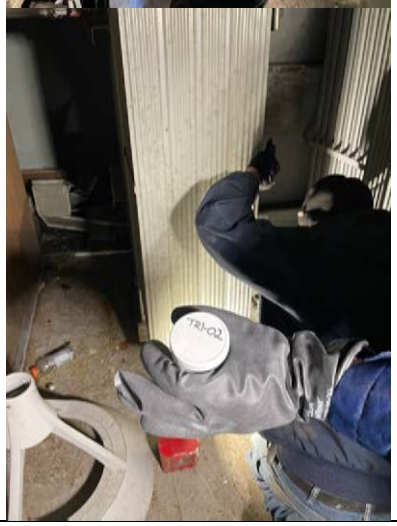
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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-02
Accessible Material: Yes
Material Description: Di-electric Oil Liquid Silicone
Reporting Limit: 0.709 mg/kg
Method Detection Limit: 0.315 mg/Kg
Total PCBs: ND < 0.315 mg/kg

Transformer Room 1
Transformer Serial Number 1091219





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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-01W
Accessible Material: Yes
Material Description: Di-Electric Oil Wipe Sample
Substrate Adjacent to Material: Metal
Method Detection Limit: 0.044 µg
Reporting Limit: 0.5 µg
Total PCBs: 0.844 µg/100cm^2

Transformer Room 2
Transformer Serial Number 1291023



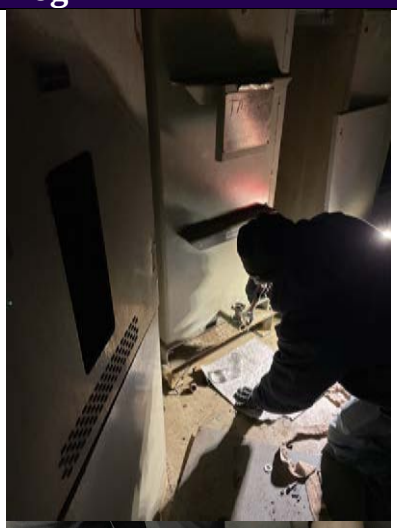


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Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-02W
Accessible Material: Yes
Material Description: Di-Electric Oil Wipe Sample
Substrate Adjacent to Material: Metal
Method Detection Limit: 0.044 µg
Reporting Limit: 0.5 µg
Total PCBs: ND <0.044 µg/100cm^2

Transformer Room 2
Transformer Serial Number 1291024





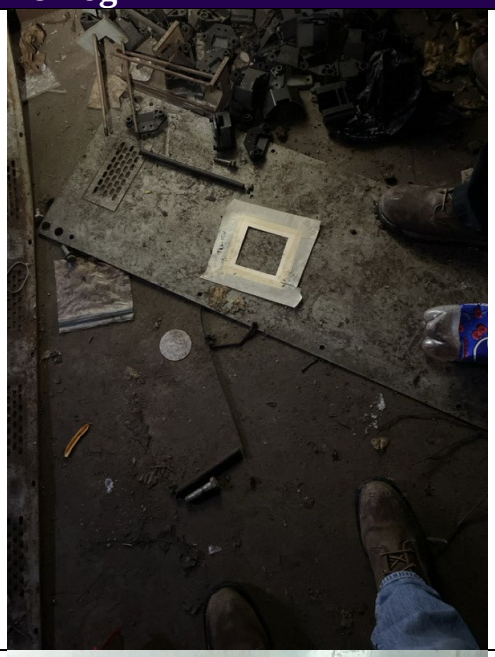
Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
Property Address	1500 Waters Place Bronx New York 10461	**Address**	1407 Broadway Suite 3301 New York NY 10018
Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-03W **Accessible Material:** Yes **Material Description:** Electric Cabinet **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.407 µg/100cm^2 **Transformer Room 2**	
Sample Number: TR2-04W **Accessible Material:** Yes **Material Description:** Electric Cabinet **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.451 µg/100cm^2 **Transformer Room 2** **(Duplicate Sample Location)**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-05W **Accessible Material:** Yes **Material Description:** Scrap Metal on the Floor **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 9.88 µg/100cm^2 **Transformer Room 2**	
Sample Number: TR2-06W **Accessible Material:** Yes **Material Description:** Metal Panel Leaning on Wall **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.718 µg/100cm^2 **Transformer Room 2**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-07W **Accessible Material:** Yes **Material Description:** Metal Plate on Floor **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 4.34 µg/100cm^2 **Transformer Room 2**	
Sample Number: TR2-08W **Accessible Material:** Yes **Material Description:** Metal Cabinet **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.128 µg/100cm^2 **Transformer Room 2**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-09W **Accessible Material:** Yes **Material Description:** Scrap Metal on the Floor **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.222 µg **Reporting Limit:** 2.5 µg **Total PCBs: 18.8 µg/100cm^2** **Transformer Room 2**	
Sample Number: TR1-01W **Accessible Material:** Yes **Material Description:** Electrical Panel **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.375 µg/100cm^2 **Transformer Room 1**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-02W **Accessible Material:** Yes **Material Description:** Steel Panel on the Floor **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.222 µg **Reporting Limit:** 2.5 µg **Total PCBs: 24.9** µg/100cm^2 **Transformer Room 1**	
Sample Number: TR1-03W **Accessible Material:** Yes **Material Description:** Electrical Panel **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.469 µg/100cm^2 **Transformer Room 1**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-04W **Accessible Material:** Yes **Material Interior or Interior:** Interior **Material Description:** Steel Panel on the Floor **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 3.33 µg/100cm^2 **Transformer Room 1**	
Sample Number: TR1-05W **Accessible Material:** Yes **Material Description:** Steel Panel **Substrate Adjacent to Material:** Metal **Method Detection Limit:** 0.044 µg **Reporting Limit:** 0.5 µg **Total PCBs:** 0.305 µg/100cm^2 **Transformer Room 1**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-06W
Accessible Material: Yes
Material Description: Steel Panel on the Floor
Substrate Adjacent to Material: Metal
Method Detection Limit: 0.044 µg
Reporting Limit: 0.5 µg
Total PCBs: 10.6 µg/100cm^2

Transformer Room 1



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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-Caulk-01
Accessible Material: Yes
Material Description: Grey Caulking on Louvre Vent
Substrate Adjacent to Material: Metal
Reporting Limit: 0.260 mg/Kg
Total PCBs: 11.0 mg/Kg

Transformer Room 1





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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR2-Sealant-01
Accessible Material: Yes
Material Description: Black Sealant at Main Electric Service Panels*
Substrate Adjacent to Material: Metal
Reporting Limit: 2.36 mg/Kg
Total PCBs: 61.1 mg/Kg

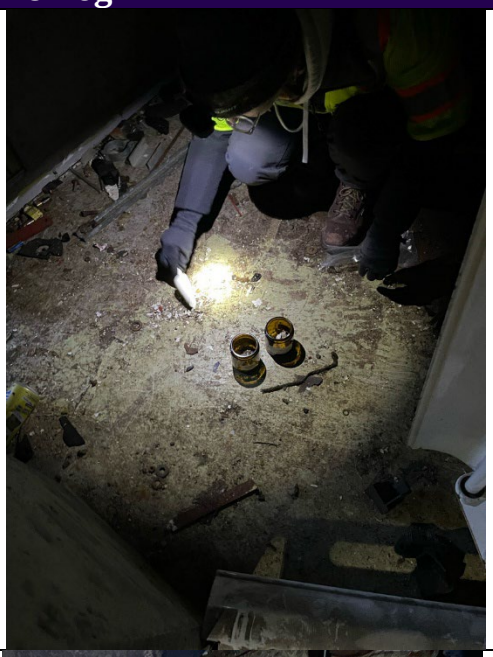
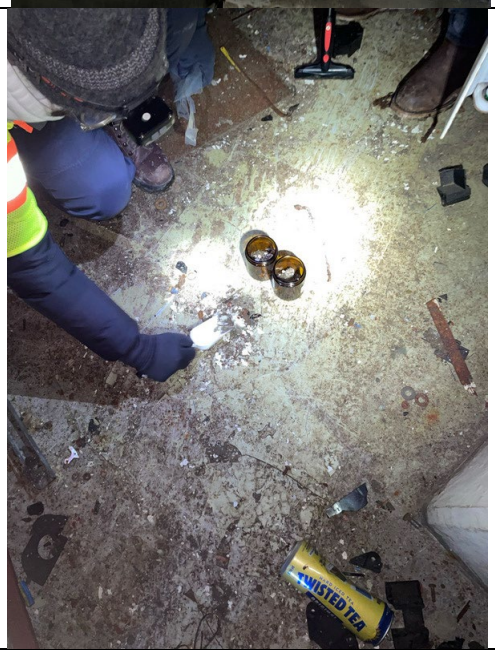
Transformer Rooms 1 & 2

***Asbestos Containing Material



Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
PCB Sampling Photographic Log

Sample Number: TR1-SD1 **Accessible Material:** Yes **Material Description:** Sediment **Substrate Adjacent to Material:** Concrete **Reporting Limit:** 4.92 mg/Kg **Total PCBs: 62.8 mg/Kg** **Transformer Room 1** **Floor Area**	
Sample Number: TR2-SD1 **Accessible Material:** Yes **Material Interior or Interior:** Interior **Material Description:** Sediment **Substrate Adjacent to Material:** Concrete **Reporting Limit:** 4.84 mg/Kg **Total PCBs:** 19.0 mg/Kg **Transformer Room 2** **Floor Area**	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Path & Entrance to Transformer Room 1	
Path & Entrance to Transformer Room 2	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 1 Non-PCB Transformer	
Transformer Room 2 Non-PCB Transformer	

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Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 1 - Fluorescent Lamps Fluorescent Light Fixtures	
Transformer Room 1 - Fluorescent Lamps Fluorescent Light Fixtures	

Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 1 - Fluorescent Lamps Missing Fluorescent Light Fixtures	
Transformer Room 1 - Fluorescent Lamps Damaged Fluorescent Light Fixtures	

Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 1 – Ballast (Labeled No- PCBs)	
Transformer Room 1 – Ballast (Labeled No- PCBs)	

Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 2 - Fluorescent Lamps Fluorescent Light Fixtures	 
Transformer Room 2 - Fluorescent Lamps Fluorescent Light Fixtures	

Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

Bronx Psychiatric Center
1500 Waters Place, Bronx, NY
Transformer Rooms 1 & 2
Hazardous Materials Inventory Photographic Log

Transformer Room 2 - Fluorescent Lamps Damaged Fluorescent Light Fixtures	

Property Name	Bronx Psychiatric Center	**TRC Office**	New York City
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Client	DASNY - OMH	**Project Number**	411323.0000.0000 Phase 23

APPENDIX B

LABORATORY RESULTS AND CHAINS-OF-CUSTODY RECORDS

Atlas Environmental Lab, Corp.
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New York, NY 10018
Phone:(212) 563-0400 Fax:(212) 563-0401
www.atlasenvironmentallab.com

Bulk Asbestos Report by PLM-TEM

Client: TRC
Collected by: Client
Project Name/No.: DASNY OMH ACM - 1500 Waters Place / 411323.0000.0000 Phase 23
Project Address: 1500 Waters Place, Bronx, New York 10461
Work Area: Transformer Rooms 1 and 2 Bronx Psychiatric Center

Lab ID: BK0226089.REV
Date Received: *
PLM Date Analyzed: *
TEM Date Analyzed: *
Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
01	BK0226089-1	Wire Insulation, Red | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Red, Homogeneous, Non-Fibrous	86.7	1.5	11.8	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
02	BK0226089-2	Wire Insulation, Red | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Red, Homogeneous, Non-Fibrous	87.1	2.0	10.9	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
03	BK0226089-3	Wire Insulation, Red | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Red, Homogeneous, Non-Fibrous	86.3	6.0	7.6	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
04	BK0226089-4	Wire Insulation, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Black, Homogeneous, Non-Fibrous	95.6	3.5	0.9	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
05	BK0226089-5	Wire Insulation, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Black, Homogeneous, Non-Fibrous	94.5	1.8	3.7	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
06	BK0226089-6	Wire Insulation, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	Black, Homogeneous, Non-Fibrous	88.5	5.9	5.5	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
07	BK0226089-7	Wire Insulation, White | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	White, Homogeneous, Non-Fibrous	83.5	1.8	14.7	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
08	BK0226089-8	Wire Insulation, White | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	White, Homogeneous, Non-Fibrous	86.2	6.3	7.4	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
09	BK0226089-9	Wire Insulation, White | Transformer Room 1, Transformer Room 2 | Transformer Room Fuse Box	White, Homogeneous, Non-Fibrous	84.5	1.8	13.7	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
10	BK0226089-10	Wire Insulation, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Rom Fuse Box	Yellow, Homogeneous, Non-Fibrous	88.7	6.3	5.0	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**

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Bulk Asbestos Report by PLM-TEM

Client: TRC
Collected by: Client
Project Name/No.: DASNY OMH ACM - 1500 Waters Place / 411323.0000.0000 Phase 23
Project Address: 1500 Waters Place, Bronx, New York 10461
Work Area: Transformer Rooms 1 and 2 Bronx Psychiatric Center

Lab ID: BK0226089.REV
Date Received: *
PLM Date Analyzed: *
TEM Date Analyzed: *
Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
11	BK0226089-11	Wire Insulation, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Rom Fuse Box	Yellow, Homogeneous, Non-Fibrous	93.6	1.2	5.2	0%	100%	**NAD** Inconclusive	**NAD**		X	X
12	BK0226089-12	Wire Insulation, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Rom Fuse Box	Yellow, Homogeneous, Non-Fibrous	93.8	5.8	0.4	0%	100%	**NAD** Inconclusive	**NAD**		X	X
13	BK0226089-13	Fabric Wire Insulation On Light Switch, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Black, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
14	BK0226089-14	Fabric Wire Insulation On Light Switch, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Black, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
15	BK0226089-15	Fabric Wire Insulation On Light Switch, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Black, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
16	BK0226089-16	Wire Insulation on Wires Coming from Ceiling, White | Transformer Room 1, Transformer Room 2 |Transformer Room Light Switch Box	White, Homogeneous, Non-Fibrous	27.0	39.1	33.9	0%	100%	**NAD** Inconclusive	**NAD**		X	X
17	BK0226089-17	Wire Insulation on Wires Coming from Ceiling, White | Transformer Room 1, Transformer Room 2 |Transformer Room Light Switch Box	White, Homogeneous, Non-Fibrous	43.7	20.6	35.8	0%	100%	**NAD** Inconclusive	**NAD**		X	X
18	BK0226089-18	Wire Insulation on Wires Coming from Ceiling, White | Transformer Room 1, Transformer Room 2 |Transformer Room Light Switch Box	White, Homogeneous, Non-Fibrous	29.5	19.9	50.6	0%	100%	**NAD** Inconclusive	**NAD**		X	X
19	BK0226089-19	Wire Insulation on Wires Coming from Ceiling, Blue | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Non-Fibrous	28.3	26.6	45.1	0%	100%	**NAD** Inconclusive	**NAD**		X	X
20	BK0226089-20	Wire Insulation on Wires Coming from Ceiling, Blue | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Non-Fibrous	29.3	21.2	49.5	0%	100%	**NAD** Inconclusive	**NAD**		X	X

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Bulk Asbestos Report by PLM-TEM

Client: TRC
Collected by: Client
Project Name/No.: DASNY OMH ACM - 1500 Waters Place / 411323.0000.0000 Phase 23
Project Address: 1500 Waters Place, Bronx, New York 10461
Work Area: Transformer Rooms 1 and 2 Bronx Psychiatric Center

Lab ID: BK0226089.REV
Date Received: *
PLM Date Analyzed: *
TEM Date Analyzed: *
Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
21	BK0226089-21	Wire Insulation on Wires Coming from Ceiling, Blue | Transformer Room 1, Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Non-Fibrous	28.8	15.2	56.0	0%	100%	**NAD** Inconclusive	**NAD**		X	X
22	BK0226089-22	Fabric Texture Wire Insulation On Box, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Box	Black, Homogeneous, Friable	Not Applicable			60%CELL 30%FBGL	10%	**NAD**		X		
23	BK0226089-23	Fabric Texture Wire Insulation On Box, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Box	Black, Homogeneous, Friable	Not Applicable			60%CELL 30%FBGL	10%	**NAD**		X		
24	BK0226089-24	Fabric Texture Wire Insulation On Box, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Box	Black, Homogeneous, Friable	Not Applicable			60%CELL 30%FBGL	10%	**NAD**		X		
25	BK0226089-25	Fabric Wire Insulation To Circuit Board, Black | Transformer Room 1, Transformer Room 2 | Transformer Circuit Board	Black, Homogeneous, Friable	Not Applicable			60%CELL	30%	**10%CHRY**		X		
26	BK0226089-26	Fabric Wire Insulation To Circuit Board, Black | Transformer Room 1, Transformer Room 2 | Transformer Circuit Board	Black, Homogeneous, Friable	Not Applicable			60%CELL	30%	**10%CHRY**		X		
27	BK0226089-27	Fabric Wire Insulation To Circuit Board, Black | Transformer Room 1, Transformer Room 2 | Transformer Circuit Board	Black, Homogeneous, Friable	Not Applicable			60%CELL	30%	**10%CHRY**		X		
28	BK0226089-28	Fibrous Board In Transformers, Red | Transformer Room 1, Transformer Room 2 | In Transformers	Red, Homogeneous, Non-Fibrous	46.6	20.3	33.1	0%	100%	**NAD** Inconclusive	**NAD**		X	X
29	BK0226089-29	Fibrous Board In Transformers, Red | Transformer Room 1, Transformer Room 2 | In Transformers	Red, Homogeneous, Non-Fibrous	53.1	29.0	17.9	0%	100%	**NAD** Inconclusive	**NAD**		X	X
30	BK0226089-30	Fibrous Board In Transformers, Red | Transformer Room 1, Transformer Room 2 | In Transformers	Red, Homogeneous, Non-Fibrous	50.6	14.0	35.4	0%	100%	**NAD** Inconclusive	**NAD**		X	X

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Bulk Asbestos Report by PLM-TEM

Client: TRC
Collected by: Client
Project Name/No.: DASNY OMH ACM - 1500 Waters Place / 411323.0000.0000 Phase 23
Project Address: 1500 Waters Place, Bronx, New York 10461
Work Area: Transformer Rooms 1 and 2 Bronx Psychiatric Center

Lab ID: BK0226089.REV
Date Received: *
PLM Date Analyzed: *
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Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
31	BK0226089-31	Fabric Wire Insulation On Light Switch, Blue | Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
32	BK0226089-32	Fabric Wire Insulation On Light Switch, Blue | Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
33	BK0226089-33	Fabric Wire Insulation On Light Switch, Blue | Transformer Room 2 | Transformer Room Light Switch Box	Blue, Homogeneous, Friable	Not Applicable			90%FBGL	10%	**NAD**		X		
34	BK0226089-34	Thick Wire Insulation With Fabric Wrap, Black | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Beige, Homogeneous, Friable	Not Applicable			50%CELL	6%	**44%CHRY**		X		
35	BK0226089-35	Thick Wire Insulation With Fabric Wrap, Black | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Beige, Homogeneous, Friable	Not Applicable			40%CELL	10%	**50%CHRY**		X		
36	BK0226089-36	Thick Wire Insulation With Fabric Wrap, Black | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Beige, Homogeneous, Friable	Not Applicable			50%CELL	6%	**44%CHRY**		X		
37	BK0226089-37	Thin Wire Insulation On Light Fixtures, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Black, Homogeneous, Non-Fibrous	94.1	2.1	3.8	0%	100%	**NAD** Inconclusive	**NAD**		X	X
38	BK0226089-38	Thin Wire Insulation On Light Fixtures, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Black, Homogeneous, Non-Fibrous	85.3	10.5	4.2	0%	100%	**NAD** Inconclusive	**NAD**		X	X
39	BK0226089-39	Thin Wire Insulation On Light Fixtures, Black | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Black, Homogeneous, Non-Fibrous	93.7	3.8	2.5	0%	100%	**NAD** Inconclusive	**NAD**		X	X
40	BK0226089-40	Thin Wire Insulation On Light Fixtures, White | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	White, Homogeneous, Non-Fibrous	93.6	6.1	0.3	0%	100%	**NAD** Inconclusive	**NAD**		X	X

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Bulk Asbestos Report by PLM-TEM

Client: TRC
Collected by: Client
Project Name/No.: DASNY OMH ACM - 1500 Waters Place / 411323.0000.0000 Phase 23
Project Address: 1500 Waters Place, Bronx, New York 10461
Work Area: Transformer Rooms 1 and 2 Bronx Psychiatric Center

Lab ID: BK0226089.REV
Date Received: *
PLM Date Analyzed: *
TEM Date Analyzed: *
Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
41	BK0226089-41	Thin Wire Insulation On Light Fixtures, White | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	White, Homogeneous, Non-Fibrous	85.6	7.1	7.2	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
42	BK0226089-42	Thin Wire Insulation On Light Fixtures, White | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	White, Homogeneous, Non-Fibrous	93.4	4.8	1.7	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
43	BK0226089-43	Thin Wire Insulation On Light Fixtures, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Yellow, Homogeneous, Non-Fibrous	88.9	3.9	7.2	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
44	BK0226089-44	Thin Wire Insulation On Light Fixtures, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Yellow, Homogeneous, Non-Fibrous	89.6	7.1	3.3	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
45	BK0226089-45	Thin Wire Insulation On Light Fixtures, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room Light Fixtures	Yellow, Homogeneous, Non-Fibrous	89.5	5.5	5.0	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
46	BK0226089-46	Black Sealant By ConEd Lines, Black |Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Black, Homogeneous, Non-Fibrous	29.9	60.9	9.2	0%	95.3%	**4.7%CHRY**	**Not Analyzed**		**X**	
47	BK0226089-47	Black Sealant By ConEd Lines, Black |Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Black, Homogeneous, Non-Fibrous	33.9	57.0	9.1	0%	95.4%	**4.6%CHRY**	**Not Analyzed**		**X**	
48	BK0226089-48	Black Sealant By ConEd Lines, Black |Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Black, Homogeneous, Non-Fibrous	29.1	62.5	8.5	0%	94.8%	**5.2%CHRY**	**Not Analyzed**		**X**	
49	BK0226089-49	Caulk On Vent, Grey | Transformer Room 1	Grey, Homogeneous, Non-Fibrous	50.4	8.1	41.5	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
50	BK0226089-50	Caulk On Vent, Grey | Transformer Room 1	Grey, Homogeneous, Non-Fibrous	45.9	23.7	30.4	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**

Atlas Environmental Lab, Corp.
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Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
51	BK0226089-51	Caulk On Vent, Grey | Transformer Room 1	Grey, Homogeneous, Non-Fibrous	43.3	11.7	45.0	0%	100%	**NAD** Inconclusive	**NAD**		X	X
52	BK0226089-52	Horse Hair Insulation Behind Black Sealant By ConEd Lines, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Yellow, Homogeneous, Friable	Not Applicable			100%HAIR	0%	**NAD**		X		
53	BK0226089-53	Horse Hair Insulation Behind Black Sealant By ConEd Lines, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Yellow, Homogeneous, Friable	Not Applicable			100%HAIR	0%	**NAD**		X		
54	BK0226089-54	Horse Hair Insulation Behind Black Sealant By ConEd Lines, Yellow | Transformer Room 1, Transformer Room 2 | Transformer Room by ConEd Line	Yellow, Homogeneous, Friable	Not Applicable			100%HAIR	0%	**NAD**		X		
55	BK0226089-55	Electrical Panel, Red - Transformer Room 1 & 2	Red, Homogeneous, Non-Fibrous	57.6	36.0	6.4	0%	100%	**NAD** Inconclusive	**NAD**		X	X
56	BK0226089-56	Electrical Panel, Red - Transformer Room 1 & 2	Red, Homogeneous, Non-Fibrous	52.4	20.5	27.2	0%	100%	**NAD** Inconclusive	**NAD**		X	X
57	BK0226089-57	Electrical Panel, Red - Transformer Room 1 & 2	Red, Homogeneous, Non-Fibrous	53.1	20.3	26.7	0%	100%	**NAD** Inconclusive	**NAD**		X	X
58	BK0226089-58	Electrical Panel, Black - Transformer Room 1 & 2	Black, Homogeneous, Non-Fibrous	22.9	1.4	75.7	0%	100%	**NAD** Inconclusive	**0.28%CHRY**		X	X
59	BK0226089-59	Electrical Panel, Black - Transformer Room 1 & 2	Black, Homogeneous, Non-Fibrous	22.7	2.0	75.3	0%	100%	**NAD** Inconclusive	**0.40%CHRY**		X	X
60	BK0226089-60	Electrical Panel, Black - Transformer Room 1 & 2	Black, Homogeneous, Non-Fibrous	24.3	4.3	71.4	0%	100%	**NAD** Inconclusive	**1.1%CHRY**		X	X

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Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	All %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
61	BK0226089-61	Electrical Panel, Black - Transformer Room 1 & 2	Black, Homogeneous, Non-Fibrous	23.5	1.5	75.0	0%	100%	**NAD** Inconclusive	**Not Analyzed**		X	
62	BK0226089-62	Electrical Panel, Black - Transformer Room 1 & 2	Black, Homogeneous, Non-Fibrous	22.9	2.5	74.6	0%	100%	**NAD** Inconclusive	**Not Analyzed**		X	
63	BK0226089-63	Glue on Metal Door Lining on Styrofoam, Green - Transformer Room 1 & 2	Green, Homogeneous, Non-Fibrous	54.9	5.2	39.8	0%	100%	**NAD** Inconclusive	**NAD**		X	X
64	BK0226089-64	Glue on Metal Door Lining on Styrofoam, Green - Transformer Room 1 & 2	Green, Homogeneous, Non-Fibrous	62.5	6.0	31.5	0%	100%	**NAD** Inconclusive	**NAD**		X	X
65	BK0226089-65	Glue on Metal Door Lining on Styrofoam, Green - Transformer Room 1 & 2	Green, Homogeneous, Non-Fibrous	53.6	7.2	39.2	0%	100%	**NAD** Inconclusive	**NAD**		X	X
66	BK0226089-66	Fuse Filler Material, Grey - Transformer Room 1 & 2	Light Grey, Homogeneous, Friable	Not Applicable			0%	100%	**NAD**		X		
67	BK0226089-67	Fuse Filler Material, Grey - Transformer Room 1 & 2	Light Grey, Homogeneous, Friable	Not Applicable			0%	100%	**NAD**		X		
68	BK0226089-68	Fuse Filler Material, Grey - Transformer Room 1 & 2	Light Grey, Homogeneous, Friable	Not Applicable			0%	100%	**NAD**		X		
69	BK0226089-69	Fuse Core Material, Grey - Transformer Room 1 & 2	Grey, Homogeneous, Non-Fibrous	35.0	4.3	60.7	0%	100%	**NAD** Inconclusive	**NAD**		X	X
70	BK0226089-70	Fuse Core Material, Grey - Transformer Room 1 & 2	Grey, Homogeneous, Non-Fibrous	35.7	2.2	62.1	0%	100%	**NAD** Inconclusive	**NAD**		X	X

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PLM Date Analyzed: *
TEM Date Analyzed: *
Report Date: 3/20/2026

Client ID#	Lab ID#	Description/ Location	Analyst Description	ORG %	AII %	ASI%	PLM			TEM	Method By ELAP		
							Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type	PLM 198.1	PLM NOB 198.6	TEM 198.4
71	BK0226089-71	Fuse Core Material, Grey - Transformer Room 1 & 2	Grey, Homogeneous, Non-Fibrous	35.0	4.4	60.7	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
72	BK0226089-72	Electrical Panel, Brown - Transformer Room 1 & 2	Brown, Homogeneous, Non-Fibrous	93.7	4.2	2.0	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
73	BK0226089-73	Electrical Panel, Brown - Transformer Room 1 & 2	Brown, Homogeneous, Non-Fibrous	96.0	2.8	1.2	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**
74	BK0226089-74	Electrical Panel, Brown - Transformer Room 1 & 2	Brown, Homogeneous, Non-Fibrous	91.8	4.4	3.8	0%	100%	**NAD** Inconclusive	**NAD**		**X**	**X**

AL

*Samples #1-54 Were Received on 2/5/2026 and Analyzed by PLM on 2/8/2026 by MN and TEM on 2/9/2026 by MB.

*Samples #55-74 Were Received on 3/19/2026 and Analyzed on 3/20/2026 PLM by EM and TEM by MB.

Quantitative Analysis (Semi/Full):Bulk Asbestos Analysis-PLM by EPA 600/M4-82-020 per 40 CFR or ELAP198.1 (friable) and 198.6 (NOB) samples for New York.

NAD=no asbestos detected, NA/PS=Not Analyzed/Positive Stop, Trace=<1%,FBGL=Fiberglass, CELL=Cellulose,CHRY=Chrysotile,Amo=Amosite,CRO=Crocidolite,ANTH=Anthophylite, TRE=Tremolite, ACT=Actinolite, NA=not applicable.

PLM is not consistently reliable in detecting Asbestos in floor coverings and similar non friable organically bound materials. NAD or Trace results by PLM are inconclusive.

TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos containing in NY State.

All samples were prepared and analyzed in accordance with the EPA "TEM Method for Identifying and Quantifying Asbestos in Non-Fibrous Organically Bound Bulk Samples" ELAP 198.4".

ORG%=Ashed Organic%, AII= Acid Insoluble Inorganic%, ASI= Acid Soluble Inorganic%. The measurement of uncertainty available upon request.

This "Summary of Analytical Results "shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, ELAP or any agency of the U.S Government. The results relate only to the items tested. This report may not be reproduced, except in full, without the written approval of AEL .Atlas Environmental lab did not collect the analyzed samples and thus accepts no liability with regard to their collection and/or maintenance . AEL relies on client's data. The liability of Atlas Environmental Lab corp with respect to the services charged, shall in no event exceed the amount of the invoice.

NYS-ELAP#11999, NVLAP Lab Code: 500092-0, CT Reg. ID: PH-0154

PLM Analyst: * TEM Analyst: MB Approved by:

B1022608 9.REV

TRC 1407 Broadway Suite 3301 New York NY 10018	*ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM*	
Client: Arcwood Environmental	Project Number: 411323.0000.0000 Phase 23	Sampling Technician: York Gavilanez, Anthony Sigona, Yuriy Klimenko Mobile App: SIH - New York - HAZMAT Survey
Project Name: DASNY OMH ACM - 1500 Waters Place - Transformer Rooms 1 and 2 Bronx Phsychiatric Center 1500 Waters Place Bronx New York 10461 US	Tracking Number:	Requested TAT: 24 HR

ASBESTOS BULK SAMPLE INFORMATION

Sample Date	Sample Identification	Material Description	Homogeneous Area	Sample Location	Analysis Requested
02/04/26	1-3	Wire Insulation, Red	Transformer Room 1, Transformer Room 2	Transformer room fuse box	PLM EPA 600/R-93/116
02/04/26	4-6	Wire Insulation, Black	Transformer Room 1, Transformer Room 2	Transformer room fuse box	PLM EPA 600/R-93/116
02/04/26	7-9	Wire Insulation, White	Transformer Room 1, Transformer Room 2	Transformer room fuse box	PLM EPA 600/R-93/116
02/04/26	10-12	Wire Insulation, Yellow	Transformer Room 1, Transformer Room 2	Transformer room fuse box	PLM EPA 600/R-93/116
02/04/26	13-15	Fabric wire insulation on light switch, Black	Transformer Room 1, Transformer Room 2	Transformer room light switch box	PLM EPA 600/R-93/116
02/04/26	16-18	Wire insulation on wires coming from ceiling , White	Transformer Room 1, Transformer Room 2	Transformer room light switch box	PLM EPA 600/R-93/116
02/04/26	19-21	Wire insulation on wires coming from ceiling , Blue	Transformer Room 1, Transformer Room 2	Transformer room light switch box	PLM EPA 600/R-93/116
02/04/26	22-24	Fabric texture wire insulation on box , Black	Transformer Room 1, Transformer Room 2	Transformer room box	PLM EPA 600/R-93/116
02/04/26	25-27	Fabric wire insulation to circuit board , Black	Transformer Room 1, Transformer Room 2	Transformer circuit board	PLM EPA 600/R-93/116
02/04/26	28-30	Fibrous board in transformers, Red	Transformer Room 1, Transformer Room 2	In transformers	PLM EPA 600/R-93/116
02/04/26	31-33	Fabric wire insulation on light switch, Blue	Transformer Room 2	Transformer room light switch box	PLM EPA 600/R-93/116

EMILY MYINT Emily Myint 03-20-26 11:45A

REL: [illegible] 3.20.26

BK0226089.REV

02/04/26	34-36	Thick wire insulation with fabric wrap , Black	Transformer Room 1, Transformer Room 2	Transformer room by ConEd line	PLM EPA 600/R-93/116
02/04/26	37-39	Thin wire insulation on light fixtures, Black	Transformer Room 1, Transformer Room 2	Transformer room light fixtures	PLM EPA 600/R-93/116
02/04/26	40-42	Thin wire insulation on light fixtures, White	Transformer Room 1, Transformer Room 2	Transformer room light fixtures	PLM EPA 600/R-93/116
02/04/26	43-45	Thin wire insulation on light fixtures, Yellow	Transformer Room 1, Transformer Room 2	Transformer room light fixtures	PLM EPA 600/R-93/116
02/04/26	46-48	Black sealant by ConEd Lines, Black	Transformer Room 1, Transformer Room 2	Transformer room by ConEd line	PLM EPA 600/R-93/116
02/04/26	49-51	Caulk on vent, Grey	Transformer Room 1	See Diagram	PLM EPA 600/R-93/116
02/04/26	52-54	Horse hair insulation behind black sealant by ConEd lines, Yellow	Transformer Room 1, Transformer Room 2	Transformer room by ConEd line	PLM EPA 600/R-93/116
start 55 03/19/26	55,56,57	Electrical panel, Red	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116
03/19/26	58,59,60,61,62	Electrical panel, Black	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116
03/19/26	63,64,65	Glue on metal door lining on styrofoam , Green	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116
03/19/26	66,67,68	Fuse filler material , Grey	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116
03/19/26	69,70,71	Fuse core material, Grey	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116
03/19/26	72,73,74	Electrical panel, Brown	Transformer Room 1 & 2	See Diagram	PLM EPA 600/R-93/116

Special Instruction to Laboratory:
Perform TEM NOB Analysis if Neccessary,Stop First Positive Result in each Homogeneous Area

CHAIN OF CUSTODY INFORMATION AND LABORATORY INFORMATION

Delivery Method: Delivered Directly to Laboratory **Relinquished By:**	**Date and Time**	**Received By:**	**Date and Time**
(Print): Yuriy Klimenko	03/19/2026 2:59 pm America/New_York	(Print): Amelia Sobhan	3/19/26

EMILY MYINT Emily Myint 03.20.26 11:45A

BK0226089.REV

(Sign):		(Sign):	@ 16:40
(Print):		(Print):	
(Sign):		(Sign):	
Email Results To: asigona@trccompanies.com	**Analytical Method:** PLM NYS 198.1 Friable,PLM NYS 198.6 NOB,TEM NYS 198.4 NOB	**Lab Comments:** Received Samples #55-74	

EMILY MYINT Emily Myint 03.20.26 11:45A

ANALYTICAL REPORT

Lab Number:	L2606779
Client:	TRC Environmental Corp 1407 Broadway Suite 3301 New York, NY 10018
ATTN:	Anthony Sigona
Phone:	(212) 221-7822
Project Name:	BRONX PSYCHIATRIC CENTER
Project Number:	411323.0000.0023
Report Date:	02/19/26

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Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2606779-01	TR1-LCP-01	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 13:34	02/05/26
L2606779-02	TR1-LCP-02	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 13:50	02/05/26
L2606779-03	TR2-LCP-01	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:00	02/05/26
L2606779-04	TR2-LCP-02	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:10	02/05/26
L2606779-05	TR1-01	OIL	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 10:09	02/05/26
L2606779-06	TR1-02	OIL	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 10:20	02/05/26
L2606779-07	TR1-CAULK 01	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 13:51	02/05/26
L2606779-08	TR1-SEALANT 01	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:42	02/05/26
L2606779-09	TR1-MT1	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:50	02/05/26
L2606779-10	TR1-SD1	SOIL	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:55	02/05/26
L2606779-11	TR2-MT1	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:30	02/05/26
L2606779-12	TR2-SD1	SOIL	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:35	02/05/26

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606779
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606779
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L2606779-05: The internal standard (IS) response for 1-bromo-2-nitrobenzene (622%) was above the acceptance criteria on column B; however, the sample was not re-analyzed due to obvious interferences. The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (14%) and decachlorobiphenyl (13%) due to interference with the Internal Standard.

L2606779-06: The internal standard (IS) response for 1-bromo-2-nitrobenzene (784%) was above the acceptance criteria on column B; however, the sample was not re-analyzed due to obvious interferences. The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (11%) and decachlorobiphenyl (11%) due to interference with the Internal Standard.

L2606779-07: The sample contains peaks which match the retention times for Aroclor 1254, but do not match the area ratios typical for this aroclor. The result for Aroclor 1254 is reported as "altered".

L2606779-08D: The sample contains peaks which match the retention times for Aroclor 1260, but do not match the area ratios typical for this aroclor. The result for Aroclor 1260 is reported as "altered".

L2606779-08D, -10D, and -12D: The surrogate recoveries are below the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (0%) and decachlorobiphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

Total Metals

L2606779-01 through -04: The sample has an elevated detection limit for lead due to the dilution required by the sample matrix.

L2606779-09 and -11: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Caitlin Walukevich

Title: Technical Director/Representative Date: 02/19/26

ORGANICS

PCBS

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-05
Client ID: TR1-01
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Date Collected: 02/04/26 10:09
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8082A
Analytical Date: 02/08/26 18:43
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3580A
Extraction Date: 02/08/26 12:05
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		mg/kg	2.19	0.324	1	A
Aroclor 1221	ND		mg/kg	2.19	0.366	1	A
Aroclor 1232	ND		mg/kg	2.19	0.774	1	A
Aroclor 1242	ND		mg/kg	2.19	0.492	1	A
Aroclor 1248	ND		mg/kg	1.46	0.547	1	A
Aroclor 1254	ND		mg/kg	2.19	0.399	1	A
Aroclor 1260	ND		mg/kg	1.46	0.674	1	A
Aroclor 1262	ND		mg/kg	0.730	0.464	1	A
Aroclor 1268	ND		mg/kg	0.730	0.378	1	A
PCBs, Total	ND		mg/kg	0.730	0.324	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	**14**	Q	30-150	B
Decachlorobiphenyl	**13**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-06
Client ID: TR1-02
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Date Collected: 02/04/26 10:20
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Oil
Analytical Method: 1,8082A
Analytical Date: 02/08/26 18:53
Analyst: EMR
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3580A
Extraction Date: 02/08/26 12:05
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		mg/kg	2.13	0.315	1	A
Aroclor 1221	ND		mg/kg	2.13	0.355	1	A
Aroclor 1232	ND		mg/kg	2.13	0.752	1	A
Aroclor 1242	ND		mg/kg	2.13	0.478	1	A
Aroclor 1248	ND		mg/kg	1.42	0.532	1	A
Aroclor 1254	ND		mg/kg	2.13	0.388	1	A
Aroclor 1260	ND		mg/kg	1.42	0.655	1	A
Aroclor 1262	ND		mg/kg	0.709	0.450	1	A
Aroclor 1268	ND		mg/kg	0.709	0.367	1	A
PCBs, Total	ND		mg/kg	0.709	0.315	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	100		30-150	A
Decachlorobiphenyl	108		30-150	A
2,4,5,6-Tetrachloro-m-xylene	**11**	Q	30-150	B
Decachlorobiphenyl	**11**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606779
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-07
Client ID: TR1-CAULK 01
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Date Collected: 02/04/26 13:51
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 02/16/26 13:43
Analyst: SDC
Percent Solids: Results Reported on an "AS RECEIVED" basis

Extraction Method: EPA 3540C
Extraction Date: 02/12/26 00:05
Cleanup Method: EPA 3630
Cleanup Date: 02/15/26
Cleanup Method: EPA 3665A
Cleanup Date: 02/15/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/15/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	521	148.	1	A
Aroclor 1221	ND		ug/kg	521	152.	1	A
Aroclor 1232	ND		ug/kg	521	116.	1	A
Aroclor 1242	1240		ug/kg	260	93.2	1	B
Aroclor 1248	ND		ug/kg	521	146.	1	A
Aroclor 1254	6290		ug/kg	521	106.	1	A
Aroclor 1260	3440		ug/kg	521	117.	1	A
Aroclor 1262	ND		ug/kg	521	107.	1	A
Aroclor 1268	ND		ug/kg	260	91.9	1	A
PCBs, Total	11000		ug/kg	260	91.9	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	71		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-08 D
Client ID: TR1-SEALANT 01
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 02/09/26 22:42
Analyst: SDC
Percent Solids: Results Reported on an "AS RECEIVED" basis

Date Collected: 02/04/26 14:42
Date Received: 02/05/26
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 02/08/26 08:35
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		mg/kg	2.36	0.210	25	A
Aroclor 1221	ND		mg/kg	2.36	0.237	25	A
Aroclor 1232	ND		mg/kg	2.36	0.501	25	A
Aroclor 1242	31.2		mg/kg	2.36	0.318	25	B
Aroclor 1248	ND		mg/kg	2.36	0.354	25	A
Aroclor 1254	ND		mg/kg	2.36	0.258	25	A
Aroclor 1260	29.9		mg/kg	2.36	0.437	25	A
Aroclor 1262	ND		mg/kg	2.36	0.300	25	A
Aroclor 1268	ND		mg/kg	2.36	0.245	25	A
PCBs, Total	61.1		mg/kg	2.36	0.210	25	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-10 D
Client ID: TR1-SD1
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/09/26 14:54
Analyst: SDC
Percent Solids: Results Reported on an "AS RECEIVED" basis

Date Collected: 02/04/26 15:55
Date Received: 02/05/26
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 02/08/26 01:00
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4920	436.	100	A
Aroclor 1221	ND		ug/kg	4920	493.	100	A
Aroclor 1232	ND		ug/kg	4920	1040	100	A
Aroclor 1242	ND		ug/kg	4920	663.	100	A
Aroclor 1248	ND		ug/kg	4920	737.	100	A
Aroclor 1254	ND		ug/kg	4920	538.	100	A
Aroclor 1260	62800		ug/kg	4920	908.	100	A
Aroclor 1262	ND		ug/kg	4920	624.	100	A
Aroclor 1268	ND		ug/kg	4920	509.	100	A
PCBs, Total	62800		ug/kg	4920	436.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-12 D
Client ID: TR2-SD1
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/09/26 15:02
Analyst: SDC
Percent Solids: Results Reported on an "AS RECEIVED" basis

Date Collected: 02/04/26 15:35
Date Received: 02/05/26
Field Prep: Not Specified

Extraction Method: EPA 3546
Extraction Date: 02/08/26 01:00
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4840	430.	100	A
Aroclor 1221	ND		ug/kg	4840	485.	100	A
Aroclor 1232	ND		ug/kg	4840	1030	100	A
Aroclor 1242	ND		ug/kg	4840	653.	100	A
Aroclor 1248	ND		ug/kg	4840	727.	100	A
Aroclor 1254	ND		ug/kg	4840	530.	100	A
Aroclor 1260	19000	P	ug/kg	4840	895.	100	A
Aroclor 1262	ND		ug/kg	4840	615.	100	A
Aroclor 1268	ND		ug/kg	4840	502.	100	A
PCBs, Total	19000		ug/kg	4840	430.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/08/26 14:36
Analyst: SDC

Extraction Method: EPA 3546
Extraction Date: 02/07/26 21:37
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 10,12 Batch: WG2173397-1						
Aroclor 1016	ND		ug/kg	48.7	4.33	A
Aroclor 1221	ND		ug/kg	48.7	4.88	A
Aroclor 1232	ND		ug/kg	48.7	10.3	A
Aroclor 1242	ND		ug/kg	48.7	6.57	A
Aroclor 1248	ND		ug/kg	48.7	7.31	A
Aroclor 1254	ND		ug/kg	48.7	5.33	A
Aroclor 1260	ND		ug/kg	48.7	9.00	A
Aroclor 1262	ND		ug/kg	48.7	6.19	A
Aroclor 1268	ND		ug/kg	48.7	5.05	A
PCBs, Total	ND		ug/kg	48.7	4.33	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	96		30-150	B
Decachlorobiphenyl	76		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/09/26 13:13
Analyst: SDC

Extraction Method: EPA 3546
Extraction Date: 02/08/26 08:35
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 08 Batch: WG2173454-1						
Aroclor 1016	ND		mg/kg	0.0965	0.00857	A
Aroclor 1221	ND		mg/kg	0.0965	0.00967	A
Aroclor 1232	ND		mg/kg	0.0965	0.0205	A
Aroclor 1242	ND		mg/kg	0.0965	0.0130	A
Aroclor 1248	ND		mg/kg	0.0965	0.0145	A
Aroclor 1254	ND		mg/kg	0.0965	0.0106	A
Aroclor 1260	ND		mg/kg	0.0965	0.0178	A
Aroclor 1262	ND		mg/kg	0.0965	0.0122	A
Aroclor 1268	ND		mg/kg	0.0965	0.0100	A
PCBs, Total	ND		mg/kg	0.0965	0.00857	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	53		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/08/26 18:13
Analyst: SDC

Extraction Method: EPA 3580A
Extraction Date: 02/08/26 12:05
Cleanup Method: EPA 3665A
Cleanup Date: 02/08/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/08/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 05-06 Batch: WG2173484-1						
Aroclor 1016	ND		mg/kg	2.26	0.334	A
Aroclor 1221	ND		mg/kg	2.26	0.377	A
Aroclor 1232	ND		mg/kg	2.26	0.797	A
Aroclor 1242	ND		mg/kg	2.26	0.507	A
Aroclor 1248	ND		mg/kg	1.50	0.564	A
Aroclor 1254	ND		mg/kg	2.26	0.411	A
Aroclor 1260	ND		mg/kg	1.50	0.695	A
Aroclor 1262	ND		mg/kg	0.752	0.477	A
Aroclor 1268	ND		mg/kg	0.752	0.389	A
PCBs, Total	ND		mg/kg	0.752	0.334	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	94		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	101		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/16/26 13:20
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/12/26 00:05
Cleanup Method: EPA 3630
Cleanup Date: 02/15/26
Cleanup Method: EPA 3665A
Cleanup Date: 02/15/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/15/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 07 Batch: WG2174841-1						
Aroclor 1016	ND		ug/kg	515	146.	A
Aroclor 1221	ND		ug/kg	515	151.	A
Aroclor 1232	ND		ug/kg	515	115.	A
Aroclor 1242	ND		ug/kg	258	92.3	A
Aroclor 1248	ND		ug/kg	515	144.	A
Aroclor 1254	ND		ug/kg	515	105.	A
Aroclor 1260	ND		ug/kg	515	116.	A
Aroclor 1262	ND		ug/kg	515	106.	A
Aroclor 1268	ND		ug/kg	258	91.0	A
PCBs, Total	ND		ug/kg	258	91.0	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	83		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	71		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 10,12 Batch: WG2173397-2 WG2173397-3									
Aroclor 1016	95		106		40-140	11		50	A
Aroclor 1260	94		105		40-140	11		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		96		30-150	A
Decachlorobiphenyl	69		79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		98		30-150	B
Decachlorobiphenyl	68		77		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 08 Batch: WG2173454-2 WG2173454-3									
Aroclor 1016	61		56		40-140	9		50	A
Aroclor 1260	64		60		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		67		30-150	A
Decachlorobiphenyl	60		58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		66		30-150	B
Decachlorobiphenyl	55		53		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 05-06 Batch: WG2173484-2 WG2173484-3									
Aroclor 1016	78		78		40-140	0		50	A
Aroclor 1260	77		77		40-140	0		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		86		30-150	A
Decachlorobiphenyl	105		105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	85		85		30-150	B
Decachlorobiphenyl	117		113		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 07 Batch: WG2174841-2 WG2174841-3									
Aroclor 1016	77		64		40-140	18		50	A
Aroclor 1260	80		68		40-140	16		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		74		30-150	A
Decachlorobiphenyl	87		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		72		30-150	B
Decachlorobiphenyl	77		63		30-150	B

METALS

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-01
Client ID: TR1-LCP-01
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 13:34
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	19400		mg/kg	82.8	3.94	20	02/09/26 21:43	02/10/26 16:18	EPA 3050B	1,6010D	MRP

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-02
Client ID: TR1-LCP-02
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 13:50
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	29000		mg/kg	89.6	4.26	20	02/09/26 21:43	02/10/26 16:20	EPA 3050B	1,6010D	MRP

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-03
Client ID: TR2-LCP-01
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 14:00
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	401		mg/kg	24.8	1.18	2	02/09/26 21:43	02/10/26 15:27	EPA 3050B	1,6010D	MRP

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606779
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-04
Client ID: TR2-LCP-02
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 14:10
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	90600		mg/kg	244	11.6	50	02/09/26 21:43	02/10/26 16:22	EPA 3050B	1,6010D	MRP

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606779
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-09
Client ID: TR1-MT1
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 15:50
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.60	J	mg/kg	7.66	3.31	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Barium, Total	483		mg/kg	7.66	0.812	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Cadmium, Total	1160		mg/kg	7.66	0.421	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Chromium, Total	54.0		mg/kg	7.66	6.49	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Lead, Total	4840		mg/kg	38.3	1.82	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Mercury, Total	0.178		mg/kg	0.065	0.042	1	02/10/26 03:29	02/11/26 01:02	EPA 7471B	1,7471B	RDB
Selenium, Total	ND		mg/kg	15.3	2.52	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD
Silver, Total	6.54		mg/kg	3.83	2.28	20	02/10/26 03:14	02/10/26 14:02	EPA 3050B	1,6010D	TLD

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606779
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606779-11
Client ID: TR2-MT1
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Solid
Percent Solids: Results are reported on an 'AS RECEIVED' basis.

Date Collected: 02/04/26 15:30
Date Received: 02/05/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	ND		mg/kg	19.6	8.46	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Barium, Total	187		mg/kg	19.6	2.08	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Cadmium, Total	91.5		mg/kg	19.6	1.08	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Chromium, Total	103		mg/kg	19.6	16.6	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Lead, Total	25900		mg/kg	98.0	4.66	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Mercury, Total	0.190		mg/kg	0.069	0.045	1	02/10/26 03:29	02/11/26 01:05	EPA 7471B	1,7471B	RDB
Selenium, Total	ND		mg/kg	39.2	6.44	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD
Silver, Total	7.54	J	mg/kg	9.80	5.84	50	02/10/26 03:14	02/10/26 14:53	EPA 3050B	1,6010D	TLD

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606779

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG2173859-1										
Lead, Total	ND		mg/kg	2.00	0.095	1	02/09/26 21:43	02/10/26 14:29	1,6010D	MRP

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 09,11 Batch: WG2173861-1										
Arsenic, Total	ND		mg/kg	0.400	0.173	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Barium, Total	ND		mg/kg	0.400	0.042	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Cadmium, Total	ND		mg/kg	0.400	0.022	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Chromium, Total	ND		mg/kg	0.400	0.339	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Lead, Total	ND		mg/kg	2.00	0.095	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Selenium, Total	ND		mg/kg	0.800	0.132	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD
Silver, Total	ND		mg/kg	0.200	0.119	1	02/10/26 03:14	02/10/26 13:16	1,6010D	TLD

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 09,11 Batch: WG2173862-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	02/10/26 03:29	02/11/26 00:45	1,7471B	RDB

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG2173859-2								
Lead, Total	98		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 09,11 Batch: WG2173861-2								
Arsenic, Total	100		-		80-120	-		20
Barium, Total	115		-		80-120	-		20
Cadmium, Total	104		-		80-120	-		20
Chromium, Total	106		-		80-120	-		20
Lead, Total	103		-		80-120	-		20
Selenium, Total	98		-		80-120	-		20
Silver, Total	108		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 09,11 Batch: WG2173862-2								
Mercury, Total	101		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG2173859-3 WG2173859-4 QC Sample: L2606929-01 Client ID: MS Sample												
Lead, Total	31.2	44.3	81.1	113		86.1	119		75-125	6		20
Total Metals - Mansfield Lab Associated sample(s): 09,11 QC Batch ID: WG2173861-3 QC Sample: L2606765-03 Client ID: MS Sample												
Arsenic, Total	3.91J	9.32	7.65J	**0**	Q	-	-		75-125	-		
Barium, Total	60.5	155	243	117		-	-		75-125	-		
Cadmium, Total	ND	4.12	3.95J	**0**	Q	-	-		75-125	-		
Chromium, Total	117	15.5	165	**309**	Q	-	-		75-125	-		
Lead, Total	774	41.2	1180	**986**	Q	-	-		75-125	-		
Selenium, Total	3.78J	9.32	4.35J	**0**	Q	-	-		75-125	-		
Silver, Total	ND	3.88	ND	**0**	Q	-	-		75-125	-		
Total Metals - Mansfield Lab Associated sample(s): 09,11 QC Batch ID: WG2173862-3 QC Sample: L2606832-02 Client ID: MS Sample												
Mercury, Total	ND	1.64	1.63	99		-	-		80-120	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER

Project Number: 411323.0000.0023

Lab Number: L2606779

Report Date: 02/19/26

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 09,11 QC Batch ID: WG2173861-4 QC Sample: L2606765-03 Client ID: DUP Sample						
Lead, Total	774	799	mg/kg	3		20
Total Metals - Mansfield Lab Associated sample(s): 09,11 QC Batch ID: WG2173862-4 QC Sample: L2606832-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/kg	NC		20

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606779
Report Date: 02/19/26

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2606779-01A	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PB-TI(180)
L2606779-02A	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PB-TI(180)
L2606779-03A	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PB-TI(180)
L2606779-04A	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PB-TI(180)
L2606779-05A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082LL(365)
L2606779-06A	Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		PCB-8082LL(365)
L2606779-07A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		NYTCL-8082-CAULK(365)
L2606779-08A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		NYTCL-8082-PPM(365)
L2606779-09A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		-
L2606779-10A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		NYTCL-8082(365)
L2606779-11A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		-
L2606779-12A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		NYTCL-8082(365)

*Values in parentheses indicate holding time in days

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606779
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606779
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606779
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Data Qualifiers

estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606779

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
SM 2540D: TSS.
Biological Tissue Matrix: EPA 3050B

PAS-MAN1 Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
MADEP-APH.

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028
EPA 524.2: 1,3,5-Trichlorobenzene, m/p-Xylene, o-xylene.
EPA 625.1: 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, N-Nitrosodiphenylamine**.**
EPA 8081B NPW and SCM: Alachlor, Endrin Ketone, Hexachlorobenzene.
EPA 8260D NPW: Tetrahydrofuran, 1,3,5-Trichlorobenzene; **SCM:** TAME, TBEE, Diethyl ether, DIPE, Tetrahydrofuran. 1,3,5-Trichlorobenzene, Freon-113**.**
EPA 8270E: NPW: Carbazole, 1-Methylnaphthalene, Pentachloronitrobenzene; **SCM:** Carbazole, 1-Methylnaphthalene**.**
EPA TO-13: Air: Benzo(e)pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene, Perylene.
EPA TO-4A Pesticide Air: delta-BHC, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Hexachlorobenzene, Methoxychlor.
SM4500: NPW: Amenable Cyanide; **SCM:** Total Phosphorus, TKN, NH3, NECi: NO2, NO3, ASTMD516**.**

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)

The following analytes are included in our Massachusetts DEP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-G, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT.**

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1: Hg. **EPA 245.7:** Hg.
SM2340B

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028

Drinking Water

EPA 300.0: NO3, NO2, Fl, Cl, SO4. **NECI Reductase**: NO3, NO2.
SM4500F-C, SM4500Cl-B, ASTM D516, SM4500CN-C,E, EPA 180.1, SM2320B, SM 2540C, SM4500H-B, SM4500SO4-E.
EPA 537.1; EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: SM9223-P/A: TC/EC; SM9223B-Colilert-enumeration: TC/EC; HPC-Simplate.

Non-Potable Water

SM4500H-B, SM2510B, SM2540C, SM2320B, SM4500Cl-B, ASTMD516, SM4500NH3-B, C, EPA 350.1, NECi: NO3, **SM4500NH3-B, C: TKN, SM4500P-E: Ortho Phosphate, SM4500P-B, E: Total Phosphorus, EPA 410.4, SM5210B, SM5310C, SM4500CN-C, E, SM2540D, SM4500Cl-G, SM4500SO4-E, EPA 1664, EPA 420.1, EPA 300.0:** Cl, SO4, NO3.
EPA 624.1: Volatile Halocarbons, Volatile Aromatics.
EPA 608.3: Chlordane, Toxaphene, Aldrin, Alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs.
EPA 625.1: SVOC-Acid Extractables and Base/Neutrals
Microbiology: SM9223B-Colilert: E. coli (Ambient and Wastewater), **SM9223B-Colilert-18:** Fecal Coliform (Wastewater).

Certification IDs:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
CT PH-0826, IL 200077, IN C-MA-03, KY kY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, CA 3117, CO MA00030, CT PH-0825, IL 200081, IN C-MA-04, KY KY98046, LA 85084, ME MA00030, MD 350, MA M-MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, UT MA00030, VT VT-0015, VA 460194, WA C954.

PAS-MAN1 Mansfield Air Lab Facility – 120 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, LA 245052, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

PAS-ELON East Longmeadow Facility – 39 Spruce St. East Longmeadow, MA 01028
CT PH-0821, ME MA00100, MI 9100, NC (DENR) 652, NC (DW) 25703, MA M-MA100, NH (Secondary) 2516, NH (Primary) 2557, NJ MA007, NY 10899, PA 68-05812, RI LAO00373, VA 460217, VT-255716, WV DEP 419, WV-DW 9979C, LA 05130, LA-DW LA042, MD-DW 373, OH 87781.

For a complete listing of analytes and methods, please contact your Project Manager.

Pace ANALYTICAL SERVICES

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193

Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Woodcliff Lake, NJ 07677: 123 Tice Blvd, Suite 101
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 02/06/26

Pace Job #: L2606779

Client Information

Client: TRC Companies
Address: 1407 Broadway, New York, NY 10018
Phone: 646-483-3346
Fax:
Email: asigona@trccompanies.com

Project Information

Project Name: Bronx Psychiatric center Transformer Rooms
Project Location: 1500 Waters Place Bronx, NY 10461 (1 and 2)
Project # 411323.0000.0023
(Use Project name as Project #) ☐
Project Manager: Anthony Sgona
PACE Quote #: 31574

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days: 5

Deliverables

☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☒ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO # 23851

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Pace ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

PACE Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYSH 7082	SW846 Method 3580A	SW846 Method 8082A	SW846 Method 3546	6010D/7470				Total Bottle	Sample Specific Comments
06779-01	TR1-LLP-01	2/4/2026	13:34	X1	MH	X								1	Lead Paint
02	TR1-LLP-02		13:50	X1	MH	X								1	" "
03	TR2-LLP-01		1400	X1	MH	X								1	" "
04	TR2-LLP-02		14:10	X1	MH	X								1	" "
05	TR1-01		10:09	O	MH		X	X						1	oil sample PCB
06	TR1-02		10:20	O	MH		X	X						1	" "
07	TR1-Caulk 01		13:51	X1	MH			X	X					1	Caulk PCB
08	TR2-Sealant 01		14:42	X1	MH			X	X					1	Sealant PCB
09	TR1-MT1		15:50	SE	MH					X				1	RCRA 8 metals
10	TR1-SD1		15:55	SE	MH			X	X					1	PCBs

Container Type: G G G G G
Preservative (ICE): 0 0 0 0 0

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] GSDE	2/5/2026 1500	GSDE PACE	2/5/26 17:00
GSDE	2/5/26 1843	NJSCSS	2/5/26 18:43
NJSCSS	2/5/26 1843	[signature]	2:5 2035
[signature] AL	2-6-26 0240	AL	2-6-26 0240

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY PACE'S TERMS & CONDITIONS. (See reverse side.)

02192616-0240

Form No: 01-25 HC (rev. 29-Jan-2025)

Pace ANALYTICAL SERVICES

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Woodcliff Lake, NJ 07677: 123 Tice Blvd, Suite 101
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 02/06/26

Pace Job #: L2608779

Client Information
Client: TRC Companies
Address: 1407 Broadway
New York, NY 10018
Phone: 646 483 3346
Fax:
Email: asigona@trcompanies.com

Project Information
Project Name: Bronx Psychiatric Center Transformer Replacement
Project Location: 1500 Waters Place Bronx NY 10018
Project #: 211323.0000.0023
(Use Project name as Project #): ☐
Project Manager: Anthony Sigona
PACE Quote #: 31574

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days: 5

These samples have been previously analyzed by Pace ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☒ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO # 231851

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

PACE Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	6010D/7470	SW846 Method 3540C	SW846 Method 8082A	Total Bottle	Sample Specific Comments
06779-11	TR2-MT1	2/4/26	15:30	SE	MH	X			1	RCRA 8 Metals
-12	TR2-SD1	↓	15:35	SE	MH		X	X	1	PCBs

Container Type: G G G
Preservative: 0 0 0 (ICE)

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/5/2026/1540	CTJAC PACE	2/5/26 17:08
CTJAC	2/5/26 18:43	NJSCSS	2/5/26 18:43
NJSCSS	2/5/26 18:43	[illegible]	2-5 2035
[illegible]	2-6-26 0240	AL	2-6-26 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY PACE'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 29-Jan-2025)

02106126-0240

Sample Delivery Group Summary

Pace Job Number : L2606779

Account Name : TRC Environmental Corp
Project Number : 411323.0000.0023
Project Name : BRONX PSYCHIATRIC CENTER

Received : 05-FEB-2026
Reviewer : Fatimat Afolabi

Delivery Information

Samples Delivered By : Pace Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.0	
B	Absent/	Ice	3.3	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between COC & sample labels?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NA**

ANALYTICAL REPORT

Lab Number:	L2609518
Client:	TRC Environmental Corp 1407 Broadway Suite 3301 New York, NY 10018
ATTN:	Anthony Sigona
Phone:	(212) 221-7822
Project Name:	BRONX PSYCHIATRIC CENTER
Project Number:	411323.0000.0023
Report Date:	02/25/26

The original project report/data package is held by Pace Analytical Services. This report/data package is paginated and should be reproduced only in its entirety. Pace Analytical Services holds no responsibility for results and/or data that are not consistent with the original.

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2609518
Report Date: 02/25/26

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2609518-01	TR1-MT1	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:50	02/05/26
L2609518-02	TR2-MT1	SOLID	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 15:30	02/05/26

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2609518
Project Number:	411323.0000.0023	**Report Date:**	02/25/26

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2609518
Project Number:	411323.0000.0023	**Report Date:**	02/25/26

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly O'Neill

Title: Technical Director/Representative Date: 02/25/26

METALS

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2609518

Project Number: 411323.0000.0023 **Report Date:** 02/25/26

SAMPLE RESULTS

Lab ID: L2609518-01 Date Collected: 02/04/26 15:50

Client ID: TR1-MT1 Date Received: 02/05/26

Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 02/21/26 19:30

Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Barium, TCLP	0.528		mg/l	0.500	0.0210	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Cadmium, TCLP	7.36		mg/l	0.100	0.0100	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Lead, TCLP	0.707		mg/l	0.500	0.0270	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/24/26 12:20	02/24/26 17:11	EPA 7470A	1,7470A	SMV
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC
Silver, TCLP	ND		mg/l	0.100	0.0280	1	02/24/26 12:16	02/24/26 18:36	EPA 3015	1,6010D	ERC

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2609518

Project Number: 411323.0000.0023 **Report Date:** 02/25/26

SAMPLE RESULTS

Lab ID: L2609518-02 Date Collected: 02/04/26 15:30

Client ID: TR2-MT1 Date Received: 02/05/26

Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2 Field Prep: Not Specified

Sample Depth: TCLP/SPLP Ext. Date: 02/21/26 19:30

Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Barium, TCLP	0.171	J	mg/l	0.500	0.0210	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Cadmium, TCLP	1.28		mg/l	0.100	0.0100	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Lead, TCLP	15.0		mg/l	0.500	0.0270	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/24/26 12:20	02/24/26 17:14	EPA 7470A	1,7470A	SMV
Selenium, TCLP	0.0592	J	mg/l	0.500	0.0350	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC
Silver, TCLP	ND		mg/l	0.100	0.0280	1	02/24/26 12:16	02/24/26 18:38	EPA 3015	1,6010D	ERC

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2609518

Project Number: 411323.0000.0023 **Report Date:** 02/25/26

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02 Batch: WG2178423-1										
Arsenic, TCLP	ND		mg/l	1.00	0.0190	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW
Barium, TCLP	ND		mg/l	0.500	0.0210	1	02/24/26 12:16	02/24/26 15:09	1,6010D	ERC
Cadmium, TCLP	ND		mg/l	0.100	0.0100	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW
Chromium, TCLP	ND		mg/l	0.200	0.0210	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW
Lead, TCLP	ND		mg/l	0.500	0.0270	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW
Selenium, TCLP	ND		mg/l	0.500	0.0350	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW
Silver, TCLP	ND		mg/l	0.100	0.0280	1	02/24/26 12:16	02/24/26 14:03	1,6010D	JNW

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 02/21/26 11:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02 Batch: WG2178424-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/24/26 12:20	02/24/26 14:55	1,7470A	SMV

Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 02/21/26 11:56

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2609518
Report Date: 02/25/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG2178423-2								
Arsenic, TCLP	98		-		75-125	-		20
Barium, TCLP	102		-		75-125	-		20
Cadmium, TCLP	98		-		75-125	-		20
Chromium, TCLP	100		-		75-125	-		20
Lead, TCLP	102		-		75-125	-		20
Selenium, TCLP	98		-		75-125	-		20
Silver, TCLP	101		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG2178424-2								
Mercury, TCLP	100		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2609518
Report Date: 02/25/26

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG2178423-3 QC Sample: L2609143-06 Client ID: MS Sample												
Arsenic, TCLP	ND	1.2	1.18	98		-	-		75-125	-		
Barium, TCLP	0.465J	20	20.2	101		-	-		75-125	-		
Cadmium, TCLP	ND	0.53	0.513	97		-	-		75-125	-		
Chromium, TCLP	ND	2	1.94	97		-	-		75-125	-		
Lead, TCLP	ND	5.3	5.18	98		-	-		75-125	-		
Selenium, TCLP	ND	1.2	1.21	101		-	-		75-125	-		
Silver, TCLP	ND	0.5	0.500	100		-	-		75-125	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG2178424-3 QC Sample: L2609143-06 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0238	95		-	-		75-125	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2609518
Report Date: 02/25/26

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG2178423-4 QC Sample: L2609143-06 Client ID: DUP Sample						
Arsenic, TCLP	ND	ND	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG2178423-4 QC Sample: L2609143-06 Client ID: DUP Sample						
Barium, TCLP	0.465J	0.454J	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG2178424-4 QC Sample: L2609143-06 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2609518
Report Date: 02/25/26

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2609518-01A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		-
L2609518-01X	Plastic 120ml HNO3 preserved Extracts	NA	NA			Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2609518-01X9	Tumble Vessel	NA	NA			Y	Absent		-
L2609518-02A	Glass 250ml/8oz unpreserved	NA	NA			Y	Absent		-
L2609518-02X	Plastic 120ml HNO3 preserved Extracts	NA	NA			Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2609518-02X9	Tumble Vessel	NA	NA			Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2609518
Project Number:	411323.0000.0023	**Report Date:**	02/25/26

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2609518
Project Number:	411323.0000.0023	**Report Date:**	02/25/26

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2609518
Project Number:	411323.0000.0023	**Report Date:**	02/25/26

Data Qualifiers

estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2609518

Project Number: 411323.0000.0023 **Report Date:** 02/25/26

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
SM 2540D: TSS.
Biological Tissue Matrix: EPA 3050B

PAS-MAN1 Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
MADEP-APH.

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028
EPA 524.2: 1,3,5-Trichlorobenzene, m/p-Xylene, o-xylene.
EPA 625.1: 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, N-Nitrosodiphenylamine**.**
EPA 8081B NPW and SCM: Alachlor, Endrin Ketone, Hexachlorobenzene.
EPA 8260D NPW: Tetrahydrofuran, 1,3,5-Trichlorobenzene; **SCM:** TAME, TBEE, Diethyl ether, DIPE, Tetrahydrofuran. 1,3,5-Trichlorobenzene, Freon-113**.**
EPA 8270E: NPW: Carbazole, 1-Methylnaphthalene, Pentachloronitrobenzene; **SCM:** Carbazole, 1-Methylnaphthalene**.**
EPA TO-13: Air: Benzo(e)pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene, Perylene.
EPA TO-4A Pesticide Air: delta-BHC, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Hexachlorobenzene, Methoxychlor.
SM4500: NPW: Amenable Cyanide; **SCM:** Total Phosphorus, TKN, NH3, NECi: NO2, NO3, ASTMD516**.**

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)

The following analytes are included in our Massachusetts DEP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-G, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT.**

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1: Hg. **EPA 245.7:** Hg.
SM2340B

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028

Drinking Water

EPA 300.0: NO3, NO2, Fl, Cl, SO4. **NECI Reductase**: NO3, NO2.
SM4500F-C, SM4500Cl-B, ASTM D516, SM4500CN-C,E, EPA 180.1, SM2320B, SM 2540C, SM4500H-B, SM4500SO4-E.
EPA 537.1; EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: SM9223-P/A: TC/EC; SM9223B-Colilert-enumeration: TC/EC; HPC-Simplate.

Non-Potable Water

SM4500H-B, SM2510B, SM2540C, SM2320B, SM4500Cl-B, ASTMD516, SM4500NH3-B, C, EPA 350.1, NECi: NO3, **SM4500NH3-B, C: TKN, SM4500P-E: Ortho Phosphate, SM4500P-B, E: Total Phosphorus, EPA 410.4, SM5210B, SM5310C, SM4500CN-C, E, SM2540D, SM4500Cl-G, SM4500SO4-E, EPA 1664, EPA 420.1, EPA 300.0:** Cl, SO4, NO3.
EPA 624.1: Volatile Halocarbons, Volatile Aromatics.
EPA 608.3: Chlordane, Toxaphene, Aldrin, Alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs.
EPA 625.1: SVOC-Acid Extractables and Base/Neutrals
Microbiology: SM9223B-Colilert: E. coli (Ambient and Wastewater), **SM9223B-Colilert-18:** Fecal Coliform (Wastewater).

Certification IDs:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
CT PH-0826, IL 200077, IN C-MA-03, KY kY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, CA 3117, CO MA00030, CT PH-0825, IL 200081, IN C-MA-04, KY KY98046, LA 85084, ME MA00030, MD 350, MA M-MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, UT MA00030, VT VT-0015, VA 460194, WA C954.

PAS-MAN1 Mansfield Air Lab Facility – 120 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, LA 245052, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

PAS-ELON East Longmeadow Facility – 39 Spruce St. East Longmeadow, MA 01028
CT PH-0821, ME MA00100, MI 9100, NC (DENR) 652, NC (DW) 25703, MA M-MA100, NH (Secondary) 2516, NH (Primary) 2557, NJ MA007, NY 10899, PA 68-05812, RI LAO00373, VA 460217, VT-255716, WV DEP 419, WV-DW 9979C, LA 05130, LA-DW LA042, MD-DW 373, OH 87781.

For a complete listing of analytes and methods, please contact your Project Manager.

Pace

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL 508-898-9220 — FAX 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL 508-822-9300 — FAX 508-822-3288

Service Centers
Woodcliff Lake, NJ 07677: 123 Tice Blvd, Suite 101
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 02/06/26

L2609518 AJK 2/20/26

Client Information

Client: TRC Companies
Address: 1407 Broadway
New York, NY 10018
Phone: 646-453-3346
Fax:
Email: asigona@trcompanies.com

Project Information

Project Name: Bronx Psychiatric Center Transformer Rooms
Project Location: 1500 Waters Place Bronx, NY 10461 (1 and 2)
Project #: 411323.0000.0023
(Use Project name as Project #):
Project Manager: Anthony Sgona
PACE Quote #: 31574

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days: 5

These samples have been previously analyzed by Pace ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables

☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

☐ Same as Client info
PO# 23851

Regulatory Requirement

☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☒ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other

Sample Filtrations

☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ANALYSIS

TCLP-RCRA8

PACE Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
	TR1-LLP-01	2/4/2026	13:34	X1	MH	Lead Paint
	TR1-LLP-02		13:50	X1	MH	"
	TR2-LLP-01		14:00	X1	MH	"
	TR2-LLP-02		14:10	X1	MH	"
	TR1-01		10:09	O	MH	oil sample PCB
	TR1-02		10:20	O	MH	"
	TR1-Caulk 01		13:51	X1	MH	Caulk PCB
	TR2-Sealant 01		14:42	X1	MH	Sealant PCB
09518 -01	TR1-MT1		15:50	SE	MH	RCRA8 metals
	TR1-SD1		15:55	SE	MH	PCBs

Container Type: G G G G G
Preservative (ICE): 0 0 0 0 0

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; KE = Zn Ac/NaOH; O = Other

Container Code: P = Plastic; A = Amber Glass; V = Vial; G = Glass; B = Bacteria Cup; C = Cube; O = Other; E = Encore; D = BOD Bottle

Westboro Certification No: MA935
Mansfield Certification No: MA015

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY PACE'S TERMS & CONDITIONS. (See reverse side)

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2/5/2026 1500	[signature] PACE	2/5/26 17:00
[signature]	2/5/26 18:45	[signature] NJ SCS	2/5/26 18:45
[signature] NJ SCS	2/5/26 18:45	[signature]	2/5/26 2005
[signature]	2-6 26 0240	[signature]	2/6/26 0240

02106126-0240

Form No: 01-25 HC (rev. 29-Jan-2025)

Pace

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL 508-898-9220 — FAX 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL 508-822-9300 — FAX 508-822-3288

Service Centers
Woodcliff Lake, NJ 07677: 123 Tice Blvd, Suite 101
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 02/06/26

L2609518 AJK 2/20/26

Client Information

Client: TRC Companies
Address: 1430 Broadway
New York, NY 10018
Phone: 646 483 3346
Fax:
Email: ASiSena@trcsolutions.com

Project Information

Project Name: Bronx Psychiatric Center Transformer Removal
Project Location: 1500 Waters Place Bronx NY 10461
Project #: 211323.0000.0023
(Use Project name as Project #)
Project Manager: Anthony Sisena
PACE Quote #: 31574

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days: 5

These samples have been previously analyzed by Pace ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables

ASP-A ☐ ASP-B ☒
EQuIS (1 File) ☐ EQuIS (4 File) ☐
Other ☐

Regulatory Requirement

NY TOGS ☐ NY Part 375 ☒
AWQ Standards ☐ NY CP-51 ☒
NY Restricted Use ☐ Other ☐
NY Unrestricted Use ☐
NYC Sewer Discharge ☐

Same as Client Info ☐
PO # 231851

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ ☐ NY ☐
Other ☐

ANALYSIS

PACE Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Corrosivity	Ignitability	Reactivity	TCLP-RCRA8	Sample Specific Comments	# of Bottles
09518 -01	TR2 - MT1	2/4/26	15:30	SG	MH	X			X	RCRA 8 Metals	1
-02	TR2 - SD1	↓	15:35	SE	MH	X	X	X		PCBs	1

Sample Filtration: Done ☐ Lab to do ☐
Preservation: Lab to do ☐
(Please Specify below)

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; KE = Zn Ac/NaOH; O = Other

Container Code: P = Plastic; A = Amber Glass; V = Vial; G = Glass; B = Bacteria Cup; C = Cube; O = Other; E = Encore; D = BOD Bottle

Westboro Certification No: MA935
Mansfield Certification No: MA015

Container Type	G	G	G
Preservative	0	0	0

Relinquished By	Date/Time	Received By	Date/Time
	2/5/2026 15:00	GSTAC PACE	2/5/26 17:08
GSTAC	2/5/26 18:43	NJSICSS	2/5/26 18:43
NJSICSS	2/5/26 18:43	MH	2/5/26 2135
MH AL	2-6-26 0240	AL	2-6-26 0240

02/06/26-0240

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY PACE'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 29-Jan-2025)

Sample Delivery Group Summary

Pace Job Number : L2609518
Received : 05-FEB-2026
Reviewer : Andrew Kussmaul

Account Name : TRC Environmental Corp
Project Number : 411323.0000.0023
Project Name : BRONX PSYCHIATRIC CENTER

Delivery Information

Samples Delivered By : Pace Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.0	
B	Absent/	Ice	3.3	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between COC & sample labels?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NA**

ANALYTICAL REPORT

Lab Number:	L2606826
Client:	TRC Environmental Corp 1407 Broadway Suite 3301 New York, NY 10018
ATTN:	Anthony Sigona
Phone:	(212) 221-7822
Project Name:	BRONX PSYCHIATRIC CENTER
Project Number:	411323.0000.0023
Report Date:	02/19/26

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Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606826
Report Date: 02/19/26

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2606826-01	TR2-01W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 10:33	02/05/26
L2606826-02	TR2-02W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 10:35	02/05/26
L2606826-03	TR2-03W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:20	02/05/26
L2606826-04	TR2-04W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:26	02/05/26
L2606826-05	TR2-05W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:40	02/05/26
L2606826-06	TR2-06W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:47	02/05/26
L2606826-07	TR2-07W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:55	02/05/26
L2606826-08	TR2-08W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 12:59	02/05/26
L2606826-09	TR2-09W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 13:05	02/05/26
L2606826-10	TR1-01W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:00	02/05/26
L2606826-11	TR1-02W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:05	02/05/26
L2606826-12	TR1-03W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:09	02/05/26
L2606826-13	TR1-04W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:13	02/05/26
L2606826-14	TR1-05W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:15	02/05/26
L2606826-15	TR1-06W	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:20	02/05/26
L2606826-16	BLANK 1	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:30	02/05/26
L2606826-17	BLANK 2	WIPE	1500 WATERS PLACE BRONX, NY10461/ 1 AND 2	02/04/26 14:35	02/05/26

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606826
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606826
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L2606826-02: The internal standard (IS) response for 1-bromo-2-nitrobenzene (48%) was below the acceptance criteria on column A; however, the sample was non-detect to the RL for all target compounds. Since the IS response was within method criteria on the other column, all associated compounds are reported from that passing column.

L2606826-05: The internal standard (IS) response for 1-bromo-2-nitrobenzene (1030%) was above the acceptance criteria on column B; however, the sample was not re-analyzed due to obvious interferences. The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (5%) and decachlorobiphenyl (5%) due to interference with the Internal Standard.

L2606826-07: The internal standard (IS) response for 1-bromo-2-nitrobenzene (221%) was above the acceptance criteria on column B; however, the sample was not re-analyzed due to obvious interferences.

L2606826-16: The surrogate recoveries were outside the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (11%,11%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Caitlin Walukevich

Title: Technical Director/Representative Date: 02/19/26

ORGANICS

PCBS

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-01
Client ID: TR2-01W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 10:33
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 09:55
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.844		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.844		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-02
Client ID: TR2-02W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 10:35
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 10:05
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	B
Aroclor 1221	ND		ug Abs	0.500	0.050	1	B
Aroclor 1232	ND		ug Abs	0.500	0.106	1	B
Aroclor 1242	ND		ug Abs	0.500	0.067	1	B
Aroclor 1248	ND		ug Abs	0.500	0.075	1	B
Aroclor 1254	ND		ug Abs	0.500	0.055	1	B
Aroclor 1260	ND		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	B
Aroclor 1268	ND		ug Abs	0.500	0.052	1	B
PCBs, Total	ND		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	139		30-150	A
Decachlorobiphenyl	113		30-150	A
2,4,5,6-Tetrachloro-m-xylene	118		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-03
Client ID: TR2-03W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:20
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 10:15
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.407	JIP	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.407	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	103		30-150	A
Decachlorobiphenyl	92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	50		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-04
Client ID: TR2-04W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:26
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 10:25
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	0.089	J	ug Abs	0.500	0.055	1	A
Aroclor 1260	0.362	J	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.451	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-05
Client ID: TR2-05W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:40
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 10:35
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	9.88	P	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	9.88		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	**5**	Q	30-150	B
Decachlorobiphenyl	**5**	Q	30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-06
Client ID: TR2-06W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:47
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/18/26 16:13
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.588		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	0.130	J	ug Abs	0.500	0.052	1	B
PCBs, Total	0.718	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-07
Client ID: TR2-07W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:55
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 10:55
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	4.34	P	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	4.34		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	33		30-150	B
Decachlorobiphenyl	31		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-08
Client ID: TR2-08W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 12:59
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 11:05
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.128	J	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.128	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-09 D
Client ID: TR2-09W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Date Collected: 02/04/26 13:05
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 19:31
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	2.50	0.222	5	A
Aroclor 1221	ND		ug Abs	2.50	0.250	5	A
Aroclor 1232	ND		ug Abs	2.50	0.530	5	A
Aroclor 1242	ND		ug Abs	2.50	0.337	5	A
Aroclor 1248	ND		ug Abs	2.50	0.375	5	A
Aroclor 1254	ND		ug Abs	2.50	0.274	5	A
Aroclor 1260	18.8		ug Abs	2.50	0.462	5	A
Aroclor 1262	ND		ug Abs	2.50	0.318	5	A
Aroclor 1268	ND		ug Abs	2.50	0.259	5	A
PCBs, Total	18.8		ug Abs	2.50	0.222	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	76		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-10
Client ID: TR1-01W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:00
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 11:25
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.375	J	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.375	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-11 D
Client ID: TR1-02W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:05
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 19:41
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	2.50	0.222	5	A
Aroclor 1221	ND		ug Abs	2.50	0.250	5	A
Aroclor 1232	ND		ug Abs	2.50	0.530	5	A
Aroclor 1242	ND		ug Abs	2.50	0.337	5	A
Aroclor 1248	ND		ug Abs	2.50	0.375	5	A
Aroclor 1254	ND		ug Abs	2.50	0.274	5	A
Aroclor 1260	24.9		ug Abs	2.50	0.462	5	B
Aroclor 1262	ND		ug Abs	2.50	0.318	5	A
Aroclor 1268	ND		ug Abs	2.50	0.259	5	A
PCBs, Total	24.9		ug Abs	2.50	0.222	5	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-12
Client ID: TR1-03W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:09
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 11:45
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.469	J	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.469	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-13
Client ID: TR1-04W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:13
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 11:55
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	3.33		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	3.33		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Lab Number: L2606826
Project Number: 411323.0000.0023
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-14
Client ID: TR1-05W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Date Collected: 02/04/26 14:15
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 12:05
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.305	J	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.305	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-15
Client ID: TR1-06W
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:20
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 12:15
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	10.6		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	10.6		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	119		30-150	B
Decachlorobiphenyl	105		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606826
Report Date: 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-16
Client ID: BLANK 1
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2
Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 12:25
Analyst: SDC

Date Collected: 02/04/26 14:30
Date Received: 02/05/26
Field Prep: Not Specified

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**11**	Q	30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	**11**	Q	30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

SAMPLE RESULTS

Lab ID: L2606826-17
Client ID: BLANK 2
Sample Location: 1500 WATERS PLACE BRONX, NY10461/ 1 AND 2

Date Collected: 02/04/26 14:35
Date Received: 02/05/26
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/09/26 12:35
Analyst: SDC

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 12:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023
Lab Number: L2606826
Report Date: 02/19/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/09/26 09:25
Analyst: GNG

Extraction Method: EPA 3540C
Extraction Date: 02/08/26 11:39
Cleanup Method: EPA 3665A
Cleanup Date: 02/09/26
Cleanup Method: EPA 3660B
Cleanup Date: 02/09/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-17 Batch: WG2173483-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	60		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606826
Report Date: 02/19/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-17 Batch: WG2173483-2 WG2173483-3									
Aroclor 1016	78		90		40-140	15		50	A
Aroclor 1260	73		87		40-140	18		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		81		30-150	A
Decachlorobiphenyl	52		63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		85		30-150	B
Decachlorobiphenyl	58		66		30-150	B

Project Name: BRONX PSYCHIATRIC CENTER
Project Number: 411323.0000.0023

Lab Number: L2606826
Report Date: 02/19/26

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2606826-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-11A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-12A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-13A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-14A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-15A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-16A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)
L2606826-17A	Glass 120ml/4oz w/1:4 Acetone:Hexane	NA	NA			Y	Absent		NYTCL-8082-3540C(365)

*Values in parentheses indicate holding time in days

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606826
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were

Report Format: DU Report with 'J' Qualifiers

Project Name:	BRONX PSYCHIATRIC CENTER	**Lab Number:**	L2606826
Project Number:	411323.0000.0023	**Report Date:**	02/19/26

Data Qualifiers

estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: BRONX PSYCHIATRIC CENTER **Lab Number:** L2606826

Project Number: 411323.0000.0023 **Report Date:** 02/19/26

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
SM 2540D: TSS.
Biological Tissue Matrix: EPA 3050B

PAS-MAN1 Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
MADEP-APH.

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028
EPA 524.2: 1,3,5-Trichlorobenzene, m/p-Xylene, o-xylene.
EPA 625.1: 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, N-Nitrosodiphenylamine**.**
EPA 8081B NPW and SCM: Alachlor, Endrin Ketone, Hexachlorobenzene.
EPA 8260D NPW: Tetrahydrofuran, 1,3,5-Trichlorobenzene; **SCM:** TAME, TBEE, Diethyl ether, DIPE, Tetrahydrofuran. 1,3,5-Trichlorobenzene, Freon-113**.**
EPA 8270E: NPW: Carbazole, 1-Methylnaphthalene, Pentachloronitrobenzene; **SCM:** Carbazole, 1-Methylnaphthalene**.**
EPA TO-13: Air: Benzo(e)pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene, Perylene.
EPA TO-4A Pesticide Air: delta-BHC, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Hexachlorobenzene, Methoxychlor.
SM4500: NPW: Amenable Cyanide; **SCM:** Total Phosphorus, TKN, NH3, NECi: NO2, NO3, ASTMD516**.**

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)

The following analytes are included in our Massachusetts DEP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-G, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT.**

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1: Hg. **EPA 245.7:** Hg.
SM2340B

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028

Drinking Water

EPA 300.0: NO3, NO2, Fl, Cl, SO4. **NECI Reductase**: NO3, NO2.
SM4500F-C, SM4500Cl-B, ASTM D516, SM4500CN-C,E, EPA 180.1, SM2320B, SM 2540C, SM4500H-B, SM4500SO4-E.
EPA 537.1; EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: SM9223-P/A: TC/EC; SM9223B-Colilert-enumeration: TC/EC; HPC-Simplate.

Non-Potable Water

SM4500H-B, SM2510B, SM2540C, SM2320B, SM4500Cl-B, ASTMD516, SM4500NH3-B, C, EPA 350.1, NECi: NO3, **SM4500NH3-B, C: TKN, SM4500P-E: Ortho Phosphate, SM4500P-B, E: Total Phosphorus, EPA 410.4, SM5210B, SM5310C, SM4500CN-C, E, SM2540D, SM4500Cl-G, SM4500SO4-E, EPA 1664, EPA 420.1, EPA 300.0:** Cl, SO4, NO3.
EPA 624.1: Volatile Halocarbons, Volatile Aromatics.
EPA 608.3: Chlordane, Toxaphene, Aldrin, Alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs.
EPA 625.1: SVOC-Acid Extractables and Base/Neutrals
Microbiology: SM9223B-Colilert: E. coli (Ambient and Wastewater), **SM9223B-Colilert-18:** Fecal Coliform (Wastewater).

Certification IDs:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
CT PH-0826, IL 200077, IN C-MA-03, KY kY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, CA 3117, CO MA00030, CT PH-0825, IL 200081, IN C-MA-04, KY KY98046, LA 85084, ME MA00030, MD 350, MA M-MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, UT MA00030, VT VT-0015, VA 460194, WA C954.

PAS-MAN1 Mansfield Air Lab Facility – 120 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, LA 245052, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

PAS-ELON East Longmeadow Facility – 39 Spruce St. East Longmeadow, MA 01028
CT PH-0821, ME MA00100, MI 9100, NC (DENR) 652, NC (DW) 25703, MA M-MA100, NH (Secondary) 2516, NH (Primary) 2557, NJ MA007, NY 10899, PA 68-05812, RI LAO00373, VA 460217, VT-255716, WV DEP 419, WV-DW 9979C, LA 05130, LA-DW LA042, MD-DW 373, OH 87781.

For a complete listing of analytes and methods, please contact your Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 02/06/26

ALPHA Job #: L2606826

Client Information

Client: TRC Companies
Address: 1430 Broadway
New York, NY 10018
Phone: 6464833346
Fax:
Email: asigona@trcompanies.com

Project Information

Project Name: Bronx Psychiatric Center Transformer Rooms
Project Location: 1500 Waters Place Bronx, NY 10461 | 1 and 2
Project #: 411323.0000.0023
(Use Project name as Project #)
Project Manager: Anthony Sigona
ALPHAQuote #: 31574

Turn-Around Time

Standard
Rush (only if pre approved)
Due Date:
# of Days: 5

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables

ASP-A
ASP-B
EQuIS (1 File)
EQuIS (4 File)
Other

Regulatory Requirement

NY TOGS
NY Part 375
AWQ Standards
NY CP-51
NY Restricted Use
Other
NY Unrestricted Use
NYC Sewer Discharge

Billing Information

Same as Client Info
PO # 231851

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ
NY
Other:

ANALYSIS

Sample Filtration
Done
Lab to do
Preservation
Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SW846 Method 8270	SW846 Method 8082	Total Bottle	Sample Specific Comments
06826-01	TR2-01W	2/4/26	10:23	W	MH	X	X		PCBs
-02	TR2-02W		10:35	W	MH	X	X		PCBs
-03	TR2-03W		12:20	W	MH	X	X		" "
-04	TR2-04W		12:26	W	MH	X	X		" "
-05	TR2-05W		12:40	W	MH	X	X		" "
-06	TR2-06W		12:47	W	MH	X	X		" "
-07	TR2-07W		12:55	W	MH	X	X		" "
-08	TR2-08W		12:59	W	MH	X	X		" "

Container Type: G G
Preservative: 0 0 (1GE)

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/5/2026 1700	GJAC PACE	2/5/26 17:00
GJAC	2/5/26 18:43	NTS CSS	2/5/26 18:43
NTS CSS	2/5/26 18:45	[illegible]	2.5.2035
[illegible] AL	2-6-26 0240	AL	2-6-26 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

02106126-0240

Pace ANALYTICAL SERVICES

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Woodcliff Lake, NJ 07677: 123 Tice Blvd, Suite 101
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 02/06/26

Pace Job #: L2606826

Client Information
Client: TRC Companies
Address: 1407 Broadway, New York, NY 10018
Phone: 646 483 3346
Fax:
Email: asigona@trcompanies.com

Project Information
Project Name: Bronx Psychiatric Center Transformer Rooms
Project Location: 1500 Waters ~~Street~~ Bronx, NY (1 and 2)
Project # 411323.0000.0023 Place (10461)
(Use Project name as Project #):
Project Manager: Anthony Sigona
PACE Quote #: 31574

Turn-Around Time
Standard: Due Date:
Rush (only if pre approved): # of Days: 5

These samples have been previously analyzed by Pace:

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables
ASP-A: ASP-B: X
EQuIS (1 File): EQuIS (4 File):
Other:

Regulatory Requirement
NY TOGS: NY Part 375: X
AWQ Standards: NY CP-51: X
NY Restricted Use: Other:
NY Unrestricted Use:
NYC Sewer Discharge:

Billing Information
Same as Client Info:
PO # 231851

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ: NY:
Other:

ANALYSIS
Sample Filtration: Done / Lab to do
Preservation: Lab to do
(Please Specify below)

PACE Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	SW846 Method 3546	SW846 Method 8082A	Total Bottle	Sample Specific Comments
06826-09	TR2-09W	2/4/2026	13:05	W	MH	X	X	1	PCBs
10	TR1-01W		14:00	W	MH	X	X	1	" "
11	TR1-02W		14:05	W	MH	X	X	1	" "
12	TR1-03W		14:09	W	MH	X	X	1	" "
13	TR1-04W		14:13	W	MH	X	X	1	" "
14	TR1-05W		14:15	W	MH	X	X	1	" "
15	TR1-06W		14:20	W	MH	X	X	1	" "
16	Blank 1		14:30	W	MH	X	X	1	" "
17	Blank 2		14:35	W	MH	X	X	1	" "

Container Type: G G
Preservative: 0 0 (4°C)

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; K/E = Zn Ac/NaOH; O = Other

Container Code: P = Plastic; A = Amber Glass; V = Vial; G = Glass; B = Bacteria Cup; C = Cube; O = Other; E = Encore; D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/5/2026 1500	GSIAC PACE	2/5/26 17:00
GSIAC	2/5/26 18:45	NYSICSS	2/5/26 18:45
NYSICSS	2/5/26 18:45	GSIAC	2:5 2035
GSIAC AL	2-6-26 0240	AL	2-6-26 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY PACE'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 29-Jan-2025)

02/06/26-0240

Sample Delivery Group Summary

Pace Job Number : L2606826

Account Name : TRC Environmental Corp
Project Number : 411323.0000.0023
Project Name : BRONX PSYCHIATRIC CENTER

Received : 05-FEB-2026
Reviewer : Fatimat Afolabi

Delivery Information

Samples Delivered By : Pace Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.0	
B	Absent/	Ice	3.3	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between COC & sample labels?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NA**

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Laboratory Report

NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

LIAL# 6020554

March 06, 2026

Innovative Recycling Technologies
690 North Queens Avenue
Lindenhurst, NY 11757

Re: Bronx Psychiatric CTR - 1500 Waters Place, Bronx

Dear Innovative Recycling Technologies,

Enclosed please find the laboratory Analysis Report(s) for sample(s) received on February 05, 2026. Long Island Analytical laboratories analyzed the samples on February 11, 2026 for the following:

SAMPLE ID	ANALYSIS
TR-1	PCBs in Oil
TR-2	PCBs in Oil
TR-3	EPA 8082 A
TR-4	EPA 8082 A

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted. Report shall not be reproduced except in full without the written approval of the laboratory. Results related only to items tested. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Michael D. Veraldi
Laboratory Technical Director

Client: Innovative Recycling Technologies	Client ID: Bronx Psychiatric CTR - 1500 Waters Place, Br
Date (Time) Collected: 02/04/2026 00:00	Sample ID: TR-1
Date (Time) Received: 02/05/2026 15:58	Laboratory ID: 6020554-01
Matrix: Oil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	962	<962	ug/kg	
Aroclor-1221	11104-28-2	962	<962	ug/kg	
Aroclor-1232	11141-16-5	962	<962	ug/kg	
Aroclor-1242	53469-21-9	962	<962	ug/kg	
Aroclor-1248	12672-29-6	962	<962	ug/kg	
Aroclor-1254	11097-69-1	962	<962	ug/kg	
Aroclor-1260	11096-82-5	962	<962	ug/kg	
Aroclor-1262	37324-23-5	962	<962	ug/kg	
Aroclor-1268	11100-14-4	962	<962	ug/kg	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	92	70-130	
Tetrachloro-m-xylene	877-09-8	88	70-130	

Date Prepared: 02/10/2026

Preparation Method: Oil Prep Organic

Date Analyzed: 02/11/2026

Analytical Method: ASTM D4059-91, 00, e05

Client: Innovative Recycling Technologies	Client ID: Bronx Psychiatric CTR - 1500 Waters Place, Br
Date (Time) Collected: 02/04/2026 00:00	Sample ID: TR-2
Date (Time) Received: 02/05/2026 15:58	Laboratory ID: 6020554-02
Matrix: Oil	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	920	<920	ug/kg	
Aroclor-1221	11104-28-2	920	<920	ug/kg	
Aroclor-1232	11141-16-5	920	<920	ug/kg	
Aroclor-1242	53469-21-9	920	<920	ug/kg	
Aroclor-1248	12672-29-6	920	<920	ug/kg	
Aroclor-1254	11097-69-1	920	<920	ug/kg	
Aroclor-1260	11096-82-5	920	<920	ug/kg	
Aroclor-1262	37324-23-5	920	<920	ug/kg	
Aroclor-1268	11100-14-4	920	<920	ug/kg	

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	94	70-130	
Tetrachloro-m-xylene	877-09-8	90	70-130	

Date Prepared: 02/10/2026

Preparation Method: Oil Prep Organic

Date Analyzed: 02/11/2026

Analytical Method: ASTM D4059-91, 00, e05

Client: Innovative Recycling Technologies	Client ID: Bronx Psychiatric CTR - 1500 Waters Place, Br
Date (Time) Collected: 02/04/2026 00:00	Sample ID: TR-3
Date (Time) Received: 02/05/2026 15:58	Laboratory ID: 6020554-03
Matrix: Wipe	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	1.50	<1.50	ug/100cm2	3.A
Aroclor-1221	11104-28-2	1.50	<1.50	ug/100cm2	3.A
Aroclor-1232	11141-16-5	1.50	<1.50	ug/100cm2	3.A
Aroclor-1242	53469-21-9	1.50	<1.50	ug/100cm2	3.A
Aroclor-1248	12672-29-6	1.50	<1.50	ug/100cm2	3.A
Aroclor-1254	11097-69-1	1.50	<1.50	ug/100cm2	3.A
Aroclor-1260	11096-82-5	1.50	9.18	ug/100cm2	3.A
Aroclor-1262	37324-23-5	1.50	<1.50	ug/100cm2	3.A
Aroclor-1268	11100-14-4	1.50	<1.50	ug/100cm2	3.A

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	299	47.4-148	3.A, 4.E
Tetrachloro-m-xylene	877-09-8	78	51.4-150	3.A

Date Prepared: 02/06/2026

Preparation Method: EPA 3546

Date Analyzed: 02/09/2026

Analytical Method: EPA 8082A

Client: Innovative Recycling Technologies	Client ID: Bronx Psychiatric CTR - 1500 Waters Place, Br
Date (Time) Collected: 02/04/2026 00:00	Sample ID: TR-4
Date (Time) Received: 02/05/2026 15:58	Laboratory ID: 6020554-04
Matrix: Wipe	ELAP: #11693

PCB/Aroclor Analysis

Parameter	CAS No.	LOQ	Result	Units	Flag
Aroclor-1016	12674-11-2	1.50	<1.50	ug/100cm2	3.A
Aroclor-1221	11104-28-2	1.50	<1.50	ug/100cm2	3.A
Aroclor-1232	11141-16-5	1.50	<1.50	ug/100cm2	3.A
Aroclor-1242	53469-21-9	1.50	<1.50	ug/100cm2	3.A
Aroclor-1248	12672-29-6	1.50	<1.50	ug/100cm2	3.A
Aroclor-1254	11097-69-1	1.50	<1.50	ug/100cm2	3.A
Aroclor-1260	11096-82-5	1.50	<1.50	ug/100cm2	3.A
Aroclor-1262	37324-23-5	1.50	<1.50	ug/100cm2	3.A
Aroclor-1268	11100-14-4	1.50	<1.50	ug/100cm2	3.A

Surrogate	CAS No.	% Recovery	Rec. Limits	Flag
Decachlorobiphenyl	2051-24-3	307	47.4-148	3.A, 4.E
Tetrachloro-m-xylene	877-09-8	84	51.4-150	3.A

Date Prepared: 02/06/2026

Preparation Method: EPA 3546

Date Analyzed: 02/09/2026

Analytical Method: EPA 8082A

Data Qualifiers Key Reference:

3.A	Reporting limit raised due to matrix interference.
4.E	Surrogate recovery has failed high.
MDL	Minimum Detection Limit
LOQ	Limit of Quantitation
H	Holding Time Exceeded
ł	Analyte Non-certified by ELAP.

LONG ISLAND ANALYTICAL LABORATORIES INC.
"TOMORROWS ANALYTICAL SOLUTIONS TODAY"
110 Colin Drive • Holbrook, New York 11741 • Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@l

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

6020554

CLIENT NAME/ADDRESS	CONTACT: John Dull	SAMPLER (SIGNATURE)	DATE	TIME	SAMPLE(S) SEALED	LABORATORY CHAIN ID # (FOR LAB USE ONLY)
Innovative Recycling Technologies, Inc. 690 North Queens Avenue Lindenhurst, NY 11757	PHONE: 631-225-3044 FAX:		2/4/26	10:00	☑ YES / NO ☐	
		SAMPLER NAME (PRINT)	DATE	TIME	CORRECT CONTAINER(S)	
		John Dull	2/4/26	10:00	☑ YES / NO ☐	

PROJECT LOCATION: BRONX PSCHIATRIC CTR - 1500 WATERS PLACE, BRONX

SAMPLES RECEIVED AT — °C

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

	LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: TCLP (8) METAL	TCLP Volatiles	TCLP Semi-vol	PCB	pH	Flaash Point	# OF CONTAINERS
1.	01	O	G				2/4/26		TR-1				X			
2.	02	O	G				2/4/26		TR-2				X			
3.	03	W	G				2/4/26		TR-3				X			
4.	04	W	G				2/4/26		TR-4				X			
5.																
6.																
7.																
8.																
9.																
10.																
11.																
12.																
13.																
14.																

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL, O=OIL, WW=WASTE WATER
TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON
PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_3O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☑ NORMAL ☐ STAT
BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
	2/5/26 17:40	John Dull		2/5/26 12:40	Christopher Ennis
RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN	DATE / TIME	PRINTED NAME
	2/5/26 15:58	Christopher Ennis		2/5/26	Jesse Schwimann

WHITE - OFFICE / CANARY - LAB / PINK - SAMPLE CUSTODIAN / GOLDENROD - CLIENT

APPENDIX C

COMPANY, PERSONNEL AND LABORATORY LICENSES

NEW YORK STATE | Department of Labor

WORKING FOR YOU

DIVISION OF SAFETY & HEALTH LICENSE AND CERTIFICATE UNIT, STATE OFFICE CAMPUS, BLDG. 12, ALBANY, NY 12226

ASBESTOS HANDLING LICENSE

TRC Engineers, Inc.
1407 Broadway, Suite 3301, New York, NY 10018

License Number: 28848
License Class: RESTRICTED
Date of Issue: 01/02/2026
Expiration Date: 01/31/2027
Duly Authorized Representative: Edward Gerdts

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Amy Phillips, Director
For the Commissioner of Labor

United States Environmental Protection Agency

This is to certify that

TRC Engineers, Inc.

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires April 04, 2027

LBP-19227-2

Certification #

March 21, 2024

Issued On

Marc Edmonds, Chief

Risk Assessment Management Branch 2.

THE UNIVERSITY OF THE STATE OF NEW YORK
EDUCATION DEPARTMENT

THIS IS TO CERTIFY THAT HAVING MET THE REQUIREMENTS OF SECTION 7210 OF THE EDUCATION LAW AND IN ACCORDANCE THEREWITH THIS CERTIFICATE OF AUTHORIZATION IS GRANTED WHICH ENTITLES

TRC ENGINEERS INC
1430 BROADWAY
10TH FLOOR
NEW YORK, NY 10018-0000

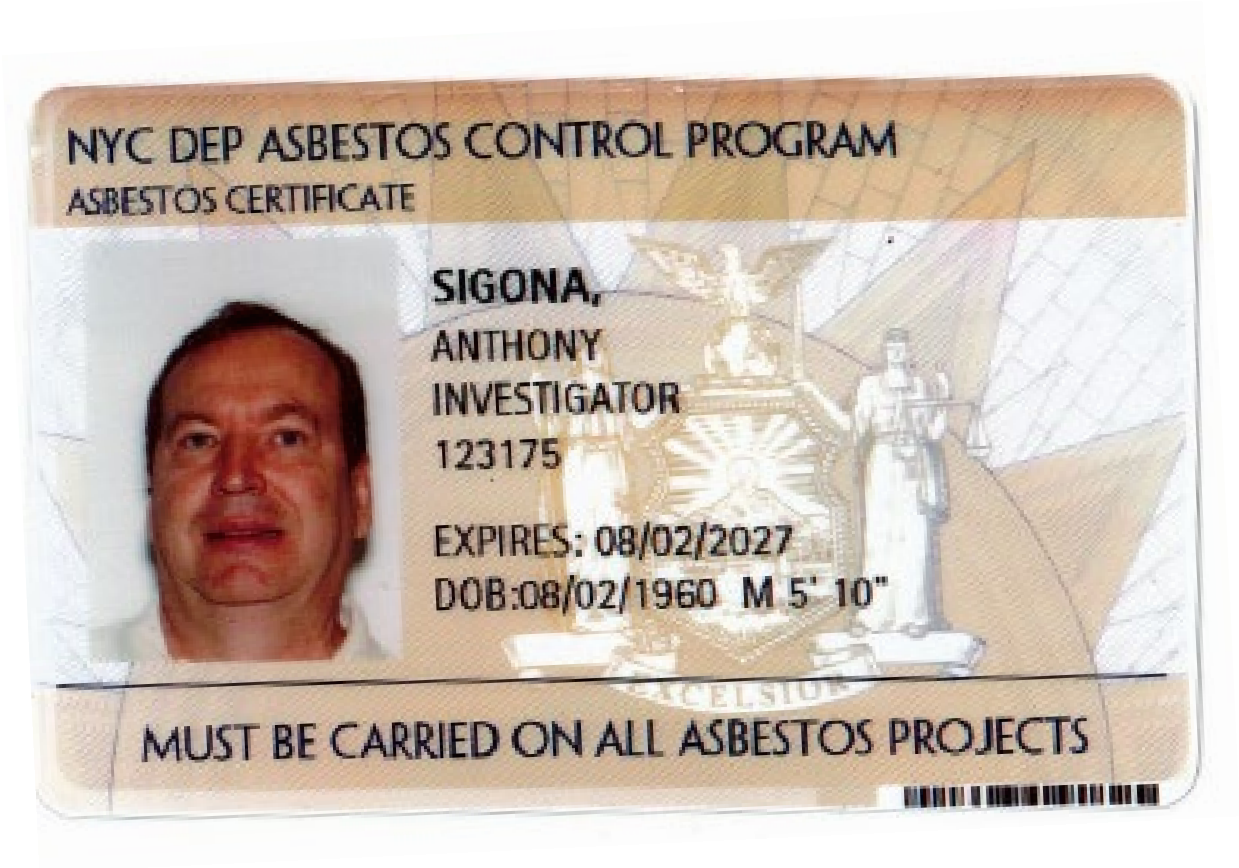
TO PROVIDE PROFESSIONAL ENGINEERING SERVICES IN THE STATE OF NEW YORK FOR THE PERIOD 01/01/2024 TO 12/31/2026.

CERTIFICATE NUMBER
0021680

BETTY ROSA
COMMISSIONER OF EDUCATION

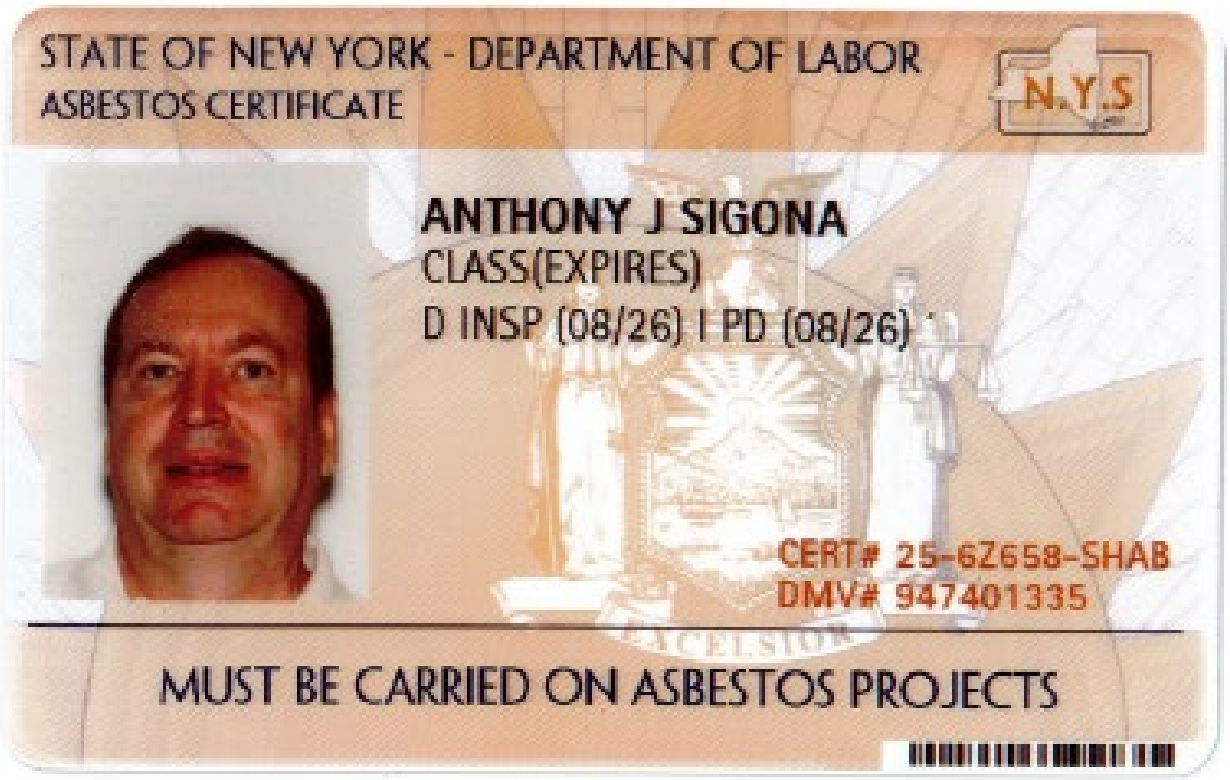
Anthony Sigona

Name	Certification No.	Expiration Date	Certification Type
Anthony Sigona	123175	08/02/2027	Investigator



Anthony Sigona

Name	Certification No.	Expiration Date	Certification Type
Anthony Sigona	24-6Z658-SHAB	8/2026	DOL DI



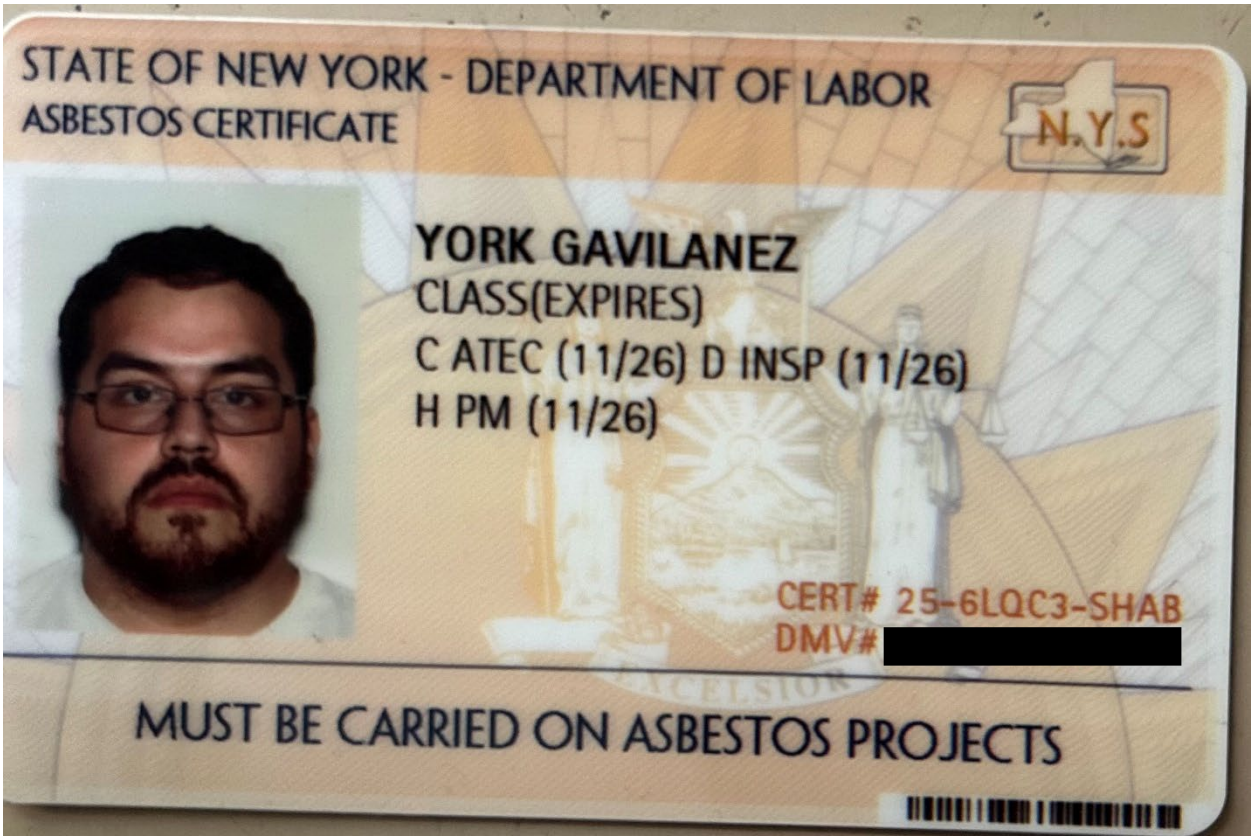
York Gavilanez

Name	Certification No.	Expiration Date	Certification Type
York Gavilanez	161376	11/10/2026	NYC DEP Investigator



York Gavilanez

Name	Certification No.	Expiration Date	Certification Type
York Gavilanez	25-6LQC3-SHAB	11/2026	DOL CDH



[redacted]

United States Environmental Protection Agency

This is to certify that



York B Gavilanez

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires October 15, 2028

LBP-I-I206043-3

Certification #

October 06, 2025

Issued On

Ben Conetta, Manager

Chemicals and Multimedia Programs Branch

United States Environmental Protection Agency

This is to certify that



Miranda B Hogan

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires July 29, 2028

LBP-R-I232692-2

Certification #

April 11, 2025

Issued On

Ben Conetta, Manager

Chemicals and Multimedia Programs Branch

United States Environmental Protection Agency

This is to certify that



William H Kane

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires September 23, 2028

LBP-I-I239476-2

Certification #

August 08, 2025

Issued On

Ben Conetta, Manager

Chemicals and Multimedia Programs Branch

APPENDIX F – FEBRUARY 2016 REVISED FEASIBILITY STUDY

REVISED FEASIBILITY STUDY

Bronx Psychiatric Center

1500 Waters Place

Bronx, New York

Prepared for:

Dormitory Authority of the State of New York

New York State Office of Mental Health

Prepared by:

URS CORPORATION – New York

40 British American Boulevard

Latham, New York 12110

February 2019

TABLE OF CONTENTS

Page No.

CERTIFICATION vi

1.0 INTRODUCTION 1-1

1.1 Overview 1-1
1.2 Site Description 1-2
1.3 Historical Actions and Interim Remedial Measures 1-3
1.3.1 Replacement of Transformers 1-4
1.3.2 Encapsulation of Concrete Floors 1-4
1.3.3 Epoxy Floor Inspection and Maintenance 1-4
1.3.4 Interim Remedial Measures 1-4
1.4 Current Site Conditions and Analysis of Remaining Impacts 1-5
1.4.1 Concrete 1-5
1.4.2 Soil 1-6
1.5 Structural Analysis 1-6

2.0 REMEDIAL ACTION OBJECTIVES AND REMEDIAL GOALS AND DEVELOPMENT OF REMEDIAL ALTERNATIVES 2-1

2.1 Remedial Action Objectives and Remedial Goals 2-1
2.2 Development of Remedial Alternatives 2-3
2.2.1 General Response Actions 2-3
2.2.2 Specific Remedial Alternatives for the Site 2-4

3.0 DESCRIPTION OF REMEDIAL ALTERNATIVES 3-1

3.1 Alternative 1 – No Further Action 3-3
3.2 Alternative 2 – Expanded Cover System 3-5
3.3 Alternative 3 – Limited Removal and Long-Term Management 3-9
3.4 Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objective 3-17

4.0 DETAILED ANALYSIS OF ALTERNATIVES 4-1

4.1 Description of Evaluation Criteria 4-1
4.2 Alternative 1 – No Further Action 4-3
4.2.1 Overall Protection of Public Health and the Environment 4-3
4.2.2 Compliance with SCGs 4-4
4.2.3 Long-Term Effectiveness and Permanence 4-4
4.2.4 Reduction of Toxicity, Mobility or Volume with Treatment 4-4

4.2.5 Short-Term Effectiveness 4-4
4.2.6 Implementability 4-5
4.2.7 Cost 4-5
4.2.8 Land Use 4-5
4.3 Alternative 2 – Expanded Cover System 4-5
4.3.1 Overall Protection of Public Health and the Environment 4-5
4.3.2 Compliance with SCGs 4-5
4.3.3 Long-Term Effectiveness and Permanence 4-6
4.3.4 Reduction of Toxicity, Mobility or Volume with Treatment 4-6
4.3.5 Short-Term Effectiveness 4-6
4.3.6 Implementability 4-6
4.3.7 Cost 4-7
4.3.8 Land Use 4-7
4.4 Alternative 3 – Limited Removal and Long-Term Management 4-7
4.4.1 Overall Protection of Public Health and the Environment 4-7
4.4.2 Compliance with SCGs 4-8
4.4.3 Long-Term Effectiveness and Permanence 4-8
4.4.4 Reduction of Toxicity, Mobility or Volume with Treatment 4-8
4.4.5 Short-Term Effectiveness 4-8
4.4.6 Implementability 4-9
4.4.7 Cost 4-10
4.4.8 Land Use 4-10
4.5 Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objective 4-10
4.5.1 Overall Protection of Public Health and the Environment 4-10
4.5.2 Compliance with SCGs 4-11
4.5.3 Long-Term Effectiveness and Permanence 4-11
4.5.4 Reduction of Toxicity, Mobility or Volume with Treatment 4-11
4.5.5 Short-Term Effectiveness 4-11
4.5.6 Implementability 4-12
4.5.7 Cost 4-14
4.5.8 Land Use 4-14
4.6 Comparative Analysis of Alternatives 4-14
4.6.1 Overall Protection of Public Health and the Environment 4-14
4.6.2 Compliance with SCGs 4-15
4.6.3 Long-Term Effectiveness and Permanence 4-15
4.6.4 Reduction of Toxicity, Mobility or Volume with Treatment 4-16
4.6.5 Short-Term Effectiveness 4-16
4.6.6 Implementability 4-17
4.6.7 Cost 4-17

4.6.8 Land Use 4-17

5.0 RECOMMENDED REMEDIAL ALTERNATIVE 5-1

5.1 Basis for Recommendation 5-1

5.2 Recommended Remedy 5-4

REFERENCES 1

TABLES

Table 1 Summary of Remedial Alternative Components

Table 2 Summary of Remedial Alternative Cost Estimates

Table 3 Comparative Analysis of Remedial Alternatives

FIGURES

Figure 1 Site Location Map

Figure 2 Transformer Room Locations and Building Foundation Plan

Figure 3 Transformer Room No. 1 Current Conditions

Figure 4 Transformer Room No. 2 Current Conditions

Figure 5 PCB Concentrations in Concrete – Transformer Room No. 1

Figure 6 PCB Concentrations in Concrete – Transformer Room No. 2

Figure 7 PCB Concenrations in Soil Samples – Transformer Room No. 1

Figure 8 PCB Concentrations in Soil Samples – Transformer Room No. 2

Figure 9 Conceptual Layout for Alternative 2

Figure 10 Alternative 3-Estimated Removal, Transformer Room No. 1

Figure 11 Alternative 3-Estimated Removal, Transformer Room No. 2

Figure 12 Alternative 3-Proposed Details, Outside Transformer Room No. 1

Figure 13 Alternative 3-Proposed Details, Outside Transformer Room No. 2

Figure 14 Alternative 4-Remediation, Transformer Room No. 1

Figure 15 Alternative 4-Remediation, Transformer Room No. 2

Figure 16 Alternative 4-Proposed Details, Outside Transformer Room No. 1

Figure 17 Alternative 4-Proposed Details, Outside Transformer Room No. 2

APPENDICES

Appendix A	Structural Analysis on Thompson Building [Building 1], CityScape Engineering, PLLC, July 2017
Appendix B	Feasibility Study Cost Estimates
Appendix C	Conceptual Shoring Plan

ABBREVIATIONS

amsl	above mean sea level
bgs	below ground surface
CFR	Code of Federal Regulations
cm^2	square centimeters
CO_2	carbon dioxide
cy	cubic yards
DASNY	Dormitory Authority of New York State
DER-10	DER Technical Guidance for Site Investigation and Remediation
FS	Feasibility Study
ICs/ECs	institutional controls/engineering controls
IRM	interim remedial measure
kV	kilovolt
lf	linear feet
mg/kg	milligram per kilogram
MVA	megavolt ampere
NEC	National Electric Code
No.	Number
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYCDOB	New York City Department of Buildings
NYCRR	New York Code, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health

ABBREVIATIONS, CONTINUED

OM&M	operation, maintenance and monitoring
OMH	New York State Office of Mental Health
Order	Order on Consent
OSHA	Occupational Safety and Health Administration
PAHs	polycyclic aromatic hydrocarbons
Part 375	6 NYCRR Part 375 Environmental Remediation Programs
PC	Psychiatric Center
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppm	parts per million
PSA	Preliminary Site Assessment
RAOs	remedial action objectives
RIR	Remedial Investigation Report
SCGs	standards, criteria, and guidance
SCOs	(Part 375) Soil Cleanup Objectives
sf	square foot
SMP	Site Management Plan
SVOCs	semi-volatile organic compounds
TAGM	Technical and Administration Guidance Memorandum
TAL	target analyte list
TCL	target compound list
TICs	tentatively identified compounds
TMV	toxicity, mobility or volume
TOGS	Technical and Operational Guidance Series
TSCA	Toxic Substance Control Act
ug/100 cm^2	micrograms per 100 cm^2
ug/l	micrograms per liter
URS	URS Corporation – New York
USEPA	United States Environmental Protection Agency
V	volt
VOCs	volatile organic compounds

CERTIFICATION

I, Robert Murphy, PE, certify that I am currently a NYS registered professional engineer and that this Feasibility Study was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



Robert Murphy, PE
February 26, 2019

1.0 INTRODUCTION

URS Corporation – New York (URS), on behalf of the Dormitory Authority of the State of New York (DASNY) and the New York State Office of Mental Health (OMH), has prepared this *Revised Feasibility Study* (*FS*) for the Bronx Psychiatric Center located at 1500 Waters Place, Bronx, New York (i.e., herein referred to as the Site). URS submitted the original *FS* for the Site to the New York State Department of Environmental Conservation (NYSDEC) in July 2015. The NYSDEC and the New York State Department of Health (NYSDOH) provided comments on the original *FS* in November 2016. Since then, OMH, URS, NYSDEC, and NYSDOH have been working together to develop a mutually agreeable path forward. The nature of the changes to the original *FS* essentially warranted a re-write of the document. A second *FS* that superseded the original July 2015 submittal was submitted March 21, 2018. This revised document has been prepared in response to comments from the NYSDEC during February 2019.

1.1 Overview

Polychlorinated biphenyl (PCB) contamination is present at the Site due to leakage from two transformers previously located in two transformer rooms in the eastern side of the basement of Building 1. The Site location is presented on Figure 1. Leakage from the former transformers, which contained PCBs, has impacted the concrete floor in both of the rooms and migrated down into the underlying soil through the floor drains and cracks or joints in the concrete. The former PCB-containing transformers were replaced in February 1993 with non-PCB (silicone based) transformers. Remedial investigations and environmental monitoring events have been conducted at the Site since 1993.

During late 1993 to early 1994, OMH, NYSDEC, NYSDOH, and the United States Environmental Protection Agency (USEPA) agreed to defer remediation of the area until a major renovation project was planned for the Site. The agreement was not memorialized in a single document but was reached through numerous meetings, discussions, and letters during the period of May 1993 through February 1994. On May 10, 1993, OMH met with the USEPA and discussed the challenges of remediating the transformer vaults at a large operating facility along with a potential alternate approach to complete removal. OMH requested that removal of PCB containing concrete be delayed five years as it was anticipated that a major building renovation would occur in four to five years. The proposed interim solution of cleaning and epoxy coating

was documented in a letter to NYSDEC dated May 18, 1993. USEPA indicated during the site meeting that they would be agreeable to delaying remediation until major renovations occurred, if NYSDEC and NYSDOH found the approach acceptable. A series of discussions and letters followed, wherein specific procedures, supplemental sampling requirements, and other conditions were detailed and finalized. In a letter dated August 4, 1993, NYSDOH indicated that the approach adequately addressed most of their concerns, but presented several comments and conditions. In a letter dated September 15, 1993, the NYSDEC provided conditional approval of the interim cleanup. In a letter dated February 15, 1994, USEPA conditionally agreed to the proposed interim cleanup.

The primary reason for deferring remediation was the concern that the complete removal of the contaminated concrete and soil would cause the building to become structurally unsafe while the building was in use and the transformers energized. From 1993 through the present time, the building has remained in continuous service without major renovations.

On July 27, 2006, OMH received a letter from the NYSDEC indicating reclassification of the Site from a Class 2 to a Class 3 identifying that the "Site does not present a significant threat to the environment or public health – action may be deferred". The Inactive Hazardous Waste Disposal Report attached to the letter stated that the quarterly groundwater monitoring for the previous ten years had not detected any migration of PCBs. In addition, there had been no detections of PCBs in indoor air samples in the previous ten years. Therefore, no further action was required at the facility until either the facility was taken out of service, or the equipment in the transformer rooms needed to be upgraded or replaced.

A new Order on Consent (Order) and Administrative Settlement (Index # R2-0668-06-11) was issued to OMH by the NYSDEC on March 4, 2012. The *FS* is a requirement of the Order in light of OMH's plan to discontinue occupancy and transfer of the property to a new owner, whereupon a comprehensive renovation of the Site Structure is anticipated.

1.2 Site Description

The Site is located at 1500 Waters Place, Bronx, New York. It contains a multi-story building that was constructed in the late 1950s and for years was used as a 360-bed facility providing inpatient stabilization programs for individuals with co-occurring mental illness and

substance abuse disorders. The building is currently unoccupied. The Site is located in a mixed commercial and industrial use area.

The Building 1 transformers are located in two basement rooms along the eastern side of the building (Figure 2). The northern room is designated as Room No. 1 (Figure 3) and contains two transformers; and the southern room as Room No. 2 (Figure 4) and contains one transformer. Each transformer room can be accessed from the outside through a set of double doors in concrete-walled areaways. There are locked gates at the top of the areaways and the entrance room doors are locked. Access to the rooms from inside the building is controlled by a series of several locked basement doors and a single door for each transformer room. The building is constructed (Figure 2) on piles to bedrock with pile caps under the building columns and perimeter walls. Grade beams (the thickened section of the floor slab) and foundation walls are present around the perimeter of each transformer room. The transformer room floors are approximately 10 feet below ground surface (bgs) at the front (eastern side) of the building.

The Site is generally flat and is at an elevation of approximately 30 feet above mean sea level (amsl), according to the National Geodetic Vertical Datum of 1929. The two nearest surface water bodies are Eastchester Bay, approximately 1 mile east of the Site, and Westchester Creek, approximately 1/2 mile south of the Site. The Site is within the Manhattan Prong geologic region which is characterized by rolling hills and valleys. According to the Surficial Geologic Map of New York (New York State Geological Survey, 1989), the Site is underlain by relatively impermeable glacial till. During a previous investigation, fill comprised of fine to medium sand with fragments of coal, brick, glass, and wood was encountered beneath the transformer rooms. Saturated fill was encountered approximately 4 to 6 feet below the concrete floor. The depth to groundwater ranges from 10 to 15 feet below ground surface and is generally at a depth of 4 to 5 feet below the basement concrete floors. Groundwater flow is to the east/northeast.

1.3 Historical Actions and Interim Remedial Measures

OMH has conducted several actions, including replacement of the transformers, encapsulation of the concrete floors, and inspection and maintenance of the epoxy-covered floors, and interim remedial measures (IRMs) at the Site since 1993. These actions and IRMs are described below.

1.3.1 Replacement of Transformers

The former PCB-containing transformers were replaced in February 1993 with non-PCB (silicone based) transformers.

1.3.2 Encapsulation of Concrete Floors

In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed and only a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed.

1.3.3 Epoxy Floor Inspection and Maintenance

From 1995 to 2017, OMH completed visual inspections of the epoxy floor coatings in both transformer rooms on a regular basis. Wipe samples were taken to confirm the effectiveness of the interim cleanup. Wipe sampling was done semi-annually until 2007, when the frequency was reduced to annual sampling. Sampling was temporarily suspended in 2017 because the rooms were not being accessed regularly by maintenance personnel. Annual inspections and sampling resumed in 2018. If damage to the epoxy coating was noted during the visual inspections, or if the results of the wipe sampling did not meet the USEPA cleanup standard of 10 micrograms per 100 square centimeters (ug/100 cm^2) in accordance with PCB spill cleanup requirements defined in 40 Code of Federal Regulations (CFR) 761.125, the affected areas were cleaned following the Double Wash/Rinse Method outlined in 40 CFR Part 761 Subpart S. The cleaned areas were then covered with a layer of two-part epoxy as outlined in 40 CFR Part 761.30(p)(1)(iii)(A).

1.3.4 Interim Remedial Measures

IRMs were developed and implemented at the Site to minimize the potential PCB exposure within and below the transformer rooms in accordance with the approved IRM Work Plan, dated November 23, 2004, and included:

- On July 27, 2005, URS sealed the openings (up to ½-inch gaps) in the exterior walls of Transformer Rooms No. 1 and No. 2 with a polyurethane caulk to prevent any wind-swept rain from entering the transformer room. Most of the openings were between the ventilation fans and the exterior walls.

- The space between the base of the electrical equipment and the floor (typically less than 1/8 inch) was sealed with a polyurethane caulk to isolate the floor beneath the transformers from the concrete flooring surrounding the transformers.

1.4 Current Site Conditions and Analysis of Remaining Impacts

Currently, Building 1 no longer houses patients, but the transformer rooms remain energized to provide limited power to essential services. Room No. 1 contains a double-ended 13.8 kilovolt (kV) to 480 volt (V) transformer with a primary disconnect switch, switchgear, and lighting transformer. Room No. 2 contains a 13.8 kV to 480 V transformer with a primary disconnect switch, switchgear, lighting transformer, and a tie breaker that is used to back feed Room No. 2 when necessary. No additional details were provided on the type of the transformers power configuration (i.e., delta or wye) or their rated megavolt ampere (MVA) load capacity.

A comprehensive Remedial Investigation Report (RIR) was prepared by URS and submitted to NYSDEC in November 2016 to provide a detailed overview of all of the previous investigations dating back to 1993. A full list of the reports summarized is included in the References section of this *FS*. The investigations evaluated the extent of PCB contamination within the concrete floor, concrete surfaces, subsurface soils, groundwater and ambient air. The results of the investigations determined that PCB contamination is limited to concrete and subsurface soils below the concrete floor slab in Transformer Rooms No. 1 and No. 2. The delineation of PCBs in concrete and soil was deemed sufficient to determine a remedial path.

URS used the figures developed for the RIR in conjunction with available construction plans for Building 1 (Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, 1958) to develop comprehensive figures which show both sampling locations and details on the floor slab, grade beams, and pile caps. Figures 5 and 6 of this *FS* summarize PCB concentrations found in concrete samples from Transformer Rooms No. 1 and No. 2, respectively. Figures 7 and 8 summarize the PCB results of soil samples from beneath Rooms No. 1 and No. 2, respectively. The remaining impacts are described below.

1.4.1 Concrete

As shown in Figure 2, concrete structures in the transformer rooms include floor slabs and grade beams around the room perimeters, as well as concrete piles and pile caps, which are

located below the slabs. The floor slab is 6 to 18 inches thick. The caps, which are under the slab, vary in thickness from 2 feet to 4.5 feet, and sit on top of the piles. Concrete sample locations in relation to the slab, grade beams, and foundation components for Transformer Rooms No. 1 and No. 2, are shown in Figures 5 and 6, respectively. As shown, concrete samples were not collected from the pile caps or piles. Sample results indicated that there were PCB impacts to the concrete floor slabs and the grade beams around the perimeter of each room. In several areas, soil or concrete samples near the pile caps have exhibited elevated concentrations of PCBs, and in these cases we have estimated for the purpose of this *FS* that the pile caps have been impacted. Based on the contaminant distribution and the thickness of pile caps, we conclude that it is unlikely that the piles themselves have been impacted.

1.4.2 Soil

As shown in Figure 7, soil samples near the former drain area in Transformer Room No. 1 had significant PCB concentrations (up to 23,000 milligrams per kilogram [mg/kg]) in the top 4 feet of soil. The findings suggest that the drain allowed material to flow directly into the subsurface. The groundwater table was at 4 feet below the concrete slab bottom and PCB field test results did not indicate contamination below this depth. As shown in Figure 8, soil sampling results also indicated that elevated concentrations of PCBs were present in soil near the drains in Transformer Room No. 2. Elevated concentrations of PCBs were found in both Transformer Rooms No. 1 and No. 2 where staining was observed prior to the interim remedial measures.

1.5 Structural Analysis

A portion of the Site that is no longer being used to provide mental health services, including Building 1, is under contract for sale and redevelopment. It is anticipated that the remedy selected through the FS process will be implemented by the prospective purchaser in conjunction with Site redevelopment activities, which include renovation of Building 1. As such, OMH included the parties representing the prospective purchaser and property developer in discussions with the NYSDEC and NYSDOH to develop the remedial alternatives that are evaluated in this *FS*.

The prospective purchaser retained an engineering firm in 2017 to perform a structural analysis to evaluate and identify potential limits to soil and concrete removal as it pertained to the alternatives evaluated in the *July 2015 FS* and subsequent discussions. The letter report entitled

Structural Analysis on Thompson Building [Building 1], prepared by CityScape Engineering, PLLC is provided as Appendix A.

The remainder of this document describes the remedial objectives and goals for the Site and the process for developing the alternatives. It also describes each alternative in detail, provides a detailed analysis of each alternative, and concludes with a recommendation of a remedial alternative to address the PCB contamination associated with the two transformer rooms.

2.0 REMEDIAL ACTION OBJECTIVES AND REMEDIAL GOALS AND DEVELOPMENT OF REMEDIAL ALTERNATIVES

2.1 Remedial Action Objectives and Remedial Goals

The overall remedial action objective (RAO) for the Site is to protect human health and the environment. Specifically, the RAOs in the Building 1 Transformer Rooms are to:

- Minimize direct contact by site workers and the public with soil and concrete that may contain contaminants;
- Prevent migration of contaminants that would result in groundwater or surface water contamination; and
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

As discussed in the RIR, PCB impacts are limited to the concrete and soil beneath the transformer rooms in the electric vaults located in the basement of Building 1. Many years of groundwater monitoring demonstrates that groundwater at the Site has not been impacted by PCBs. The isolated location of the impacts prevents biota from contacting or ingesting PCB-impacted soil or concrete. Therefore, the remedial goals for the Building 1 Transformer Rooms will focus on minimizing potential direct contact by site workers and the public.

Under existing conditions, workers could potentially come into contact with PCB-contaminated concrete in the Building 1 Transformer Rooms but not the soil underlying the concrete. It is currently anticipated that the building will be sold and that the new owner will undertake substantial renovations. There is currently no indication that the electrical rooms will change use. In the absence of remediation, future construction and other workers (e.g., utility, maintenance) could be exposed to PCB-contaminated soil.

The overall RAO for this Site is to eliminate or mitigate significant threats to human health and/or the environment, to the extent practicable, from soil and concrete that has been impacted by PCBs in Building 1 Transformer Rooms. The remedial goals will focus on minimizing potential direct contact by site workers and the public. In order to meet this goal, the

following potentially applicable cleanup objectives have been identified to protect human health in compliance with NYSDEC Part 375.

Media	RAO for	RAO & Potentially Applicable Cleanup Objectives/Levels
Concrete	Worker Health Protection	o Prevent human exposure (ingestion/direct contact) to the contaminated concrete surface under current conditions.
Subsurface Soil	Worker Health Protection	o Prevent human exposure (ingestion/direct contact) to soil exceeding soil cleanup objectives (SCOs) based on site use and anticipated future conditions: ▪ CP-51 presumptive SCO 10 parts per million (ppm) PCB; and ▪ Part 375 SCO for residential, restricted-residential, and commercial uses of 1 ppm PCB.

In addition to remedial goals and potentially applicable cleanup objectives outlined in 6 New York Code, Rules and Regulations (NYCRR) Part 375, the cleanup requirements specified by USEPA in Toxic Substance Control Act (TSCA) (40 CFR Part 761) will also be considered in developing and evaluating potential remedial actions for the Site. Similar to Part 375, the provisions in TSCA account for different levels of site use and impacted media. Potentially applicable remedial cleanup goals specified in Part 761.61 are listed below.

Media	Location	PCB Cleanup Objective
Concrete (and subsurface material)	High or Low Occupancy Areas	o Continued use of porous surface in accordance with 761.30(p) containing more than 10 ug/100 cm^2 for remainder of useful life of surface and subsurface material following double wash rinse procedure for accessible areas, either epoxy coating or solid barrier fastened to the surface, and labeling.

Media	Location	PCB Cleanup Objective
Subsurface Soil	High Occupancy Areas	o Less than or equal to 1 ppm without further conditions; or o Less than or equal to 10 ppm and covered with a cap.

The potentially applicable cleanup objectives described above guided the development of the remedial alternatives discussed below.

2.2 Development of Remedial Alternatives

In order to develop remedial alternatives for the Site, the *FS* evaluated general response actions and their ability to satisfy the RAOs for the Site. The development process is provided below.

2.2.1 General Response Actions

General response actions are broad categories of remediation approaches capable of satisfying RAOs and achieving compliance with applicable regulatory cleanup objectives that may vary based on jurisdiction and site use. Some response actions may be sufficiently broad to be able to satisfy all RAOs for the Site as a whole. Other response actions must be combined. Remedial alternatives have been identified for this *FS* which correspond to the general response actions of no further action, institutional controls, containment, and removal. A brief description of each of the general response actions follows:

- **No Further Action** - The National Oil and Hazardous Substances Pollution Contingency Plan requires that a no action/no further action alternative be evaluated as part of the FS process. This provides no additional measures to provide protection to human health and the environment and is used as a baseline for comparing the other alternatives.
- **Institutional Controls** – Institutional controls, such as an environmental easement and use restrictions, are measures to provide protection to human health and the environment by documenting areas of contamination and

ensuring long-term implementation of measures that limit exposure to contamination. Institutional Controls are frequently implemented in conjunction with a Site Management Plan that specifies the long-term management protocols.

- **Containment** – Containment measures are those remedial actions whose purpose is to contain and/or isolate contaminants. These measures provide protection to human health and the environment by reducing exposure to and migration of contaminants, but they do not treat or remove the contamination. Containment measures are considered engineering controls.
- **Removal** – Excavation of contaminated soil and concrete removal are remedial actions whose purpose is to remove contaminants. Combined with off-site treatment and/or disposal, removal provides protection to human health and the environment by eliminating the contaminant mass and limiting the exposure or migration of contaminants.

2.2.2 Specific Remedial Alternatives for the Site

Four remedial alternatives were developed for the Site based on the general response actions. The approach for developing each of the alternatives is summarized below. The four alternatives and the general response actions incorporated for this *FS* include:

1. No Further Action – This alternative is included for comparison purposes and incorporates continued management of the interim remedial measures already in place at the Site.

2. Containment and Intuitional Controls – This alternative incorporates an expanded epoxy coating along with institutional controls to provide for long-term management of residual PCB impacts. This alternative was developed to align with TSCA regulations that allow the continued use of PCB-impacted porous surfaces (concrete) and underlying materials under certain conditions.

3. Limited Removal, Containment, and Institutional Controls – This alternative was developed to incorporate a removal and containment approach that would meet

EPA's TSCA regulations while also achieving NYSDEC's promulgated cleanup objectives for subsurface soil.

4. Removal – This alternative incorporates removal of soil and concrete to achieve state and federal cleanup standards for PCBs that minimize restrictions on Site use and eliminated the need for long term management. This alternative was developed to achieve the Part 375 Residential SCO for PCBs.

The four alternatives are described in detail in Section 3.0.

3.0 DESCRIPTION OF REMEDIAL ALTERNATIVES

This section presents a detailed description, cost estimate and underlying assumptions for each of the four remedial alternatives for the Site. The alternatives were developed following discussions between URS, OMH, and the NYSDEC, and include input from the prospective purchaser of the property, who will likely be implementing the remedy. The alternatives consider the findings of the structural analysis performed by a consultant for the prospective purchaser and correlate with USEPA's TSCA regulations. The alternatives developed for the *FS* still stem from the assumption that work would be conducted when the electrical equipment at the Site can be de-energized and removed to facilitate cleanup under the transformers.

As discussed in Section 2.0, the four remedial alternatives that were developed to meet the overall RAO for the Site and are considered in this *FS* are:

- **Alternative 1 – No Further Action:** No further remedial actions (remain as a Class 3 Inactive Hazardous Waste Site), continue annual wipe sampling, continue to maintain epoxy floor coating, and implement Institutional Controls and Engineering Controls (ICs/ECs) including an environmental easement and a Site Management Plan (SMP).

- **Alternative 2 – Expanded Cover System:** Notify USEPA of intent to perform a self-implementing cleanup, remove existing equipment, scarify the surface of the concrete, re-apply epoxy floor coating, replace electrical equipment, maintain the expanded epoxy floor coating, and implement ICs/ECs including an environmental easement and a SMP. The Site will remain as a Class 3 Inactive Hazardous Waste Site.

- **Alternative 3 – Limited Removal and Long Term Management:** Notify USEPA of intent to perform a self-implementing cleanup, remove existing equipment, remove portions of concrete slab, excavate and dispose off-site soil with greater than 10 ppm PCBs, perform limited dewatering (if necessary), collect confirmation samples for PCB analysis to verify cleanup objective has been achieved, place a demarcation layer, backfill excavation, replace the concrete floor, construct a concrete cap over residually impacted soil and concrete, replace electrical equipment, and implement ICs/ECs including an environmental easement and a SMP. This alternative would include a sampling program to evaluate whether soil beneath the transformers contains elevated concentrations of PCBs. The Site would be reclassified as a Class 4 Inactive Hazardous Waste Site.

- **Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objective:** Notify USEPA of intent to perform a self-implementing cleanup; perform a pre-design investigation to refine removal boundaries and support the development of a detailed remedial design and work sequence; develop a shoring plan to support the building loads during remedial work; develop a dewatering plan and obtain a temporary discharge permit for treated water; remove existing equipment; remove and dispose off-site interior portions of concrete slab; excavate and dispose off-site soil with greater than one ppm PCBs; dewater excavation; collect confirmation samples for PCB analysis to verify cleanup objective has been achieved; treat and discharge remedial wastewater in accordance with permit terms; backfill excavation to four feet below slab; initiate step-wise shoring, structural concrete removal and structural concrete reconstruction; backfill excavations, reconstruct removed walls and slabs, and replace electrical equipment. This alternative would result in Part 375 residential soil cleanup objective for PCBs being achieved without ICs or ECs, which would allow the Site to be de-listed.

  The alternatives are discussed below with regard to:

  - Size and configuration;
  - Time duration for remedial construction;
  - Spatial requirements;
  - Disposal considerations;
  - Permitting requirements, approvals, and pre-design studies;
  - Limitations;
  - Ecological impacts; and
  - Present worth of the capital and annual costs.

Components of the remedial alternatives are presented on Table 1. Costs are summarized on Table 2 and presented in detail in Appendix B.

3.1 Alternative 1 – No Further Action

Alternative 1 is the No Further Action alternative that includes no remediation and limited exposure controls. With this alternative, the site would remain listed on the state registry as a Class 3 Inactive Hazardous Waste Site. Annual wipe sampling and analysis would be conducted and the existing epoxy floor coating would be maintained in the accessible areas (i.e., surrounding the existing electrical equipment). Since this is an alternative which is protective of human health but not a treatment/removal alternative, the following components are included:

- Long-term annual inspection, cleaning and maintenance of existing epoxy floor coating; and
- ICs including an environmental easement and a SMP to protect human health and the environment. ICs would:
    - Require compliance with the approved SMP which would include requirements for managing potential exposure to residual contaminated soil including procedures for soil characterization, handling, disposal, and health and safety of workers and the community;
    - Limit the use and development of the property to specific uses (i.e., commercial);
    - Require the long-term maintenance and monitoring of engineering controls (e.g., epoxy surfacing) in accessible areas; and
    - Include requirements to complete and submit periodic certification to the NYSDEC.

Size and Configuration

- No existing equipment present in the transformer rooms would be moved.
- The readily accessible portions of epoxy floors in each transformer room would be maintained by cleaning and re-applying epoxy as necessary following an inspection for its integrity.
- Annual wipe sampling and analysis would be conducted in accordance with the SMP.

- A Periodic Review Report would evaluate Site conditions, operation, maintenance and monitoring (OM&M) activities, and recommend any necessary changes.

Time Duration for Remedial Construction

- No time would be required for remedial construction because the epoxy coating is already in place.
- A short period of time, on the order of a few days, would be required for the sampling that would be performed on an annual basis. If the inspection and sampling indicated that maintenance on the epoxy coating was necessary in a given year, the cleaning, and re-applying of epoxy would likely be on the order of a week or less.
- For the purpose of this report, a 30-year period is assumed for sampling, maintenance and reporting.

Spatial Requirements

- There are no spatial requirements for this alternative.

Disposal

- There would be a limited amount of materials generated during the cleaning and/or application of epoxy that would require disposal.

Permit Requirements, Approvals and Pre-Design Studies

- No permits or additional studies would be required.
- For the purpose of this *FS* we have assumed the original USEPA approval would be sufficient and no additional notification or approval would be needed.

Limitations

- Access to the flooring in the transformer rooms would be limited while the epoxy was drying.

Ecological Impacts

- Implementation of this alternative is not anticipated to have any significant impacts on wildlife resources.

Costs

- There is no capital cost associated with this alternative.
- As presented on Table 2, the annual cost of this alternative is $11,500.
- The total present worth for this alternative for a 30-year period and 4% discount rate is $207,000.

3.2 Alternative 2 – Expanded Cover System

Alternative 2 is an expanded cover system where the epoxy coating would be installed throughout both transformer rooms, including those areas currently covered by equipment. This alternative would likely result in the Site classification remaining as a Class 3 Inactive Hazardous Waste Site because PCB-impacted soil and concrete would not be removed with this alternative.

For this alternative, electrical equipment in the rooms would need to be de-energized, removed, and then replaced following the remedial construction. We have assumed that temporary electric service would not be required because we have assumed that the remedial construction would occur while the building is under renovation. It is assumed that equipment removal and new equipment installation could occur through the existing external access points for each transformer room.

Alternative 2 includes scarifying, cleaning and coating the surfaces of the concrete floor in both transformer rooms as indicated on Figure 9. The concrete floor surface in each room would be scarified to remove the existing epoxy. The concrete surface would be cleaned in accordance with the double wash rinse procedure followed by double epoxy coating of the concrete in contrasting colors and labeling the floor with the PCB (M_L) mark as outlined in TSCA regulations for continued use of porous surfaces impacted by PCBs (40 CFR 761.30(p)). Solid and liquid waste generated during the work would be containerized and disposed off-site at appropriately permitted facilities.

In addition to the remedial components, since this is an alternative which is protective of human health but not a treatment/removal alternative, the following components are included:

- Long-term annual inspection, cleaning and maintenance of epoxy floor coating; and

- ICs including an environmental easement and a SMP that would include a limitation on excavating soil from under Transformer Rooms No. 1 and No. 2 to protect human health and the environment. ICs would:

    - Require compliance with the NYSDEC-approved SMP which would include requirements for managing potential exposure to residual contaminated soil including procedures for soil characterization, handling, disposal, and health and safety of workers and the community;

    - Limit the use and development of the property to specific uses (i.e., restricted-residential and/or commercial);

    - Require the long-term maintenance and monitoring of engineering controls (e.g., epoxy surfacing); and

    - Include requirements to complete and submit periodic certification to the NYSDEC.

Size and Configuration

- In order to gain access to the basements, the metals door and adjacent metal walls with louvers would be removed from the external access points at each building (subgrade basement area stairwells).
- The existing electrical equipment from Transformer Rooms No. 1 and No. 2 would be removed through the existing external access points and disposed/salvaged off-site at appropriate facilities.
- Scarifying, cleaning, and coating of the floor over the entire area of each transformer room (approximately 1,100 square feet [sf] in each room) could be readily accomplished once all equipment was removed.
- A limited quantity of waste would be generated during remedial activities.
- When the floor work is complete, new electrical equipment would be installed. It is assumed for this alternative that no concrete work (foundation or equipment pads) would be necessary.

- Once the new equipment is installed, the removed exterior doors and metal louvered panels would be replaced and any areas outside the building that were damaged would be restored.
- Annual inspection, cleaning, and maintenance of the epoxy coating on the concrete within Transformer Rooms No. 1 and No. 2 would be conducted in accordance with the SMP.
- A Periodic Review Report would evaluate Site conditions, OM&M activities and recommend any necessary changes.

Time Duration for Remedial Construction

It is assumed that remedial activities would not be undertaken until power in the rooms is de-energized. A total of approximately 5 months (19 weeks) of construction-related time is estimated for this alternative, with the remedial aspect of the work comprising a small portion of the schedule. The duration for the various tasks included in the construction are as follows:

- Start-up, mobilization, and submittals are estimated to take 6 weeks.
- At least 4 weeks would be required to remove all the electrical equipment from both rooms once it is de-energized.
- The time frame to inspect, clean and re-epoxy the floors is approximately one week.
- Approximately 4 weeks of installation time is estimated to replace all the electrical equipment and mount all the termination panels, etc.
- Final Site restoration and closeout time is estimated at 2 weeks.
- For the purpose of this report, a 30-year period is assumed for inspection, cleaning, maintenance and reporting.

Spatial Requirements

- In order to move electrical equipment into and out of the basement areas, the metal doors and adjacent metal louvered panels in the stairwells would be removed for each room. It is assumed that the existing electrical equipment could be removed and that the new electrical equipment could be installed through the opened external access points.

- Site ingress/egress, staging, and trailer areas would be required for necessary equipment. Access to the green space and/or parking area in the front of the building would be needed during remediation.
- A secure area for managing and storing remediation waste would be necessary for a period of a few weeks.

Disposal

- The existing electrical equipment may contain lead paint and PCBs. Proper characterization would have to be conducted prior to disposal or possible salvage.
- Limited amounts of PCB remediation waste would be generated during the remedial work. Solid and liquid waste generated during the scarification and cleaning of the concrete floor would be containerized and disposed at appropriately licensed facilities. An estimated 220 gallons of liquid waste would be generated from cleaning the concrete and an estimated four drums of solid TSCA waste would be generated from concrete scarification.

Permit Requirements, Approvals and Pre-Design Studies

- A detailed utility survey would be needed.
- A notification would need to be made to USEPA regarding the self-implementing cleanup. USEPA-approval is not anticipated to be needed because this alternative has been designed to comply with the self-implementing TSCA regulations.
- The most recent National Electric Code (NEC) and New York City (NYC) building codes would have to be met.
- An inspection may be required by one or more of the following entities following the installation of the equipment: power provider Con Edison; the local electrical safety inspection authority; and the NYC Electrical Building Inspector; and permitting authority.

Limitations

- It is assumed that the existing equipment may be dismantled and cut into smaller pieces if necessary, to be removed. It is assumed that new equipment could be

installed through the existing external access points for Transformer Rooms No. 1 and No. 2.

- Due to the close proximity of nearby buildings, the construction activities could have impacts on nearby residents, nearby property owners, and roadways through: noise from the demolition and construction activities and equipment; and noise, traffic and dust from trucks and workers entering and leaving the project Site. These would have to be mitigated through adequate plans and specifications, and adherence to local ordinances.
- Access to the flooring in the transformer rooms would be limited while the epoxy was curing.
- The future use of the Site would be limited to the provisions identified in the SMP and environmental easement.

Ecological Impacts

- Implementation of this alternative is not anticipated to have any significant impacts on wildlife resources.

Costs

- As presented on Table 2, the capital cost associated with this alternative is $1,306,000.
- The annual cost of this alternative is $11,500.
- The total present worth for this alternative for a 30-year period and 4% discount rate is $1,513,000.

3.3 Alternative 3 – Limited Removal and Long-Term Management

Alternative 3 would include limited removal of PCB-impacted concrete and soil beneath each transformer room, followed by installation of a concrete cap over remaining impacts and long-term management. For this alternative, subsurface soil with greater than 10 ppm PCBs would be removed to achieve the presumptive cleanup level for subsurface PCBs provided in in CP-51 Soil Cleanup Guidance, which is expected to result in restricted-residential and/or commercial use of the Site and to allow the Site to be re-classified to a Class 4 Inactive Hazardous Waste Site. Notification to USEPA of the intent to perform a self-implementing

cleanup would be made prior to the start of work. In the event that circumstances beyond those anticipated were encountered during implementation that made achieving a 10 ppm cleanup objective for subsurface soil technically impracticable, the project objectives would be reviewed with NYSDEC and a risk-based approval from USEPA would be sought.

For this alternative, electrical equipment in the rooms would need to be de-energized, removed, and then replaced following the remedial construction. We have assumed that temporary electric service would not be required because we have assumed that the remedial construction would occur while the building is under renovation. It is assumed that equipment removal and new equipment installation could occur through the existing external access points or a slightly enlarged version for each transformer room.

In order to access soil beneath each room that contains greater than 10 ppm PCBs, the concrete floor slab in each room would be removed. For the purpose of this *FS*, we have assumed that the central part of the slab would be removed and the grade beams around the perimeter of each room would remain undisturbed to limit both the risk to the building structure and the need for shoring during remedial activities. Actual limits of removal, along with an evaluation of potential temporary shoring for the excavation, would be determined during the design phase. For this alternative, it is assumed that a limited soil investigation would be performed prior to excavation to refine the extent of impacts near the former floor drains. The estimated extent of concrete and soil removal is shown on Figures 10 and 11. For the purpose of this *FS*¸ it was assumed that limited soil excavation from beneath the water table would be necessary, and therefore, limited dewatering would be required. Post-excavation soil sampling would be performed to verify that the cleanup objectives would be met.

For Alternative 3, a demarcation layer would be placed, the excavation would be backfilled and the removed section of slab would be replaced before a six-inch thick concrete cap would be installed over the remaining PCB-impacted soil and concrete. The cap would be constructed to meet the requirements of 40 CFR 761.61(a)(7) and would minimize the potential for human exposure. After construction of the cap, replacement electrical components would be installed to complete the restoration of each of the two transformer rooms.

In addition to the remedial components, since this is an alternative which is protective of human health but not a complete treatment/removal alternative, the following components are included:

- ICs including an environmental easement and a SMP that includes a limitation on excavating soil from under Transformer Rooms No. 1 or No. 2 to protect human health and the environment. ICs would:

    - Require compliance with a NYSDEC-approved SMP which would prohibit excavating under the floor of Transformer Rooms No. 1 and 2 without prior approval of the NYSDEC and would include requirements for managing potential exposure to residual contaminated soil including procedures for soil characterization, handling, disposal, and health and safety of workers and the community;

    - Limit the use and development of the property to specific uses (i.e., restricted-residential and/or commercial);

    - Require completing and periodically submitting certification statements to the NYSDEC (annual certification documenting the presence and condition of the engineering control [e.g. concrete cap] and verifying that no soil had been removed).

Size and Configuration

- In order to gain access to soil below the concrete slabs, the metals door and adjacent metal walls with louvers would be removed from the external access points at each building (subgrade basement area stairwells) as indicated on Figures 12 and 13. A crane would be used to lift equipment into and out of the stairwell areas, the nearby trees would be trimmed and the existing light poles would be temporarily moved. It would be the goal to preserve existing trees. Existing utilities, including the current underground service, are known to be present in front of the building. These existing utilities would have to be identified and properly protected to prevent potential damage from the crane. A temporary access road would be constructed to facilitate access to each of the transformer rooms.

- The existing electrical equipment from Transformer Rooms No. 1 and No. 2 would be permanently removed and disposed/salvaged off-site at appropriately licensed facilities.
- The thickness of the concrete slabs was found to be between 6 and 18 inches. An overall average of 12 inches was assumed for costing purposes. The volume of concrete to be removed is approximately 1,542 sf (both rooms combined), for a total of 57 cubic yards (cy). Concrete would be broken up by man-operated or equipment-mounted jackhammer and removed. A crane would be used to lift the excavated material out of the basement area.
- Once the concrete flooring was removed, soil removal would be performed. Excavation would be performed using a combination of a mini-excavator and manual labor. An estimated 43 cy of soil would be removed from Transformer Room No. 1 and 29 cy from Transformer Room No. 2.
- Dewatering would be performed as necessary during excavation beneath the water table. It is assumed that work would be sequenced to limit the need to dewater the excavation. For cost estimate purposes, and as discussed in Appendix B, it was estimated that no more than 21,000 gallons of wastewater would be generated from dewatering and equipment decontamination activities.
- Post-excavation soil samples would be collected and analyzed for PCBs in accordance with a Sampling and Analysis Plan to document remaining PCB concentrations.
- Removed concrete and soil would be characterized to develop waste profiles as necessary to meet transport and disposal facility requirements for disposal off-site. For cost estimating purposes, it was conservatively assumed that removed concrete and soil that exhibits PCB impacts of greater than one ppm would be managed and disposed of at an appropriately authorized hazardous waste landfill/PCB disposal facility approved under TSCA.
- The horizontal and vertical extent of the excavation would be recorded. A demarcation layer would be placed over the excavation bottoms, and excavated areas inside the building would be backfilled with clean soil from an approved off-site

source (meeting restricted-residential use criteria) and compacted to the desired final grade in preparation for reconstruction of the concrete slab.

- For structural stability, the concrete grade beams would not be removed along the perimeter of the walls.
- Existing pile caps underneath the transformer rooms would be protected during floor demolition work to the extent possible. Historical foundation drawings show the floor to be placed directly on top of the pile caps with no structural (rebar) connection between floor and pile caps. Some bonding of floor concrete with the top surface of pile caps may have occurred during original floor construction so some non-structural damage to pile caps could occur during floor demolition; but this is not expected to be significant if careful floor demolition is performed at pile cap locations.
- After the reinforced slab has been constructed, a six-inch thick concrete cap would be installed over the slab in each of the transformer rooms. When the cap construction is complete, replacement electrical equipment would be installed to return the transformer rooms to full functionality.
- Once the new equipment is installed, the removed exterior doors and metal louvered panels would be replaced. Any damaged areas outside of the building due to access roads, trailers, or the weight of the crane would be raked out and topsoil would be added, if necessary, and the areas would be seeded. The two existing light poles that are anticipated to be temporarily removed would be replaced.
- An annual certification documenting the presence and condition of the concrete cap and verifying that no soil had been removed would be provided in accordance with the SMP for the duration of the building operation.
- A periodic Review Report would evaluate Site conditions and recommend any necessary changes.

Time Duration for Remedial Construction

It is assumed that remedial activities would not be undertaken until power in the rooms is de-energized. A total of approximately 8.5 months (37 weeks) of construction-related time is estimated for this alternative. A slightly shorter duration might be achieved with careful

sequencing and if different crews and equipment were used to expedite the work. For the purpose of this *FS*, the estimated task durations are as follows:

- Start-up, mobilization, and contractor submittals are estimated to take 6 weeks.
- At least 4 weeks would be required to remove all the existing electrical equipment in both rooms on the floor once it is de-energized.
- The time for concrete floor removal, soil excavation, backfill, floor reconstruction, and cap constructions is estimated at 15 weeks.
- Approximately 6 weeks of installation time is estimated to replace all the electrical equipment. This includes constructing equipment foundations.
- Final Site restoration and closeout time is estimated at 6 weeks.
- For the purpose of the cost estimate presented in this report, a 30-year period is assumed for certification and reporting.

Spatial Requirements

- Pre-characterization sampling would be conducted to meet the requirements of the disposal facility and limit the need to store waste at the Site.
- In order to gain access to the basement areas, the metal doors and adjacent metal louvered panels in the stairwells would be removed. A (single) crane for both Transformer Rooms No. 1 and No. 2 would be used to lift equipment and materials into and out of the subgrade basement area stairwells.
- It is assumed that the existing electrical equipment could be removed and the new electrical equipment could be installed through the opened existing external access points in Transformer Rooms No. 1 and No. 2. Furthermore, it is assumed that equipment to remove the concrete floor, excavate soils, and remove the soil from the building could be moved into both rooms.
- Site ingress/egress, staging, and trailer areas would be required for necessary equipment. Access to the green space and/or parking loop in the front of the building would be impacted during remediation.

Disposal

- Excavated soil would be transported off-site to an appropriate landfill. For the purpose of this *FS*, we have assumed that the PCB-impacted material (concrete and soil) would be disposed of at an appropriately authorized hazardous waste landfill/ PCB disposal facility approved under TSCA. For costing purposes, other soil that would be excavated to facilitate the remedial work is anticipated to have constituents typically found in historic fill (potentially including polycyclic aromatic hydrocarbons [PAHs]). It is assumed that the concentrations of these constituents would be acceptable for disposal of the material at a solid waste landfill.
- Wastewater would be generated from dewatering the excavation when removing deeper soils, and would also be generated during decontamination procedures and management of saturated soils. For the purpose of this *FS*, it is assumed that liquids would be treated on site and discharged under the terms of a discharge permit. Off-site treatment or disposal of wastewater could be a viable alternative for project-generated wastewater.
- The presence of paint on the surfaces of the electrical components could indicate a high level of lead, requiring abatement on equipment, surfaces and/or waste before it could be disposed. The paint surfaces in both rooms would need to be tested for lead and PCB contamination to determine appropriate disposal requirements.

Permit Requirements, Approvals and Pre-Design Studies

- A notification would need to be made to USEPA regarding the self-implementing cleanup. USEPA-approval is not anticipated to be needed because this alternative has been designed to comply with the self-implementing TSCA regulations.
- A pre-design investigation would be undertaken to refine excavation limits.
- A detailed utility survey would be needed.
- A shoring permit from NYCDOB might be necessary for the excavation.
- A detailed review of the final remedial excavation plan should be made by a licensed NYS engineer in conjunction with a study on structural components of the building to verify that shoring is not necessary.

- It is assumed that a permit for discharging treated project wastewater would be necessary from the NYCDEP, although off-site disposal of wastewater could be selected in the design phase.
- The most recent NEC and NYC building codes would have to be met.
- An inspection could be required by one or more of the following entities following the installation of the equipment: power provider Con Edison; the local electrical safety inspection authority; and the NYC Electrical Building Inspector; and permitting authority.
- If conditions other than those anticipated were encountered during excavation that resulted in it being technically infeasible to attain the planned remedial goals, a risk-based approval from USEPA would need to be obtained.

Limitations

- It is assumed that the existing equipment may be dismantled, if necessary, to be removed.
- Due to the close proximity of nearby buildings, the construction activities could have impacts on nearby residents, nearby property owners, and roadways through: noise from the demolition and construction activities and equipment; and noise, traffic and dust from trucks and workers entering and leaving the project Site. These would have to be mitigated through adequate plans and specifications, and adherence to local ordinances.
- The future use of the Site would be limited to the provisions identified in the SMP and environmental easement.

Ecological Impacts

- Implementation of this alternative is not anticipated to have any significant impacts on wildlife resources.

Costs

- As presented on Table 2, the capital cost associated with this alternative is $2,193,000.
- The annual cost of this alternative is $4,600.
- The total present worth for this alternative for a 30-year period and 4% discount rate is $2,276,000.

3.4 Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objective

Alternative 4 would include removal of PCB-impacted concrete and soil beneath each transformer room with a remedial goal of achieving complete removal of concrete and soil with greater than one ppm PCBs. This cleanup goal would meet the NYSDEC's Part 375 residential use SCO for PCBs in soil, and meet the USEPA's high occupancy area PCB cleanup objective. Achieving complete removal of concrete and soil with greater than one ppm PCBs would result in no long-term ICs or ECs under Part 375. Notification to USEPA of the intent to perform a self-implementing cleanup would be made prior to the start of work.

For the purpose of this *FS*, assumptions regarding which structural building elements (concrete grade beams, foundation walls, and pile caps) have been impacted by PCBs were made based on the proximity to existing sampling points and concentration of PCBs observed in nearby samples. The estimated scope of removal is shown on Figures 14 and 15 for Transformer Rooms No. 1 and No. 2, respectively, and would include the concrete slab, portions of the grade beams around the perimeter of each room, and multiple pile caps. For this alternative, a sampling program would need to be performed during the design phase, early in the work when removal of the equipment and concrete slab makes sample collection easier, or a combination of approaches in order to determine the scope of the remedial actions.

In order to gain ready, efficient, and safe access to soil below the concrete slabs and impacted structural components, soil from two areas outside of the building (one exterior excavation pit for each transformer room), would be excavated and a portion of the exterior building wall would be removed. A temporary access road would be constructed to facilitate

access into each of the transformer rooms. The proposed excavation details for the areas outside Transformer Rooms No. 1 and No. 2 are shown on Figures 16 and 17.

For this alternative, electrical equipment in the rooms would need to be de-energized, removed, and then replaced following the remedial construction. We have assumed that temporary electric service would not be required because we have assumed that the remedial construction would occur while the building is under renovation.

Due to the complexity of excavating soil beneath, and removing and reconstructing structural components of the foundation of a high-rise building, the development of this alternative included a structural analysis (Appendix A), a conceptual shoring plan (Appendix C), a conceptual work sequence, and a conceptual schedule. The work sequence is summarized below and a schedule is provided in support of the cost estimate (Appendix B). The structural analysis concluded that soil could safely be excavated from beneath pile caps and grade beams as long as only one pile cap at a time per room was undermined, and shoring was used to support the load being carried on the associated column. The grade beams and pile caps themselves could likewise be removed and replaced. A detailed shoring plan would need to be prepared by a licensed NYS engineer before the remedy was implemented. A conceptual shoring plan was prepared to support the development of a cost estimate for this alternative, and includes conventional underpinning with needle beams to temporarily support each building column. For the purpose of developing a cost estimate for this alternative, we have assumed that perimeter walls of the transformer room and associated grade beam segments would be removed entirely (including soil supported by the wall) rather than shoring the walls to allow partial removal.

The conceptual excavation sequence prepared in support of this *FS* includes:

1. Site preparation, including installing a settlement monitoring system, constructing access, brace walls, and removing electrical equipment;

2. Removing floor slab;

3. Installing groundwater dewatering system;

4. Excavating accessible impacted soil, collecting post-excavation confirmation samples, and backfilling;

5. Installing mini-piles and constructing pile caps that will serve to temporarily support the building, which would likely include excavating soil that has not been contaminated with PCBs from areas of the basement crawlspace and exterior to the building footprint;

6. Removing soil in crawl space or exterior to building footprint that is being retained behind wall segment that will be removed;

7. Installing needle beams and blocking that will receive the load from the building column and serve as part of the temporary building shoring system;

8. Setting jacks and transferring column loads to the temporary shoring system;

9. Demolishing impacted pile cap and impacted grade beams;

10. If necessary, removing PCB-impacted soil beneath pile cap and grade beams, and performing confirmatory sampling;

11. If necessary, repairing damage to pile tops;

12. Backfilling as needed, and reconstructing pile cap;

13. After concrete has cured, transferring column loads back to the reconstructed pile cap and repairing column;

14. Removing needle beams and jack, and abandoning new pile caps in place;

15. Reconstructing grade beams and bottom portion of wall; and

16. Repeating procedure (steps 5 through 15) at next impacted location.

Several waiting periods would be needed to allow curing time for: the mini-pile grout; temporary pile cap concrete; reconstructed pile cap concrete; reconstructed grade beam concrete; and reconstructed wall concrete. The time needed to shore, remove PCB-impacted concrete and soil, reconstruct the pile cap, allow the concrete to cure to sufficient strength, and transfer the column load back to each new pile cap is estimated to be approximately 20 days per location, and is the primary schedule driver for this alternative. This estimate assumes efficient work

scheduling and the use of high early strength concrete. A schedule for this alternative was developed in support of the cost estimate and is provided as Attachment 2 to the cost estimate in Appendix B. The schedule assumes that work would be performed in both transformer rooms simultaneously with one column supporting pile cap at a time per room being removed and reconstructed as called for in the structural analysis. The estimated project duration for remedial construction is more than 21 months, but would depend on the actual extent of impacts to the building structural components, shoring approach, and many other design details.

Alternative 4 would include complete removal of soil and concrete impacted with PCBs at concentrations greater than one ppm. With this alternative the Part 375 residential soil cleanup criteria would be achieved and, no long term ICs or ECs would be required under Part 375. Therefore, no long-term maintenance or monitoring is included in this alternative. An environmental easement and a SMP would not be required.

Size and Configuration

- Soil excavation exterior to the building and selective wall demolition would occur to gain more efficient access to each transformer room. The estimated volume of exterior soil excavation is 1,815 cy. Previous investigations in the area outside of the building indicate that this soil is historic fill and contaminated with PAHs. Therefore, this material would not be re-used as backfill, but would be disposed off-site. The proposed excavation details for the areas outside Transformer Rooms No. 1 and No. 2 are shown on Figures 16 and 17.
- Existing utilities, including the current underground service, are known to be present within the proposed work area in front of the building that would be excavated for external access to the rooms. These existing utilities would have to be located and either re-routed, protected, and/or replaced during remediation. Two light poles may need to be temporarily relocated. It would be the goal to preserve existing trees to the extent practicable.
- The existing electrical equipment from Transformer Room No. 1 and No. 2 would be permanently removed and disposed/salvaged off-site at appropriately licensed facilities.

- It is estimated that the scope of removal for Transformer Room No. 1 would include the concrete floor slab in the middle of the room, approximately 116 lf of concrete grade beam around the perimeter of the room, four column supporting pile caps, and approximately 83 cy of soil beneath the room. For Transformer Room No. 2, it is estimated that removal would include the concrete floor slab in the middle of the room, approximately 110 lf of concrete grade beam around the perimeter of the room, six column supporting pile caps, and approximately 47 cy of soil beneath the room. Concrete would be broken up by man-operated or equipment-mounted jackhammer and removed.

- Dewatering would be performed as necessary during excavation beneath the water table and when working on pile caps. It is assumed that work would be sequenced to limit the need to dewater the excavation. For the purpose of costing this alternative and discussed in Appendix B, it was estimated that approximately six million gallons of wastewater would be generated during the project.

- Following the excavation, post-excavation soil samples would be collected and analyzed for PCBs to verify that the cleanup objective was achieved.

- Removed concrete and soil would be characterized to develop waste profiles as necessary to meet transport and disposal facility requirements for disposal off-site. For cost estimating purposes, it was conservatively assumed that removed concrete and soil that exhibits PCB impacts of greater than one ppm would be managed and disposed of at an appropriately authorized hazardous waste landfill/PCB disposal facility approved under TSCA (approximately 700 tons). It was also assumed that soil and concrete removed to facilitate the remedial work would be disposed as solid waste (approximately 3,900 tons).

- The horizontal and vertical extent of the excavation would be recorded. Excavated areas inside the building would be backfilled with clean soil from an approved off-site source (meeting residential use criteria) and compacted to the desired final grade in preparation for installation of a concrete slab on top. Excavated areas outside of the building would similarly be backfilled.

- After the slab has been reconstructed and replacement electrical equipment is installed, the demolished portions of the exterior wall would be reconstructed and the

excavation areas outside of the building backfilled, topsoil added and the areas seeded. Two light poles and some asphalt path pavement restoration work would also be needed. It would be the goal to preserve existing trees to the extent practicable.

Time Duration for Remedial Construction

It is assumed that remedial activities would not be undertaken until power in the rooms is de-energized. As mentioned above, a total of more than 21 months (93 weeks) construction-related time is estimated for this alternative, which is primarily driven by the need to sequentially remove PCB-impacted pile caps and reconstruct them to protect the structural integrity of the building. The actual schedule would depend on the extent of impacts and removal approach. For the purpose of this *FS*, the estimated task durations include:

- Start-up, mobilization, and contractor submittals are estimated to take 12 weeks.
- Site preparation activities are estimated to take at least 8 weeks.
- At least 4 weeks would be required to remove all the existing electrical equipment in both rooms on the floor once it is de-energized.
- The time to remove the concrete floor slab and excavate accessible soil and backfill the area is estimated at about 11 weeks.
- At least 27 weeks would be needed for the sequential removal and replacement of pile caps and grade beams (including temporary structural supports).
- Restoring the interior, including reconstructing floor slabs and walls, would take approximately 10 weeks.
- Approximately 6 weeks of installation time is estimated to replace all the electrical equipment. This includes constructing equipment foundations.
- Final Site restoration and closeout time is estimated at 15 weeks.

Spatial Requirements

- Due to the limited size and location of the Site, stockpiling excavated soil while awaiting characterization results would not be desirable. Pre-characterization sampling would be conducted as required by the disposal facility. Secure storage for waste would still be necessary.

- The extensive dewatering that would be necessary to excavate below the water table and remove and reconstruct pile caps that extend approximately to the water table would require a portable wastewater treatment system and multiple storage tanks.
- In order to gain access to subsurface below the concrete slabs, areas outside of the building would have to be excavated to open the basement walls and create an access way for equipment to perform interior excavation and to provide temporary building support.
- Portions of the basement crawl space adjacent to each transformer room would also need to be excavated to enable the grade beams to be removed and replaced and to allow the installation of mini-piles and pile caps to temporarily support the building.
- Site ingress/egress, staging, and trailer areas would be required for necessary equipment. Access to the green space and/or parking area in the front of the building would be impacted during remediation.

Disposal

- Excavated soil and demolition debris would be transported off-site to appropriately licensed landfills. PCB impacted soil and debris is assumed to require disposal as TSCA regulated waste. Soil and concrete removed to facilitate the work (such as that removed for access and to construct temporary structural supports) is anticipated to be managed and disposed as solid waste.
- It is assumed that because of the long duration of the project and proximity to the bay which connects to the ocean, a large volume of water will be generated from dewatering the work area, with additional volume generated from dewatering saturated soil and decontaminating equipment. For the purpose of this *FS*, it is assumed that onsite treatment and discharge to the local sewer in accordance with a discharge permit would be the most cost effective option. Another option would be to containerize and transport liquids for off-site disposal or treatment.
- The presence of paint on the surfaces of the electrical components may indicate a high level of lead, requiring abatement on equipment, surfaces and/or waste before it could be disposed. The paint surfaces in both rooms would need to be tested for lead and PCB contamination to determine appropriate disposal requirements.

Permit Requirements, Approvals and Pre-Design Studies

- A notification would need to be made to USEPA regarding the self-implementing cleanup. USEPA-approval is not anticipated to be needed because this alternative has been designed to comply with the TSCA regulations.
- An investigation would be undertaken to refine excavation and removal limits.
- A detailed utility survey would be needed.
- A shoring permit from NYCDOB might be necessary for the excavation.
- A detailed review of the final remedial excavation plan should be made by a licensed NYS licensed engineer in conjunction with a study on structural components of the building.
- A shoring plan prepared by a NYS licensed engineer would be necessary.
- A dewatering plan prepared by a NYS licensed engineer would be necessary.
- It is assumed that a permit for discharging treated project wastewater would be necessary from the NYCDEP, although off-site disposal of wastewater could be selected in the design phase.
- The most recent NEC and NYC building codes would have to be met.
- An inspection may again be required by one or more of the following entities following the installation of the equipment: power provider Con Edison; the local electrical safety inspection authority; and the NYC Electrical Building Inspector; and permitting authority.

Limitations

- Due to the close proximity of nearby buildings, the construction activities could have impacts on nearby residents, nearby property owners, and roadways through: noise from the demolition and construction activities and equipment; and noise, traffic and dust from trucks and workers entering and leaving the project Site. These would have to be mitigated through adequate plans and specifications and adherence to local ordinances.

- The extensive amount of dewatering that will occur with this alternative has the potential to mobilize adjacent soil (piping), which could potentially undermine adjacent structures and utilities.

Ecological Impacts

- Implementation of this alternative is not anticipated to have any significant impacts on wildlife resources.

Costs

- There are no annual costs associated with this alternative because no long-term management of the Site would be necessary, since no ICs/ECs would be required under Part 375.
- As presented on Table 2 the capital cost, which is also the total cost, associated with this alternative is $7,994,000.

4.0 DETAILED ANALYSIS OF ALTERNATIVES

This section provides a description of the procedures used to analyze the alternatives as well as a comparative analysis of the alternatives. Table 3 summarizes the comparative analysis.

4.1 Description of Evaluation Criteria

Each of the alternatives is subjected to a detailed evaluation with respect to the criteria outlined in 6 NYCRR Part 375. A description of each of the evaluation criteria is provided below. This evaluation aids in the selection process for remedial actions in New York State.

Overall Protection of Public Health and the Environment

This criterion is an assessment of whether the alternative meets requirements that are protective of human health and the environment. The overall assessment is based on a composite of factors assessed under other evaluation criteria, particularly long-term effectiveness and permanence, short-term effectiveness, and compliance with standards, criteria and guidance values (SCGs). This evaluation focuses on how a specific alternative achieves protection over time and how potential Site risks are reduced. The analysis includes how the contamination is to be eliminated, reduced, or controlled.

Compliance with Standards, Criteria, and Guidance

This criterion determines whether or not each alternative and the proposed remedial technologies comply with applicable environmental laws and SCGs pertaining to the contaminants detected and the location of the Site. For this *FS*, these include 6 NYCRR Part 375 SCOs, CP-51 soil cleanup levels and 40 CFR Part 761.

Long-Term Effectiveness and Permanence

This criterion addresses the performance of a remedial action in terms of its permanence and the quantity/nature of waste or residuals remaining at the Site after implementation. An evaluation is made on the extent and effectiveness of controls required to manage residuals remaining at the Site and the operation and maintenance systems necessary for the remedy to remain effective. The factors that are evaluated include permanence of the remedial alternative,

magnitude of the remaining risk, adequacy of controls used to manage residual contamination, and the reliability of controls used to manage residual contamination.

Reduction of Toxicity, Mobility or Volume with Treatment

This criterion assesses the remedial alternative's use of technologies that permanently and significantly reduce toxicity, mobility, or volume (TMV) of the contamination as their principal element. Preference is given to remedies that permanently and significantly reduce the TMV of contamination at the Site.

Short-Term Effectiveness

This criterion assesses the effects of the alternative during the construction and implementation phase with respect to the effect on human health and the environment. The factors that are assessed include protection of the workers and the community during remedial action, environmental impacts that result from the remedial action, and the time required until the RAOs are achieved.

Implementability

This criterion addresses the technical and administrative feasibility of implementing the alternative and the availability of various services and materials required during implementation. The evaluation includes the feasibility of construction and operation, the reliability of the technology, the ease of undertaking additional remedial action, monitoring considerations, activities needed to coordinate with regulatory agencies, availability of adequate equipment, services and materials, off-site treatment, and storage and disposal services.

Cost

Capital costs and OM&M costs are estimated for each alternative and presented as present worth over a 30-year period using a 4% discount rate. Cost estimates for each remedial alternative are presented in Appendix B and summarized on Table 2. The costs for electrical equipment replacements have been included in the cost estimates because it is unlikely the equipment would be removed from service if it did not have to be removed to conduct remedial actions.

Land Use

This criterion is an evaluation of the current, intended and reasonably anticipated future use of the site and its surroundings, as it relates to an alternative or remedy, when unrestricted levels would not be achieved.

This criterion addresses the current, intended, and reasonably anticipated future land use of Building 1. This *FS* has been prepared as a requirement of the Order in light of OMH's plan to discontinue future occupancy and potential comprehensive renovation of the structure for restricted-residential and/or commercial use. However, such renovation is not ensured, and intended future use(s) are not certain; therefore, current and potential future use of the property is considered in the evaluation.

Community Acceptance

The scope of the remedial alternatives was agreed upon following discussions between URS, OMH, NYSDEC, NYSDOH, and parties representing the prospective purchaser of the property. Concerns of the Community would be addressed separately in accordance with the public participation program developed for the Site.

This criterion is evaluated after the public review of the remedy selection process as part of the final DER selection/approval of a remedy for a site. It will not be discussed further in this *FS*.

4.2 Alternative 1 – No Further Action

4.2.1 Overall Protection of Public Health and the Environment

This alternative would not provide any additional protection of human health and the environment. Under current conditions, there is no risk to the environment because PCBs are beneath the basement of a building and many years of groundwater monitoring has demonstrated that groundwater quality is not impacted. The current epoxy coating and restrictions on entering the area mitigates exposure to the general public. There is some potential risk for workers who visit the area to maintain equipment to contact PCBs. This alternative would leave contamination at the Site but would provide protection to workers through inspection and maintenance of the

ECs, including the existing epoxy floor coating, and ICs, including a SMP, and meet the RAO for the Site.

4.2.2 Compliance with SCGs

Since no remediation is proposed, contamination would remain. This alternative would not comply with 6 NYCRR Part 375 SCOs but would comply with USEPA criteria for continued use of concrete surfaces and subsurface material in 40 CFR Part 761.30(p).

4.2.3 Long-Term Effectiveness and Permanence

The potential risks to human health and the environment from contaminated concrete and soil would continue. This alternative relies on ICs/ECs and a SMP to be effective and permanent in the long-term at reducing Site risks. The Site would remain a Class 3 Inactive Hazardous Waste Site.

4.2.4 Reduction of Toxicity, Mobility or Volume with Treatment

This alternative would not reduce the toxicity, mobility, or volume of contaminated concrete or soil present at the Site. The routine maintenance included in Alternative 1 should reduce the mobility of PCBs through the concrete surfaces that might otherwise occur due to deterioration of the epoxy coating.

4.2.5 Short-Term Effectiveness

As there is no construction associated with this alternative, there would be limited impacts to workers during the short time period that the inspection, maintenance and sampling of the epoxy floor coating would occur each year. This alternative would provide protection to current workers through sampling and floor maintenance, and future workers through ICs/ECs and a SMP.

The time frame for this alternative would be on the order of one week or less, annually. Because very little waste would be generated and only a limited number of trips to the Site for maintenance or inspections would be necessary, this alternative would pose virtually no green remediation/sustainability issues.

4.2.6 Implementability

Since there are no construction activities, there would be no construction implementation issues with this alternative. However, the Site would remain as a Class 3 Inactive Waste Site and would pose an administrative disadvantage and require continued management including ICs/ECs and the SMP.

4.2.7 Cost

There are annual inspections, maintenance and sampling costs associated with the No Further Action alternative, but no capital costs. Annual costs are $11,500 for a total present worth of $207,000.

4.2.8 Land Use

Current land use for the Site could continue.

4.3 Alternative 2 – Expanded Cover System

4.3.1 Overall Protection of Public Health and the Environment

This alternative would provide slight additional protection of human health and the environment. Under current conditions, there is no risk to the environment because PCBs are located beneath the basement of the building, and many years of groundwater monitoring has demonstrated that groundwater quality is not impacted. The current epoxy coating and restrictions on entering the area mitigates exposure to the general public. There is some potential risk for workers who visit the area to maintain equipment to contact PCBs and this potential risk would be reduced with an expanded epoxy cover system. This alternative would leave contamination at the Site but would provide protection to workers through inspection and maintenance of the ECs, including the epoxy floor coating, and ICs, including the SMP, and meet the RAO for the Site.

4.3.2 Compliance with SCGs

Contamination would remain even though new epoxy is applied to the entire floor. This alternative would not comply with 6 NYCRR Part 375 SCOs but would comply with USEPA criteria for continued use of concrete surfaces and subsurface material in 40 CFR Part 761.30(p).

4.3.3 Long-Term Effectiveness and Permanence

This alternative relies on ICs/ECs and the SMP to be effective and permanent in the long-term at reducing Site risks. This alternative would not be expected to result in Site reclassification because it would not achieve state cleanup objectives. The requirement for periodic inspections and maintenance of the floor would mitigate the potential risk for non-compliance that would otherwise increase with the passage of time.

This alternative would provide protection to current workers through remediation (re-epoxy entire floor) and future workers through ICs/ECs and the SMP.

4.3.4 Reduction of Toxicity, Mobility or Volume with Treatment

This alternative would not reduce the toxicity of impacted concrete or soil. It would provide a reduction in the potential mobility of impacted media. This alternative would not include treatment or any significant removal, so overall there would be no reduction in the volume of impacted materials.

4.3.5 Short-Term Effectiveness

Since this alternative includes removal of the existing electrical equipment in order to re-epoxy the entire floor, there would be short-term impacts to workers. Short-terms risks to workers performing the remedial work and those performing maintenance or repairs on the epoxy coating would be mitigated by performing the work under a Site-specific Health and Safety Plan.

The time frame for this alternative would be approximately five months beginning with contractor submittals, mobilization and start-up through restoration and closeout. This alternative would require long-term maintenance and monitoring that would take a week or less per year.

This alternative would pose minimal green remediation/sustainability issues since only a small quantity of waste would be generated that will require transportation for off-site disposal.

4.3.6 Implementability

There are construction implementation issues which may be moderately difficult with this alternative in light of having to remove and install electrical equipment. An underlying assumption is that the existing equipment may be dismantled and cut into smaller pieces, if

necessary, to be removed. It is assumed that replacement equipment can be installed through the existing external access points for Transformer Rooms No. 1 and No. 2. Noise, traffic and safety concerns would be mitigated through plans and specifications. However, the Site would remain as a Class 3 Inactive Hazardous Waste Site, and would require continued management including ICs/ECs and the SMP. This could continue to pose an administrative disadvantage as the continued sampling and maintenance of the floor is considered an administrative burden.

4.3.7 Cost

Estimated capital and annual OM&M costs included in Alternative 2 are presented on Table 2. The total capital cost is approximately $1,306,000, annual OM&M costs for inspection and maintenance of the floor coating are $11,500, and the total present worth of Alternative 2 is $1,513,000.

4.3.8 Land Use

Alternative 2 is anticipated to result in a restricted-residential and/or commercial use classification provided the ICs/ECs and environmental easement provisions, including a SMP, are met. This would be consistent with current and anticipated future use of the Site.

4.4 Alternative 3 – Limited Removal and Long-Term Management

4.4.1 Overall Protection of Public Health and the Environment

This alternative would be deemed effective for protecting human health and the environment in the long-term since there are no plans to remove the building. Under current conditions, there is no risk to the environment because PCBs are located beneath the basement of the building, and many years of groundwater monitoring has demonstrated that groundwater quality is not impacted. Furthermore, additional protection to current and future workers would be provided in this alternative by removing the most egregiously PCB-impacted soil, installing a concrete cap over residual PCB containing concrete and soil, and implementing ICs, including the SMP, and would meet the RAO for the Site.

4.4.2 Compliance with SCGs

With this alternative, residual contamination would remain even though the most significantly contaminated soil would be removed. This alternative would meet the presumptive cleanup level of 10 ppm for PCBs in subsurface soil outlined in NYSDEC's CP-51.

While the SCO for soil listed in 6 NYCRR Part 375-6.8(b) for restricted-residential or commercial use would not be achieved, the remaining PCB-containing soil meets the CP-51 SCO of 10 ppm for subsurface soil, and would be isolated by a concrete cap and, thus, the property could be used for these land uses provided IC/ECs are implemented in accordance with an environmental easement.

This alternative would comply with federal TSCA requirements for high occupancy areas specified in 40 CFR 761.61(a)(4)(i)(A) because soil with greater than 10 ppm PCBs would be removed and a cap meeting the requirements of TSCA would be constructed over the remaining impacted material.

4.4.3 Long-Term Effectiveness and Permanence

This alternative would be effective and permanent in the long-term. Following removal of contaminated soil with greater than 10 ppm PCBs and construction of a concrete cap, the Site would be re-classified to a Class 4 Inactive Hazardous Waste Site. The IC and SMP would prevent disturbing the cap and excavating under the floor of Transformer Rooms No. 1 and. No. 2, as well as providing provisions for long-term maintenance and certification of the presence of a cap and that no soil was removed.

4.4.4 Reduction of Toxicity, Mobility or Volume with Treatment

Excavation and off-site disposal of soil with greater than 10 ppm PCBs would reduce the volume of contaminated materials at the Site. Mobility of PCBs in residually impacted soil and concrete at the Site would be reduced by installation of the concrete cap.

4.4.5 Short-Term Effectiveness

Since this alternative would include removal of the existing electrical equipment, concrete and soil, there would be some short-term impacts to workers and the community. There

would be limited impacts to the environment. Nuisance noise from construction activities and traffic from workers and trucks could impact neighbors.

Potential impacts to workers performing the remedial actions would be mitigated by the work being performed in accordance with a Site-specific Health and Safety Plan, along with other plans and specifications. However, performing excavation and concrete removal in a relatively small area in the basement and crawlspace of a high-rise building would be complicated, and the limited space to maneuver would increase the risk of injury to workers. Furthermore, this alternative would include excavating soil beneath the water table and beneath structural building components. Both of these activities would be inherently riskier than a more standard excavation, and with the tight spaces involved, much of this work would likely be performed by manual labor.

This alternative would pose some green remediation/sustainability issues. Access via a portion of the green space and/or parking area in the front of the building would likely cause damage to landscaping during remediation. This alternative would be anticipated to generate two types of waste that would be disposed at appropriately licensed facilities. Limited landfills exist that would be able to accept the TSCA regulated waste and the longer trips would result in additional carbon dioxide (CO_2) emissions than would be generated with a more readily disposed waste stream.

The time frame to construct this alternative would be about 8.5 months beginning with contractor submittals, mobilization and start-up, through restoration and closeout. This alternative would require long-term maintenance and monitoring. However, the concrete cap is expected to be very durable and would rarely require repair or maintenance.

4.4.6 Implementability

This alternative would present a moderate level of construction implementation issues, which could be moderately difficult. The structural integrity of the building would need to be assessed prior to removing the concrete floor and excavating soil. Protection of the pile caps would be necessary. Noise, traffic and safety concerns would be mitigated through adequate plans and specifications. Once suitable access was available, concrete removal and excavation of the relatively small volume of soil (to a depth of three to four feet in the unsaturated zone and an additional several feet in the saturated zone) would be challenging due to the space constraints

and the need to protect the structural integrity of the building, but would not be technically infeasible.

Due to the limited size and location of the Site, stockpiling excavated soil while awaiting characterization results would not be desirable. Pre-characterization sampling would need to be conducted as required by the disposal facility.

4.4.7 Cost

Estimated capital and annual OM&M costs included in Alternative 3 are presented on Table 2. The total capital cost is approximately $2,193,000, annual OM&M costs for inspection and maintenance of the concrete cap are $4,600, and the total present worth of Alternative 2 is $2,276,000.

4.4.8 Land Use

Alternative 3 would result in re-classification of the Site to a Class 4 Inactive Hazardous Waste Site following removal and off-site disposal of soil containing PCBs at concentrations greater than 10 ppm and construction of a concrete cap meeting TSCA requirements over the remaining impacted soil and concrete. Alternative 3 would meet the presumptive cleanup level of 10 ppm for PCBs in subsurface soil outlined in NYSDEC's CP-5,1 and would be anticipated to result in a restricted-residential and/or commercial use classification provided the ICs/ECs and environmental easement provisions, including an SMP, are met.

4.5 Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objective

4.5.1 Overall Protection of Public Health and the Environment

This alternative would be effective for protecting human health and the environment in the long-term because soil and concrete with greater than one ppm PCBs would be removed from the Site. Alternative 4 would meet the RAO for the Site.

4.5.2 Compliance with SCGs

This alternative would meet the cleanup objective of one ppm for residential use in 6 NYCRR Part 375 for the Site and the TSCA cleanup objective of one ppm for high occupancy areas without conditions in 40 CFR 761.61(a)(4)(i)(A).

4.5.3 Long-Term Effectiveness and Permanence

This alternative would be effective and permanent in the long-term. Following removal of contaminated concrete and soil, the Site would be de-listed. Under Part 375 no ICs or ECs would be necessary. This alternative would not rely on long-term maintenance for effectiveness and would be a permanent solution.

4.5.4 Reduction of Toxicity, Mobility or Volume with Treatment

Excavation and off-site disposal of contaminated concrete and soil would reduce the volume of contaminated materials at the Site. This remedy would eliminate the potential for media with greater than one ppm PCB to mobilize at the Site because these materials would be completely removed.

4.5.5 Short-Term Effectiveness

Since this alternative would include removal of the existing electrical equipment, opening access points through the building exterior wall, excavating soil below the water table, excavating soil beneath structural building components, and removal and replacement of portions of the high-rise building foundation, there would be substantial short-term impacts to workers and neighbors. There would be limited impacts to the environment. Nuisance noise from construction activities and traffic from workers and trucks could impact neighbors and the community. Access to the green space and/or parking area in the front of the building would be impacted during remediation.

Potential impacts to workers performing the remedial actions would be mitigated by the work being performed in accordance with a Site-specific Health and Safety Plan, along with other plans and specifications. However, performing excavation and concrete removal in a relatively small area in the basement and crawlspace of a high-rise building would be complicated, and the limited space to maneuver would increase the risk of injury to workers. Furthermore, this

alternative would include excavating soil beneath the water table and beneath structural building components. Both of these activities would be inherently riskier than a more standard excavation, and with the tight spaces involved, much of this work would likely be performed by manual labor.

This alternative would present several safety risks to workers and those who may be nearby during the various phases of securing the structural integrity of the building, including underpinning work. Utilizing a low-clearance drill rig to install the mini-piles for temporary supports would be an inherently risky task, particularly when performed in a constrained space. Each transfer of the load from the original building pile caps to the temporary supports, and then back to newly constructed replacement pile caps, would also be risky. The dewatering that would be needed periodically throughout the project would also have the potential to mobilize soil and undermine existing, temporary, and newly constructed foundation components.

The time frame for this alternative would be 21 months beginning with contractor submittals, mobilization and start-up, through restoration and closeout. The long construction schedule associated with this alternative would mean that short-term impacts would extend for many months.

This alternative would pose green remediation/sustainability issues in that an additional 1,815 cy of soil external to the building would have to be excavated in order to create access within the building to excavate 428 cy of PCB-contaminated soil and concrete. Removal of this additional soil would require substantially more excavation equipment and transportation vehicle equipment, which would require fuel and release emissions. It would also result in substantially more soil disposal at an off-site facility.

4.5.6 Implementability

This alternative would present a number of construction implementation issues that range from moderately challenging to very challenging. The challenges would stem from the need to excavate below the concrete slab and foundation components, below groundwater, within the confines of the basement, and remove and replace concrete foundation components under a high-rise building without negatively impacting the structural integrity of the building.

In order to accomplish the removal of foundation components and/or the soil supporting the foundation components, the load supported by each building column affected would need to be transferred to an alternate support mechanism, and this effort is limited to one location at a time per room. The complexity of step by step constructing new temporary foundation supports, transferring the load, performing removal, reconstructing the associate pile cap and grade beam, and then transferring the load back after the concrete has cured would be approaching technically infeasible. In addition to the complexity of the construction sequence itself, the working environment itself would be challenging, and these challenges would include:

- Work in a subterranean area, beneath a building, with only limited ingress/egress;
- Work in low-light conditions with only portable lighting;
- Work in tight confines between other existing columns (variable distances, center of the room columns less than 9 feet from west wall) and pile caps (some separated by as little as six inches);
- Work in an area with limited vertical clearance, ranging from approximately 10 feet in the transformer rooms prior to slab removal to less than approximately 7 feet (at best) in the surrounding pipe access areas surrounding each room within the building foot print;
- Work without the benefit of a concrete slab or other solid level working surface for the majority of the work;
- Work from about four feet above the water table to about four feet below the water table, which would result in frequently wet conditions;
- Limited ability to control water infiltration to the work area given the proximity of the Site to significant bodies of water and the impossibility of installing sheet pile under a building; and
- Dewatering that could have the potential to mobilize adjacent soil (piping), which could potentially undermine adjacent structures and utilities.

Alternative 4 would also have administrative challenges. Given the amount of water likely to be generated from excavation dewatering, the only cost-effective approach would be to treat it on-site and discharge it under a permit from NYCDEP. Obtaining the permit would likely

take 8-12 months and include a treatability study to document that the proposed treatment train would be effective in treating water to the required discharge limits. Another potential administrative challenge would be identifying a specialty subcontractor skilled and experienced in underpinning work to meet the confidence level of the owner.

URS believes that while some of the challenges noted above could be managed and overcome, when one considers the entirety of technological and administrative challenges associated with this alternative, as a whole, Alternative 4 is not implementable.

4.5.7 Cost

Estimated costs included in Alternative 4 are presented on Table 2. There are no annual OM&M costs for this alternative. The total capital cost is $7,994,000.

4.5.8 Land Use

Alternative 4 would include de-listing the Site following removal of all contaminated concrete in Transformer Rooms No. 1 and 2, and removal of soil exceeding Part 375 protection of groundwater and residential use criteria. The de-listed Site would meet the NYSDEC Part 375 requirements for residential use with no ICs or ECs, and meet TSCA criteria for high occupancy use without conditions.

4.6 Comparative Analysis of Alternatives

The comparative analysis of alternatives using the 6 NYCRR Part 375 evaluation criteria for alternatives is summarized on Table 3. A detailed comparison discussion is provided below.

4.6.1 Overall Protection of Public Health and the Environment

The four alternatives would offer various degrees of overall protection of public health and the environment and all four alternatives would meet the RAO for the Site. The more aggressive remedial alternatives would provide more certainty that PCB-impacted materials would be contained over time, but this would be offset by greater risks to workers during the remedial construction phase, and greater potential risk to the environment stemming from an accidental release, which could occur during material handling or transport, as well as greater CO_2 emissions during transport to treatment and disposal facilities located farther from the Site.

Alternative 4 is the only alternative that would provide a permanent solution. Alternative 4 would comply with 6 NYCRR Part 375 residential and protection of groundwater SCOs for PCBs, as well as with TSCA cleanup objective for high occupancy areas without conditions. With Alternative 4, no ICs or ECs would be needed. However, Alternative 4 would be technically impracticable to implement. Alternatives 1 through 3 would each offer some level of compliance with state or federal cleanup objectives for various levels of use, which are discussed below.

Each of the alternatives would mitigate the potential for direct exposure by site workers through removal and off-site disposal, or the use of a cover system and ICs to require ongoing inspection and maintenance of the cover system. Because the impacts are limited to concrete and subsurface soils within and beneath the basement of a building, the risk of exposure to the impacted media by the general public is already limited by the isolated location of the PCBs. Alternatives 2 and 3 would each provide progressively more protection against inadvertent contact by current site workers, future construction workers, or trespassers. For Alternatives 2 and 3, the ICs would prohibit the disturbance of the cover system unless the prescribed procedures in the NYSDEC-approved SMP were followed.

4.6.2 Compliance with SCGs

Alternative 1, which would take no further action, would not comply with state cleanup objectives for any use classification. Alternative 2, which would include the expanded and refreshed epoxy coating would fully comply with TSCA cleanup objectives that allow continued use of porous surfaces (concrete) and underlying materials for the duration of their useful life. However, Alternative 2 would not comply with state cleanup objectives. Alternative 3, which would include limited removal, construction of a concrete cap, and long-term monitoring would meet the presumptive cleanup level of 10 ppm for PCBs in subsurface soil outlined in NYSDEC's CP-51, as well as the TSCA cleanup criteria for high occupancy areas. Alternative 4 would comply with the 6 NYCRR Part 375 residential SCO for PCBs, as well as with TSCA cleanup objective for high occupancy areas without conditions.

4.6.3 Long-Term Effectiveness and Permanence

Alternatives 1 and 2 would not be completely effective at reducing the potential risks to human health through floor maintenance, but would rely on ICs/ECs and the SMP. Alternative 3

would also rely on ICs/EC and the SMP. However, the removal and off-site disposal of the most significantly contaminated soil that would occur in Alternative 3, combined with a cap meeting the requirements of TSCA, which would be anticipated to be more durable, require less maintenance, and provide more long-term effectiveness, would further reduce potential risks to human health.

Alternatives 1 through 3 are not permanent solutions. Alternative 4 is a permanent solution and would provide the best long-term effectiveness at reducing risks to human health because the PCB-impacted materials would be removed from the Site and disposed at a properly licensed facility. Alternative 4 would not rely on ECs and would not require an SMP or ICs.

4.6.4 Reduction of Toxicity, Mobility or Volume with Treatment

Alternative 4, and to a somewhat lesser extent, Alternative 3, with concrete and soil excavation and off-site disposal, would reduce the volume of contaminated material on the Site. Alternatives 1 and 2 would not reduce the volume of PCB-impacted soil or concrete. The alternatives would not include treatment, so overall there would be no reduction in toxicity of impacted materials. Alternatives 1 and 2 should reduce the mobility of PCBs through the concrete surfaces as a result of the epoxy coating. Alternative 3 would reduce the mobility of PCBs through the construction of a concrete cap over residually impacted materials.

4.6.5 Short-Term Effectiveness

The construction time required for Alternatives 1 through 3 would each be less than 9 months. Alternative 4 would take over 21 months to construct.

The least amount of short-term impacts would be associated with Alternative 1. Greater amounts of time and impacts to workers, the community, and the environment would be incrementally posed by Alternatives 2, 3 and 4. These risks and impacts would be managed through a combination of plans and specifications during remediation. Alternative 4, and to a lesser extent Alternative 3, would pose green remediation/sustainability issues which would require off-site transportation of soil and concrete. Alternative 4 would pose greater issues with regard to sustainability in that it includes excavation of non-PCB-contaminated soil to gain access within the building. Alternative 4, and to a lesser extent Alternative 3, would provide risk to construction workers due to the complexity of removing impacted materials from beneath the

basement of a building, excavation beneath groundwater, tight confines of working in a basement, and for Alternative 4 the added complication of excavation in a crawlspace to construct temporary supports for the columns, and the piecemeal removal and replacement of foundation components for a high-rise building.

4.6.6 Implementability

Alternatives 1 through 4 get progressively more challenging to implement. As discussed in Section 4.5.6, Alternative 4 would be highly complex to construct and to implement. This alternative would have many technical difficulties and risks that would need to be overcome to implement, therefore URS concluded that Alternative 4 is not implementable.

There would be no issues with implementing Alternative 1, because this alternative has already been constructed. For Alternative 2, obtaining a contractor to scarify, clean and epoxy coat the entire floor of each room would be relatively easy. The challenge with Alternative 2, would be removing and replacing the electrical equipment. For Alternative 3, which includes a temporary access road, the challenge presented by removing and replacing the equipment would be somewhat mitigated by bringing in a crane to support the remedial work. The removal of concrete and excavation of soil within a tight space and in proximity to groundwater would be highly challenging, but the challenges could be overcome for the limited quantities being removed.

4.6.7 Cost

A review of costs for each alternative indicates that Alternatives 1 and 2 have the same annual cost, and Alternative 3 has a smaller annual cost. Alternative 4 has no annual cost. Alternative 4 has the highest total cost followed by Alternatives 3, 2, and 1, respectively. The total cost for Alternative 4 is more than three times the total cost for Alternative 3.

4.6.8 Land Use

Alternatives 1 and 2 would allow for current continued use of the building. Alternative 3 would be expected to achieve the 10 ppm PCB presumptive cleanup level for subsurface soil specified in NYSDEC's CP-51, and would allow the Site to be reclassified to a Class 4 Inactive Hazardous Waste Site. Alternatives 1 through 3 would rely, in part, on maintenance and

monitoring to remain effective over time. Alternative 4 would be expected to achieve the 6 NYCRR Part 375 cleanup objective of one ppm PCBs that allows residential use, meet TSCA criteria for high occupancy use without conditions, and would allow the Site to be de-listed.

5.0 RECOMMENDED REMEDIAL ALTERNATIVE

Four remedial alternatives were evaluated in this *FS*, and these were: Alternative 1 – No Further Action, Alternative 2 – Expanded Cover System, Alternative 3 – Limited Removal and Long-Term Management, and Alternative 4 - Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objectives. All alternatives evaluated meet the RAO for the Site. The alternatives were developed following discussions between URS, OMH, and the NYSDEC, and include input from the prospective purchaser of the property, who will likely be implementing the remedy. URS recommends that Alternative 3 be implemented at the Site. URS bases this recommendation on the alternative comparison presented in Section 4.6.

5.1 Basis for Recommendation

In the short term, Alternative 1 would provide protection to workers through inspection and maintenance of the existing epoxy floor coating and ICs/ECs including a SMP. This alternative would leave contamination at the Site and would not satisfy applicable SCOs.

Although Alternative 2 would meet TSCA requirements for continued use of concrete surfaces and subsurface material, PCB-impacted media would remain at the Site at concentrations greater than 6 NYCRR Part 375 SCOs. Alternative 2 would rely on ECs/ICs and the SMP to provide protection to current facility maintenance personnel, as well as future construction or utility workers. Alternative 2 would be relatively easy to construct, with the biggest challenge being moving the electrical equipment out of and into the rooms.

Alternative 3 includes removal and off-site disposal of readily accessible concrete and of the more significantly impacted soil. This alternative is expected to achieve the presumptive cleanup level for PCBs in soil of 10 ppm set forth in NYSDEC's CP-51. The construction of a concrete cap meeting TSCA specifications over residually impacted soil and concrete would protect future workers against exposure and would enable this alternative to comply with TSCA regulations. Alternative 3 would be fairly challenging to construct because of the tight confines of working within the two basement rooms. Excavation between pile caps, beneath grade beams, and beneath the water table would be challenging, particularly because a substantial portion of the excavation would need to be performed by hand. The potential risks to workers during remedial construction would be mitigated with a Site-specific Health and Safety Plan. Alternative 3 would rely on ICs/ECs and the SMP to provide protection to future workers. However, the combination

of reducing the volume of contaminated media at the Site and the construction of a six-inch thick cap would more effectively protect future workers from exposure to the residually impacted materials than the epoxy coating in Alternatives 1 and 2. Alternative 3 would cost more to construct than Alterative 2, but is expected to have lower maintenance costs due to the durability of the concrete cap.

Alternative 4 would achieve 6 NYCRR Part 375 SCOs for residential use and would meet the TSCA cleanup objective for high occupancy use without conditions provided in 40 CFR 761.61(a)(4)(i)(A), without relying on ICs/ECs for effectiveness and would be a permanent solution. As such, this alternative would allow the highest use for the Site and offer the greatest long-term effectiveness. However, it is highly unlikely that this property would ever be utilized for residential use (single family homes). The Site has been used as a hospital and to provide medical services (commercial use) for over 50 years. While property transfer and redevelopment of the Site is currently planned, the prospective buyer intends to use the building for restricted-residential and commercial uses. The area of PCB contamination is in the concrete floors and soil beneath the floors of two electrical rooms in a subterranean area of a 12-story building with a penthouse. The current and likely future use of the rooms is as electric utility rooms to support the power needs of the building. Therefore, there is little value in cleaning up the Site to allow higher use than the current and anticipated future use of the property.

In order to achieve the greater long-term effectiveness and higher level of use that might be achieved if Alternative 4 were selected, there would be significant risks to workers during construction. These risks stem from tight confines of the work area and complexity of the work, the need to hand excavate around the building foundation and in crawl space areas, and the proximity of the water table and the need to dewater to during the work. Protecting remedial workers from potential exposure to PCBs would be far easier than protecting them from the physical hazards of the small, dark, wet, subterranean work area if the tasks outlined in Alternative 4 were completed. While Alternative 4 would reduce the volume of PCB-impacted materials at the Site, this alternative offers no overall reduction in volume of contamination because debris and excavated soil would be transported and disposed off-site at appropriately licensed landfills. Alternative 4 would pose additional hazards, including utilizing a low-clearance drill rig to install the mini-piles for temporary supports and the repeated load transfer from the original building pile caps to the temporary supports. The dewatering that would be

needed periodically throughout the project would also have the potential to mobilize soil and undermine existing, temporary, and newly constructed foundation components.

The effort to remove and transport the impacted materials to landfills would pose green remediation/sustainability issues. An additional 1,815 cy of soil external to the building would have to be excavated in order to create access within the building to excavate 428 cy of PCB-contaminated soil and concrete. The complexity (Section 3.4) to excavate soil under a high-rise building and to remove and replace concrete foundation elements, while protecting the structural integrity of the building approaches, and may exceed, the threshold for technical feasibility. The complexity of Alternative 4 results in an estimated construction duration (over 21 months) and estimated capital costs ($7,994,000) significantly higher than the next most complex (and protective) alternative, Alternative 3, which has an estimated construction duration of less than 9 months and capital costs of $2,193,000.

Part 375-1.2(s) states that "…*Feasible* means suitable to site conditions, capable of being successfully carried out with available technology, implementable and cost effective." The level of protection offered by Alternative 4 exceeds that necessary for the current and likely future use of the property and, therefore, is of questionable suitability to site conditions. Alternative 4 presents many construction challenges, puts remediation workers at unnecessary risk, and would be highly complex to implement, and in fact is very close to the threshold of technical infeasibility. Alternative 4 is not cost effective. Further, URS believes that Alternative 4 is not feasible.

URS believes that the permanent solution and residential use that could be achieved with Alternative 4 is not of sufficient benefit to justify choosing Alternative 4 over Alternative 3, which offers similar long-term protection to human health and the environment with substantially less drawbacks and risks. The comparative drawbacks to Alternative 4 include the risk to workers during construction, possible loss of value of the property (building), reduced sustainability, greater nuisance to neighbors and the community, loss of use of the building to accommodate the longer construction schedule, and significantly greater cost. Therefore, URS recommends that Alternative 3 be selected as the remedy for the Site because the slight increase in removal of contaminant mass that could be achieved with Alternative 4 does not justify the additional costs and implementation risks associated with Alternative 4.

5.2 Recommended Remedy

Alternative 3 is the recommended remedy because it meets the RAO for the Site at the lowest risk and best value, and provides short and long-term protection to human health under current and future conditions through the removal of the highest concentrations of PCB-containing soil and the partial removal of the contaminated concrete floor. Furthermore, future workers are isolated from any remaining PCB-containing soil or PCBs through the impermeable barrier of the concrete cap that would be constructed over residually impacted materials, as well as by the ICs and an SMP that prohibit uncontrolled excavating of contaminated soil and require certifying the presence of the concrete cap and that no soil has been removed.

This alternative would result in re-classification of the Site to a Class 4 Inactive Hazardous Waste Site. This alternative would meet the presumptive cleanup level of 10 ppm for PCBs in subsurface soil specified in NYSDEC's CP-51 and would be anticipated to result in a restricted- residential and/or commercial use classification provided the ICs/ECs and environmental easement provisions, including an SMP are met. Notification to USEPA of the intent to perform a self-implementing cleanup would be made prior to the start of work. In the event that circumstance beyond those anticipated were encountered during implementation that made achieving a 10 ppm cleanup objective for subsurface soil technically impracticable, the project objectives would be reviewed with NYSDEC and a risk-based approval from USEPA would be sought.

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TABLES

TABLE 1

SUMMARY OF REMEDIAL ALTERNATIVE COMPONENTS

Component	Alternative 1 No Further Action	Alternative 2 Expanded Cover System	Alternative 3 Limited Removal and Long-Term Management	Alternative 4 Expanded Removal to Achieve Part 375 Residential SCO
Remediation	None.	• Remove electrical equipment; • Scarify, double wash rinse, apply new contrasting coats of epoxy to entire floor; and • Replace electrical equipment.	• Remove electrical equipment; • Remove central portion of concrete floor slab; • Excavate soil with greater than 10 ppm PCBs; • Backfill excavation and reconstruct floor; • Construct concrete cap; and • Replace electrical equipment.	• Remove electrical equipment; • Excavate contaminated concrete and soil with greater than 1 ppm; • Backfill and install new concrete floor; and • Replace electrical equipment.
Long-Term Requirements	• Sampling and analysis; • Maintain EC (epoxy floor coating in accessible areas); and • ICs and SMP.	• Sampling and analysis; • Maintain EC (epoxy floor coating); and • ICs and SMP.	• Maintain EC (concrete cap); and • ICs and SMP.	None. No ECs or ICs required under Part 375.
SCG Status	• Meets the overall objective to provide protection to current and future workers through ICs/ECs and SMP. • Does not meet Part 375 SCOs for PCBs. • Complies with TSCA.	• Meets the overall objective to provide protection to current workers and future workers through ICs/ECs and SMP. • Does not meet Part 375 SCOs for PCBs. • Complies with TSCA.	• Meets the overall objective to protect human health through remediation and ICs and SMP. • Attains CP-51 presumptive cleanup level for PCBs. • Attains TSCA cleanup level for High Occupancy Area.	• Meets the overall objective to protect human health for future site users through remediation. • Meets Part 375 SCO for PCBs for residential use. • Attains TSCA cleanup level for High Occupancy Area without further conditions.
Outcome	• No active remediation. • Maintains the current floor coating in accessible areas. Site remains commercial. Site remains as Class 3.	• Improves current floor coating. • Addresses current and future worker health protection through ICs/ECs and SMP. Restricted-residential and/or commercial use. Site Remains as Class 3.	• Removes significantly PCB-impacted soil and portions of contaminated concrete. • Cap (EC), ICs and SMP address current and future worker health protection. Restricted-residential and/or commercial use. Re-classify the Site to Class 4.	Removes PCB-contaminated concrete and soil. Residential use. De-list the Site.

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 2
Summary of Remedial Alternative Cost Estimates

CAPITAL COSTS

Item	Description	Units	ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
			Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
1	Mobilization/Demobilization (includes construction work plans and submittals, project coordination, subcontractor, equipment and material procurement, and mobilization of personnel, materials and equipment (assume 5% of Items 2 through 27)	Lump Sum	1	$242,120	$242,120	1	$71,852	$71,852	1	$48,860	$48,860	-		$0
2	Temporary Site Services (Refer to Table 5)	Lump Sum	1	$475,466	$475,466	1	$244,449	$244,449	1	$102,071	$102,071	-		$0
3	Temporary Access Road	Square Foot	741	$2.98	$2,210	741	$2.98	$2,210	-		$0	-		$0
4	Soil Excavation, Exterior	Cubic Yard	1,815	$16	$28,783	-	$16	$0	-		$0	-		$0
5	Soil Excavation, Interior	Cubic Yard	280	$211	$59,108	72	$211	$15,199	-		$0	-		$0
6	Sawcut Concrete Floor Prior to Demolition	Lineal Feet	604	$7	$4,367	604	$7	$4,367	-		$0	-		$0
7	Sawcut Concrete/Brick Wall	Lineal Feet	104	$305	$31,684	-	$305	$0	-		$0	-		$0
8	Concrete Demolition and Removal	Cubic Yard	128	$505	$64,771	57	$505	$28,822	-		$0	-		$0
9	Dewatering, Storage and Treatment	Day	56	$10,235	$573,160	14	$5,118	$71,645	5	$221	$1,105	-		$0
10	Dispose Off-Site TSCA Soil and Demolition Material	Ton	697	$420	$292,796	222	$420	$93,393	1	$4,520	$4,520	-		$0
11	Dispose Off-Site Non-TSCA Soil and Demolition Material	Ton	3,874	$71	$273,097	1,112	$71	$78,361	-	$1,520	$0	-		$0
12	Discharge or Dispose Off-Site Contaminated Water/Liquid	Gallon	6,048,000	$0.01	$60,480	21,000	$0.01	$210	220	$11.82	$2,600	-		$0
13	Temporary Structural Stabilization	LS	1	$1,820,795	$1,820,795	-		$0	-		$0	-		$0
14	Characterization Sample Analysis - Full Analytical	Each	12	$630	$7,560	5	$630	$3,150	1	$630	$630	-		$0
15	PCB Sample Analysis	Each	60	$107	$6,420	20	$107	$2,140	-	$107	$0	-		$0
16	Purchase Clean Off-Site Material for Backfill	Tons	2,828	$37	$105,583	97	$53	$5,119	-		$0	-		$0
17	Backfill with General Fill	Cubic Yard	1,815	$9	$15,753	-	$9	$0	-		$0	-		$0
18	Backfill Basement Excavation with Pea Gravel	Cubic Yard	280	$165	$46,295	72	$165	$11,904	-		$0	-		$0
19	Floor Reconstruction	Cubic Yard	57	$431	$24,587	57	$431	$24,587	-		$0	-		$0
19a	6" TSCA Cap	Cubic Yard	-	$252	$0	42	$252	$10,475	-		$0			$0
20	Wall Reconstruction	Cubic Yard	27	$2,873	$78,240	1	$5,000	$5,000	-		$0	-		$0
21	Pile Cap Reconstruction	Cubic Yard	46	$587	$27,004	-	$587	$0	-		$0	-		$0
22	Topsoil and Seeding	Square Yard	3,544	$9.31	$32,999	2,611	$9.31	$24,309	222	$9.31	$2,069	-		$0
23	Decommission Removal/ Install Power Equipment [3]	Lump Sum	1	$811,243	$811,243	1	$811,243	$811,243	1	$811,243	$811,243	-		$0
24	Epoxy Coating (includes Surface Prep)	Square Foot	-	$24	$0	-	$24	$0	2,243	$24	$52,957	-		$0
25	Demarcation Layer	Square Foot	-	$0.29	$0	1,542	$0.29	$452	-	$0.29	$0	-		$0
	Capital Cost SubTotal				**$5,085,000**			**$1,509,000**			**$1,026,000**			**$0**

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 2
Summary of Remedial Alternative Cost Estimates

MARKUPS			ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
Item	Description	Units	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
	Capital Cost SubTotal				**$5,085,000**			**$1,509,000**			**$1,026,000**			**$0**
Markup 1	Engineering, Design, Permitting and Construction Management, percentage of the subtotal (Structural Analysis, Request for Risk-Based Approval, Self-Implementing Cleanup Notification)			20%	$1,017,000		20%	$301,800		15%	$153,900			$0
Markup 2	Contingency, percentage of subtotal plus Engineeing and Construction Management (25% for Alternative 4, 20% for Alternative 3 and 10% for Alternative 2)			25%	$1,525,500		20%	$362,160		10%	$117,990			$0
Markup 3	Escalation to Midpoint of Construction, 3% per year. Assume 2 years for Alternative 4; 1 year for Alternatives 2 and 3. Apply to Subtotal plus Engineering and Construction Management	3% per year	2	3%	$366,120	1	3%	$19,919	1	3%	$8,157			$0
	TOTAL CAPITAL COST				**$7,994,000**			**$2,193,000**			**$1,306,000**			**$0**

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 2
Summary of Remedial Alternative Cost Estimates

ANNUAL COSTS			ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
Item	Description	Units	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
	TOTAL CAPITAL COST				**$7,994,000**			**$2,193,000**			**$1,306,000**			**$0**
A1	Start-Up, Project Review, Follow-Up	Lump Sum			0	1	$4,000.0	$4,000.0	1	$4,000.0	$4,000.0	1	$4,000.0	$4,000
A2	Wipe Sampling and Lab Analysis - PCB	Lump Sum			$0			$0	1	$2,456.0	$2,456.0	1	$2,456.0	$2,456
A3	Dispose Off-Site Contaminated Soil and Demolition Material: less than 50 mg/kg PCBs	Ton			$0			$0	0.40	$220.0	$88.0	0.40	$220.0	$88
A4	Epoxy Coating Spot Repair	Lump Sum			$0			$0	1	$3,505.8	$3,505.8	1	$3,505.8	$3,506
	SubTotal				**$0**			**$4,000**			**$10,000**			**$10,000**
	Contingency (15%)				**$0**			**$600**			**$1,500**			**$1,500**
	TOTAL ANNUAL COST (unescalated)				**$0**			**$4,600**			**$11,500**			**$11,500**
	PRESENT WORTH of ANNUAL COST (4% for 30 years) (1)				**$0**			**$82,725**			**$206,813**			**$206,813**
	TOTAL CAPITAL plus PW of ANNUAL COST				**$7,994,000**			**$2,276,000**			**$1,513,000**			**$207,000**

Notes:

(1) Present Worth = $\Sigma(C/(1+r)^n)$ from n=1 to n=30

TABLE 3

COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES

Evaluation Criteria	Alternative 1 No Further Action	Alternative 2 Expanded Cover System	Alternative 3 Limited Removal and Long-Term Management	Alternative 4 Expanded Removal to Achieve Part 375 Residential SCO
Overall Protection of Human Health and the Environment	Contamination remains at the Site; ICs/ECs with SMP provide additional protection to current and future workers.	Contamination remains at the Site; ICs/ECs with SMP provide additional protection to current and future workers.	Some contaminated soil and concrete remains at the Site; ICs/ECs with SMP provide additional protection to current and future workers.	PCB contaminated soil and concrete removed. No long-term ICs/ECs under Part 375 required.
Compliance with SCGs	Meets TSCA.	Meets TSCA.	Meets TSCA and CP-51.	Meets TSCA and Part 375.
Long-term Effectiveness and Permanence	Effective but relies on EC, ICs and SMP; Site would continue to be Class 3 with action deferred.	Effective but relies on ECs, ICs and SMP; Site would continue to be Class 3 with action deferred.	Effective and permanent but relies on EC, ICs and SMP; Site would be reclassified to be a Class 4 and would require continued management.	Effective and permanent; Site would be de-listed.
Reduction of Toxicity (T), Mobility (M), and Volume (V) with Treatment	No TV reduction; EC reduces potential M.	No TV reduction; EC reduces potential M.	Removal reduces V at the site, but not overall; EC reduces potential M, no T reduction.	Removal reduces VM at the site, but not overall; No T reduction.
Short-Term Effectiveness	Few short-term impacts as no construction is included. Time for remediation: less than 1 week per year	Impacts to workers, community and environment during remediation. Time for remediation: 5 months	Removal will present moderate risks and impacts to workers, community, traffic, and environment. Poses green remediation/sustainability issues. Time for remediation: 8.5 months	Removal presents greatest risks and impacts to workers, community, traffic, structures, and environment. Poses greatest green remediation/ sustainability issues. Time for remediation: 21 months
Implementability	No construction to pose implementation issues. ICs/ECs and SMP pose administrative disadvantages. Remains as Class 3.	Moderately difficult to implement due to moving electrical equipment in and out of building ICs/ECs and SMP administrative disadvantage. Remains as Class 3.	Challenging to implement due to moving electrical equipment and concrete/soil excavation in tight environment and excavation beneath water table. Re-classification as Class 4 may pose administrative disadvantage.	Most difficult to implement due to moving electrical equipment, confined area, concrete and soil removal, work below water table, complexity of temporary structural support to protect building structural integrity. De-listing the Site is a beneficial administration advantage.
Land Use	ICs/ECs and SMP would allow continued current use.	ICs/ECs and SMP would allow restricted-residential and/or commercial use.	Remediation and cap would allow reclassification to Class 4 and restricted-residential and/or commercial use.	Remediation would allow de-listing Site and residential use.
Total Present Worth	$207,000	$1,513,000	$2,276,000	$7,994,000

FIGURES



0 1500' 3000'

MAP SOURCE:

GOOGLE EARTH IMAGERY DATE 09/2017

Title:	SITE LOCATION MAP
Location:	BRONX PSYCHIATRIC CENTER 1500 WATERS PLACE NEW YORK, NEW YORK
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

URS

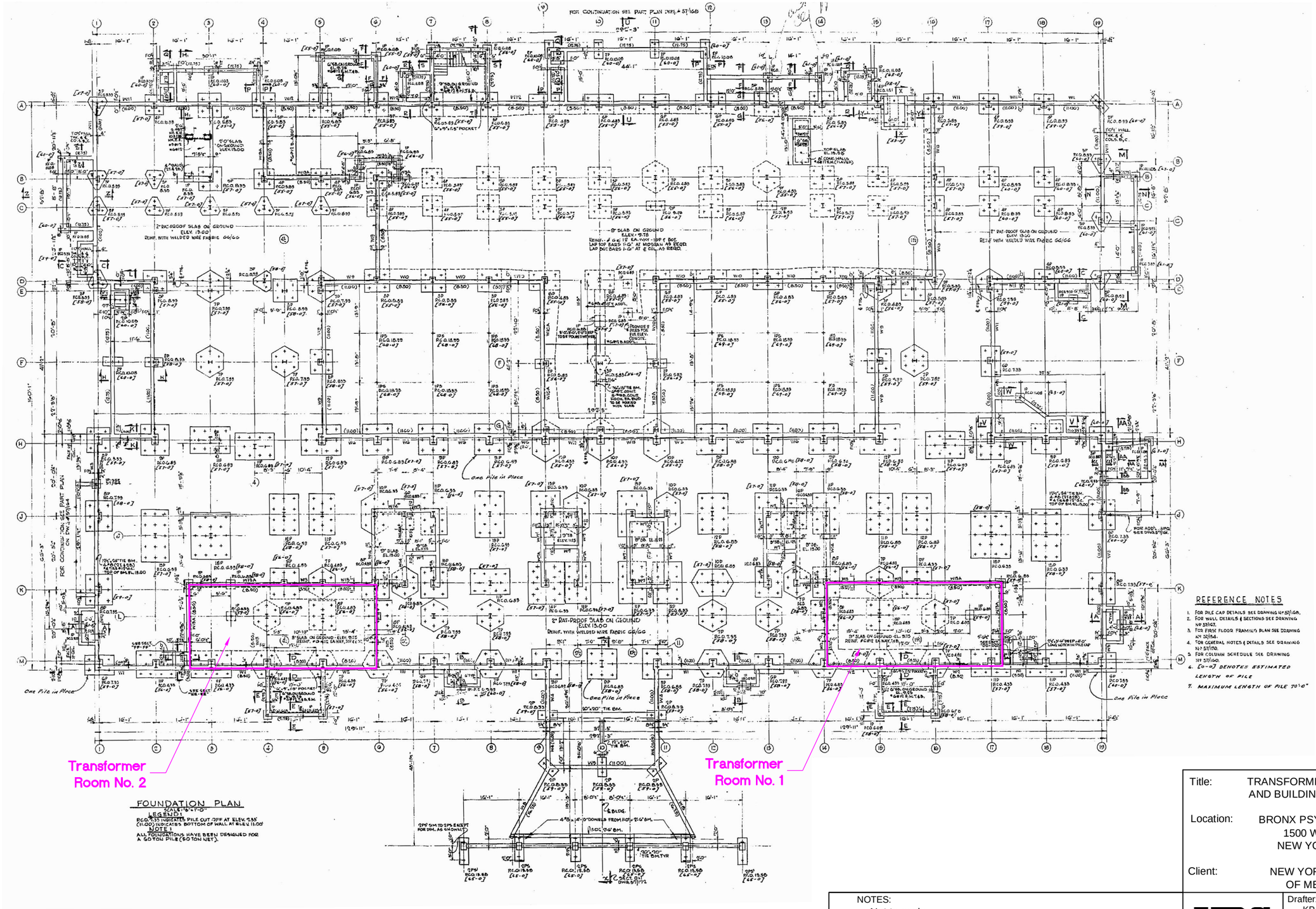
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: CLS	Date: March 2018
Drg. Size: 8.5 x 11	Job No.: 60425929

FIGURE 1

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\910-CAD\20-SHEETS\Figure 1 Site Location Map-NYSP.dwg User:meisterk Mar 14, 2018 - 12:06pm

C:\Users\karen.peppin\Desktop\backup work hd 2014-06-12\karen desktop 4\Bronx PC\2016-17 CAD\2016 CAD\FIGURE 2-new.dwg User: karen.peppin Jan 12, 2017



NOTES:
Not to scale.

SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, 12/04/58

Title: TRANSFORMER ROOM LOCATIONS AND BUILDING FOUNDATION PLAN

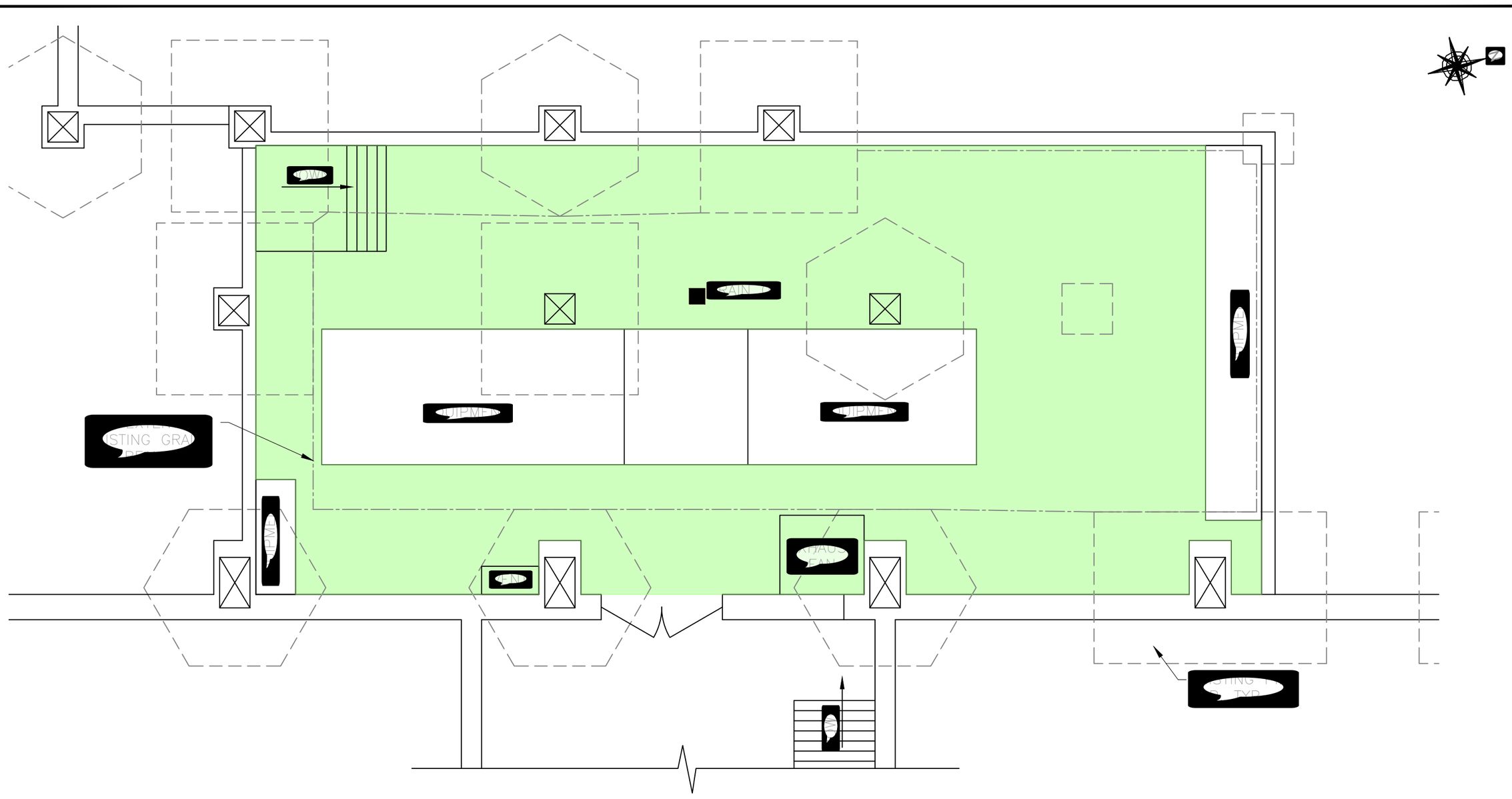
Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

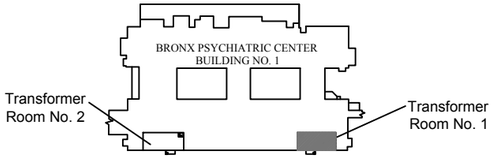
Drafter: KP	Date: January 2017
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 2



LOCATION MAP

NOT TO SCALE



LEGEND

- Structural Column
- Encapsulated Area (Epoxy Coated)
- Former Drain

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

Title: TRANSFORMER ROOM NO. 1 CURRENT CONDITIONS

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

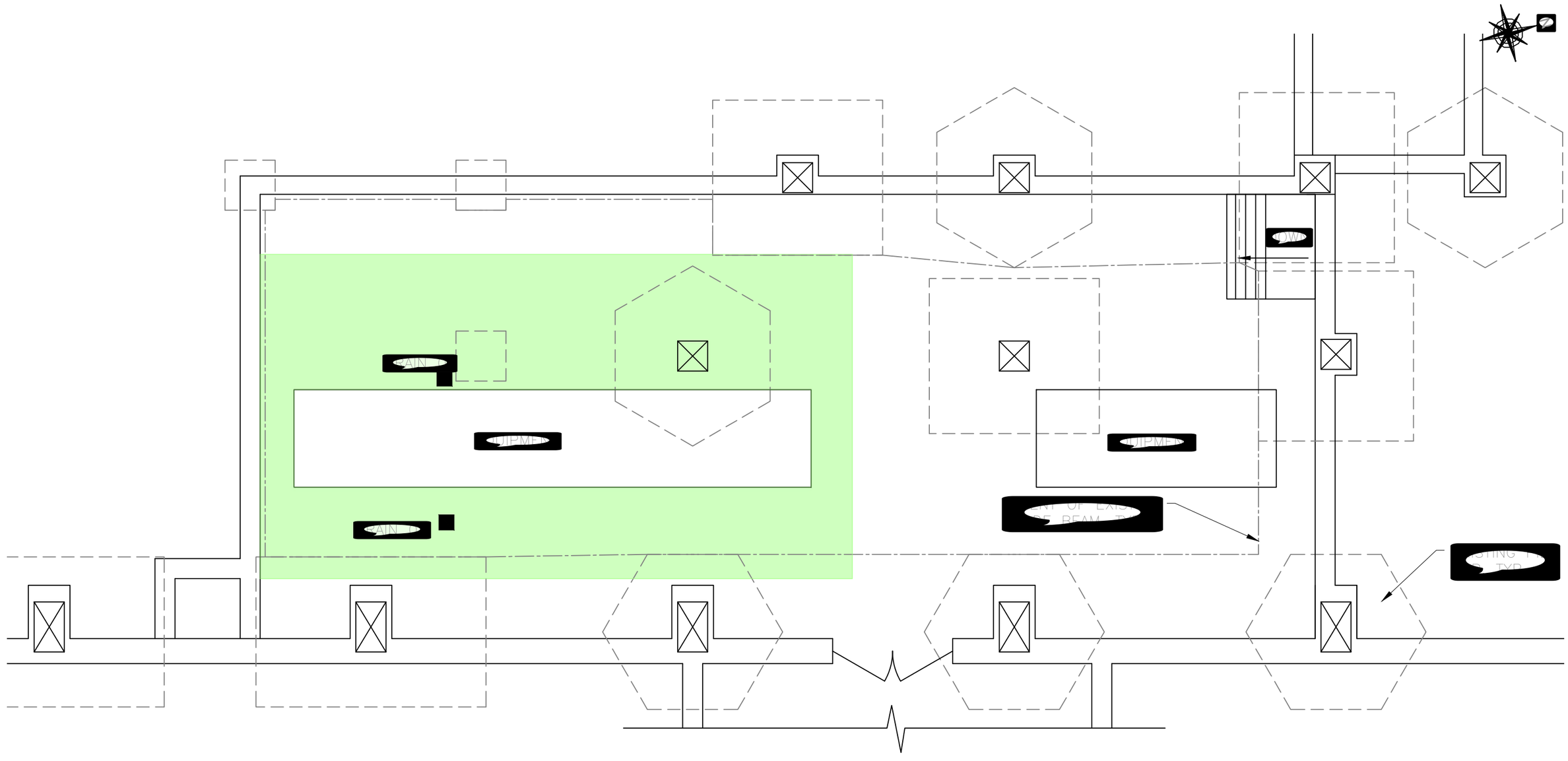
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

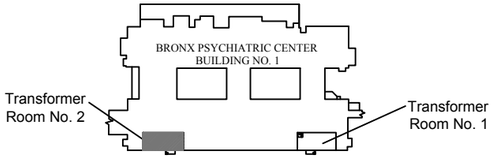
FIGURE 3

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User: meisterk Mar 14, 2018 - 11:55am



LOCATION MAP

NOT TO SCALE



LEGEND

- Structural Column
- Encapsulated Area (Epoxy Coated)
- Former Drain

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

Title: TRANSFORMER ROOM NO. 2 CURRENT CONDITIONS

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

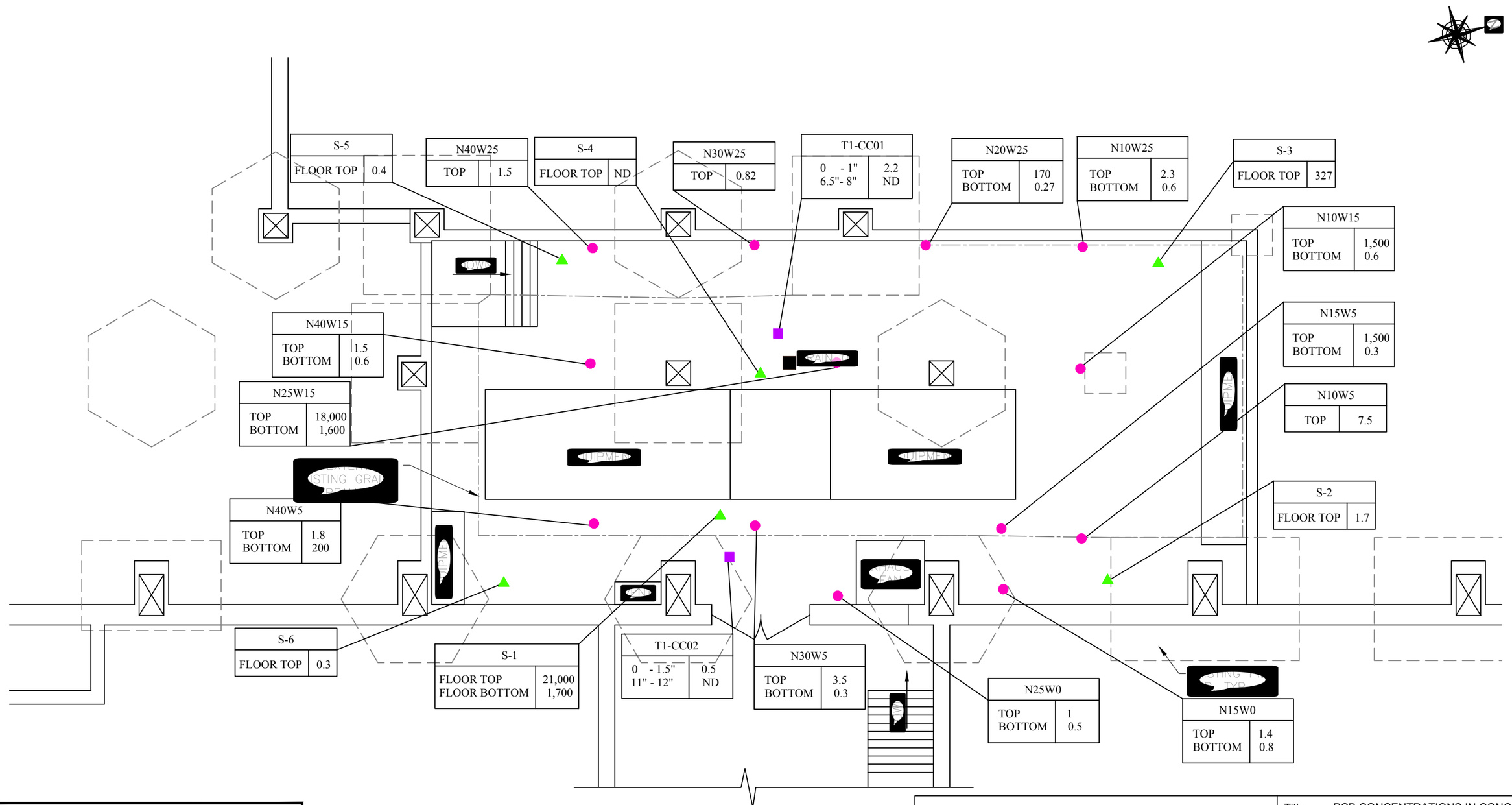
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

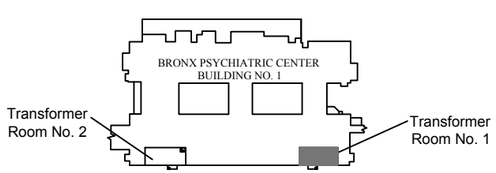
FIGURE 4

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User: meisterk Mar 14, 2018 - 11:55am



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Concrete Sample Location - 1993
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 5

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:55am

T2-CC04	
0 - 1.5"	0.11
10" - 12"	ND

S40W20	
TOP	3
BOTTOM	0.47

S35W13	
TOP	45

S30W20	
TOP	650
BOTTOM	39

S20W15	
TOP	8.9

S15W10	
TOP	1.6
BOTTOM	1.2

S5W20	
TOP	0.9

S50W15	
TOP	0.2

S45W13	
TOP	43
BOTTOM	2.5

S47W7	
TOP	2.2
BOTTOM	58,000

S10W15	
TOP	0.4

S5W10	
TOP	6.5

S0W5	
TOP	0.6

T2-CC03	
0 - 1"	0.4
13" - 15"	ND

S40W0	
TOP	8.4
BOTTOM	0.5

S35W5	
TOP	68,000
BOTTOM	14,000

S25W0	
TOP	2.5
BOTTOM	360

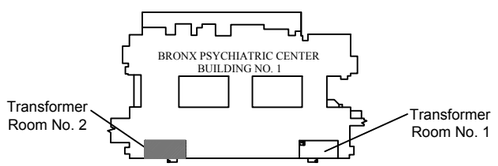
S25W7	
TOP	16

S20W5	
TOP	4.9
BOTTOM	1.8

S10W0	
TOP	0.7
BOTTOM	10

LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Concrete Sample Location - 2000
- Concrete Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN CONCRETE TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

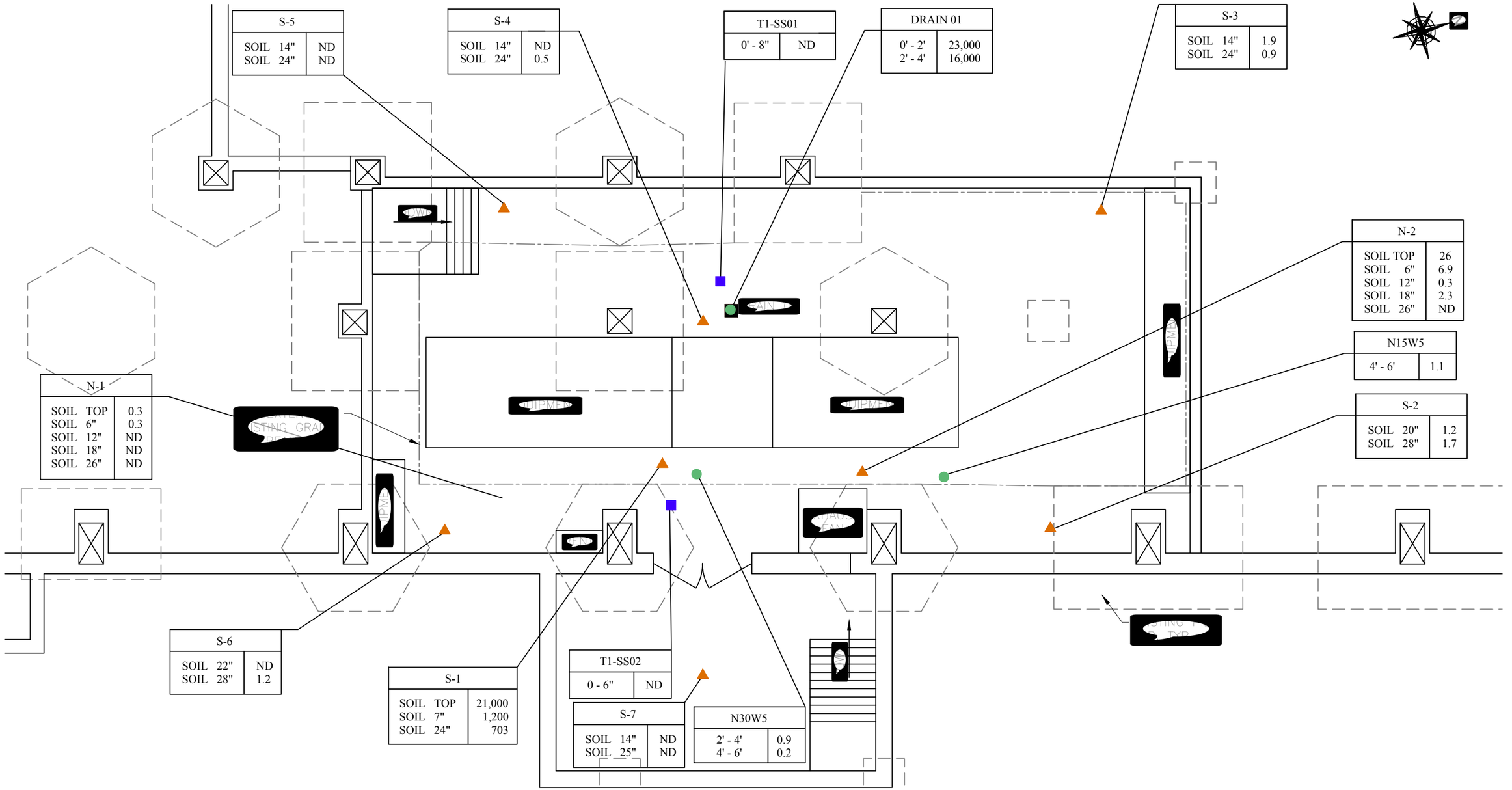
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

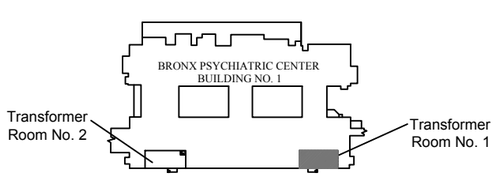
FIGURE 6

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:55am



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Soil Sample Location - 1993
- Soil Sample Location - 2000
- Soil Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN SOIL SAMPLES
TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 7

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am

T□SS□□
1□" □1□" | ND

DRAIN □1
1□" | □□

S1□□ 1□
□□□□□ | □1

DRAIN 01

DRAIN □□
□□□□□ | □
□□□□□ | □□

DRAIN 02

T□SS□□
□□□" | □1□

S□□□ □
□□□□□ | 1□
□□□□□ | □□

S□□□ □
□□□□□ | □.□

EQUIPMENT

EQUIPMENT

DOWN

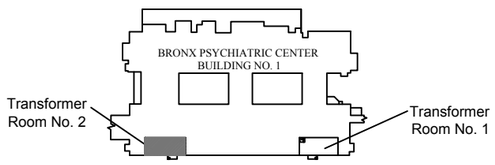
EXTENT OF EXISTING GRADE BEAM, TYP.

EXISTING PILE CAP, TYP.

N

LOCATION MAP

NOT TO SCALE



6' 0 6'

SCALE IN FEET

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Soil Sample Location - 2000
- Soil Sample Location - 2013
- Former Drain

NOTES:
All locations are approximate.
Concentrations are in mg/kg.

ND - Not Detected
NA - Not Analyzed

Title: PCB CONCENTRATIONS IN SOIL SAMPLES
TRANSFORMER ROOM NO. 2

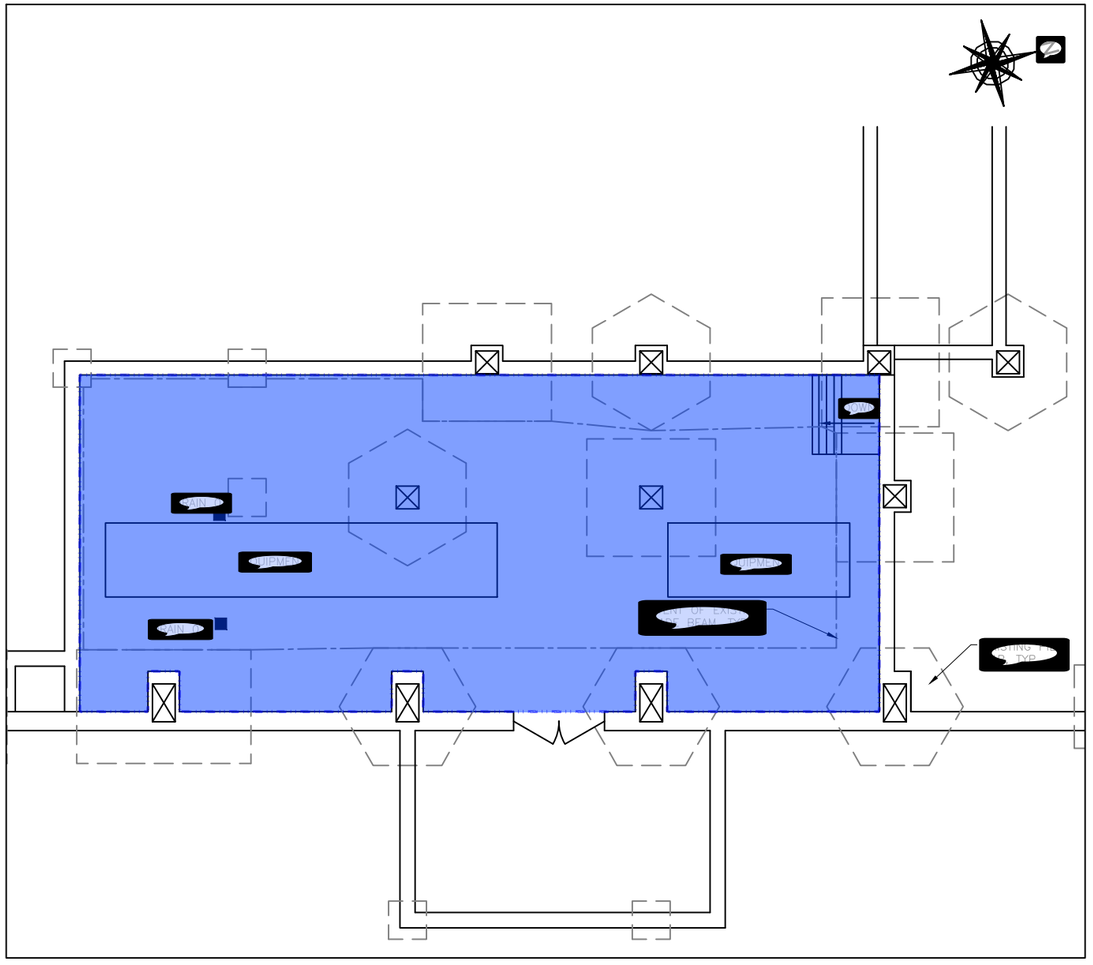
Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

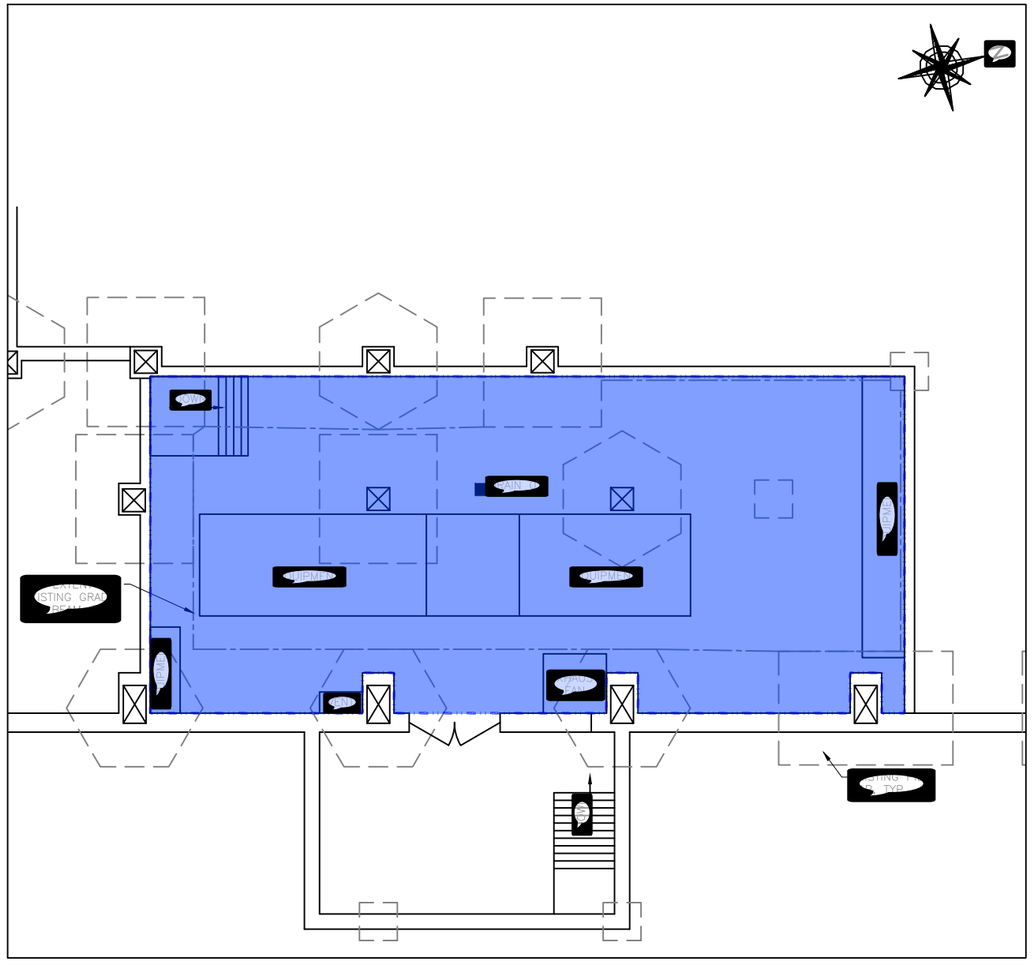
URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 8



TRANSFORMER ROOM NO. 2

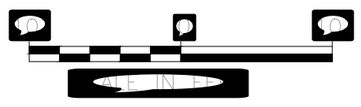


TRANSFORMER ROOM NO. 1

LOCATION MAP

NOT TO SCALE





BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Expanded Epoxy Coating

Title: CONCEPTUAL LAYOUT FOR ALTERNATIVE 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

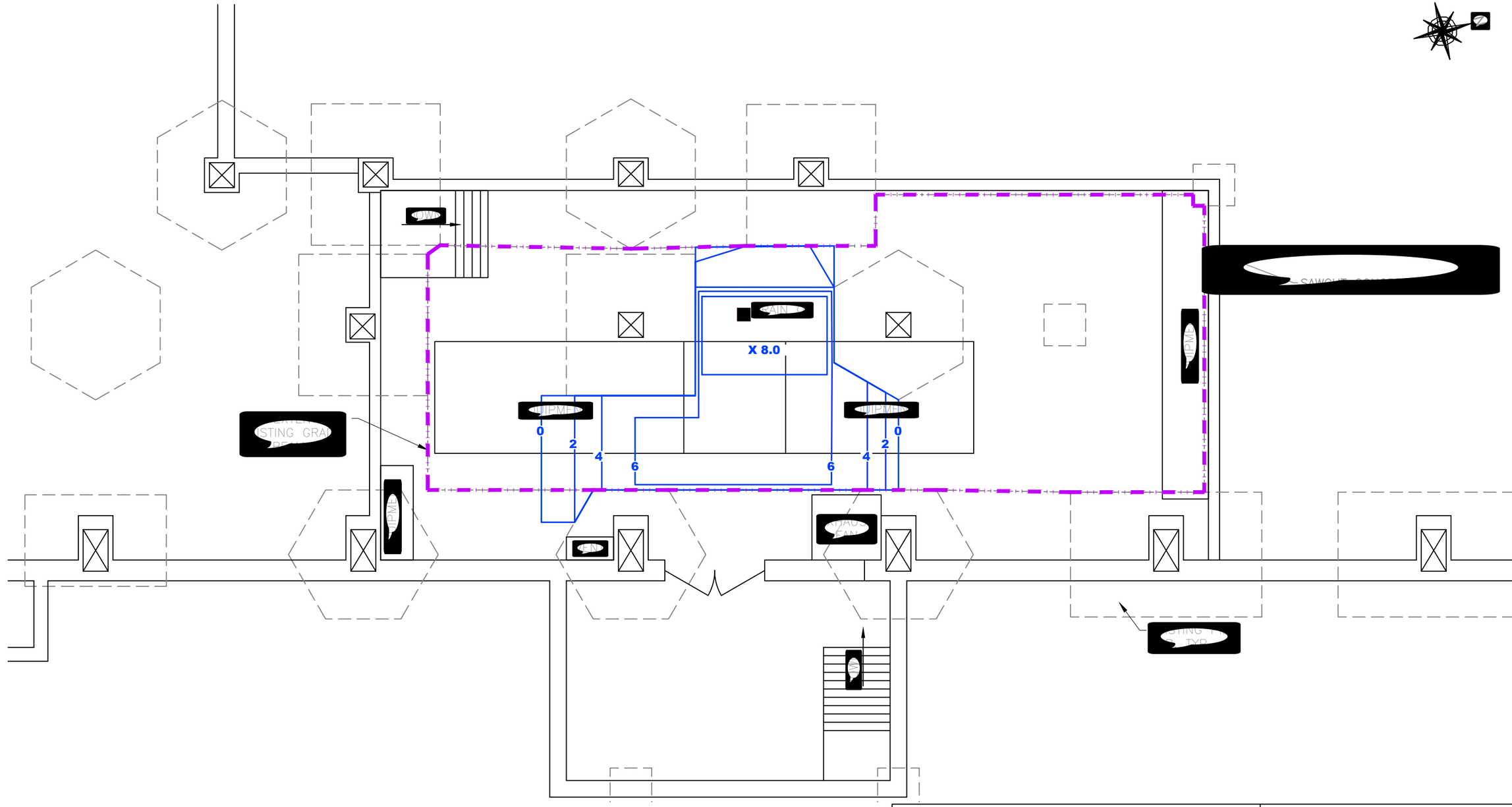
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

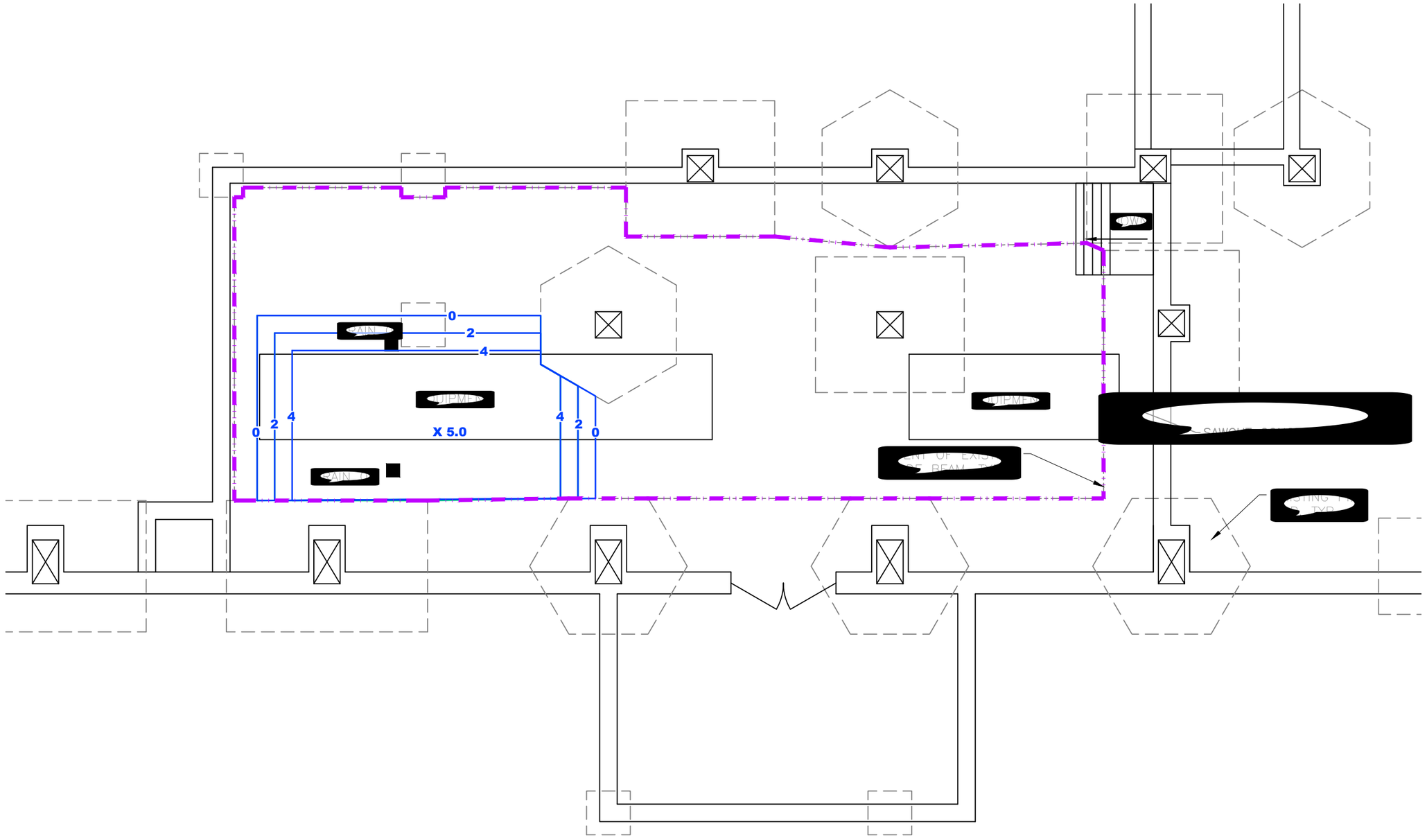
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 9

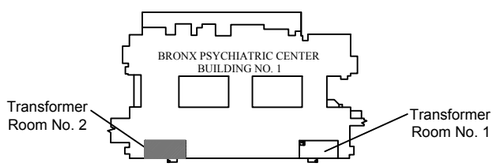
P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am


X 8.0
0
2
4
6
6
4
2
0
DRAIN
DRAIN
DRAIN



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- 4 — Impacted Soil Excavation Depth Contours (Estimated)

NOTE:
All locations are approximate.

Title: ALTERNATIVE 3 ESTIMATED REMOVAL TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

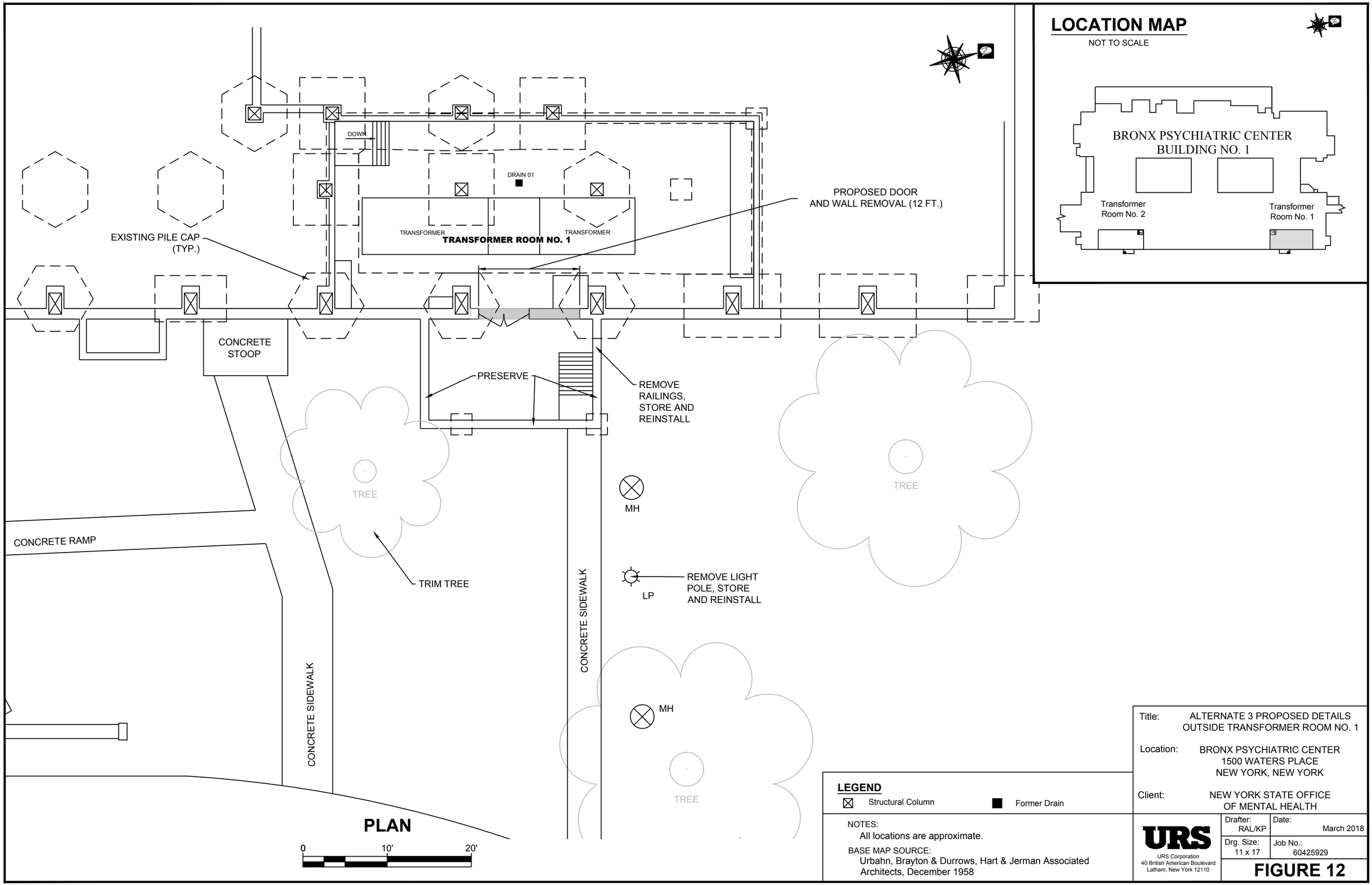
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 11

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User:meisterk Mar 14, 2018 - 11:56am



LOCATION MAP

NOT TO SCALE

LEGEND

⊠ Structural Column

■ Former Drain

NOTES:

All locations are approximate.

BASE MAP SOURCE:

Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

Title: ALTERNATE 3 PROPOSED DETAILS OUTSIDE TRANSFORMER ROOM NO. 1

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

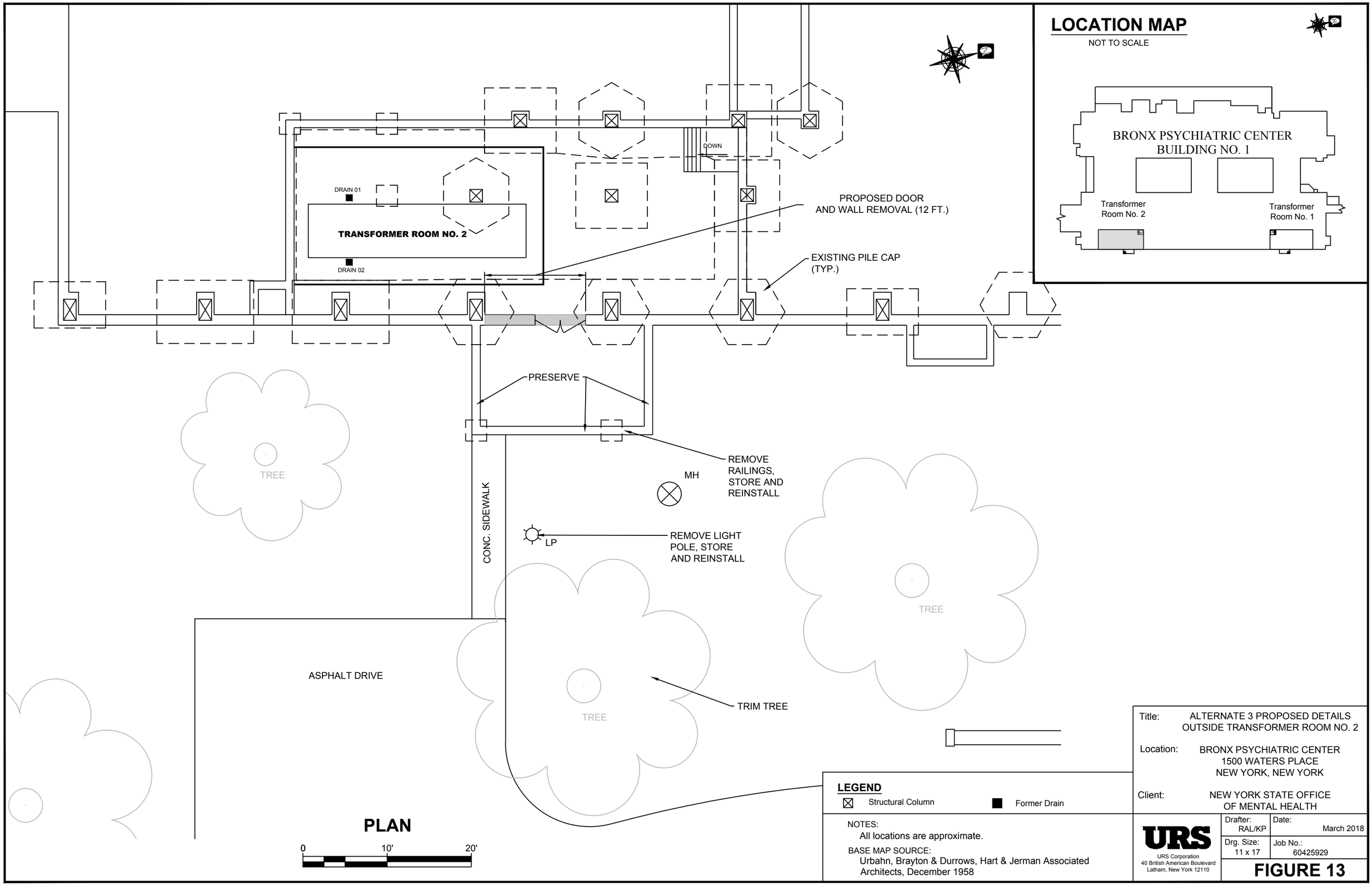
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 12

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\910-CAD\20-SHEETS\ALT-3\60425929-ALT-3_TR1_TR2.dwg User:meisterk Mar 14, 2018 - 1:01pm



LOCATION MAP

NOT TO SCALE

LEGEND

Structural Column

Former Drain

NOTES:

All locations are approximate.

BASE MAP SOURCE:

Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

Title: ALTERNATE 3 PROPOSED DETAILS OUTSIDE TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

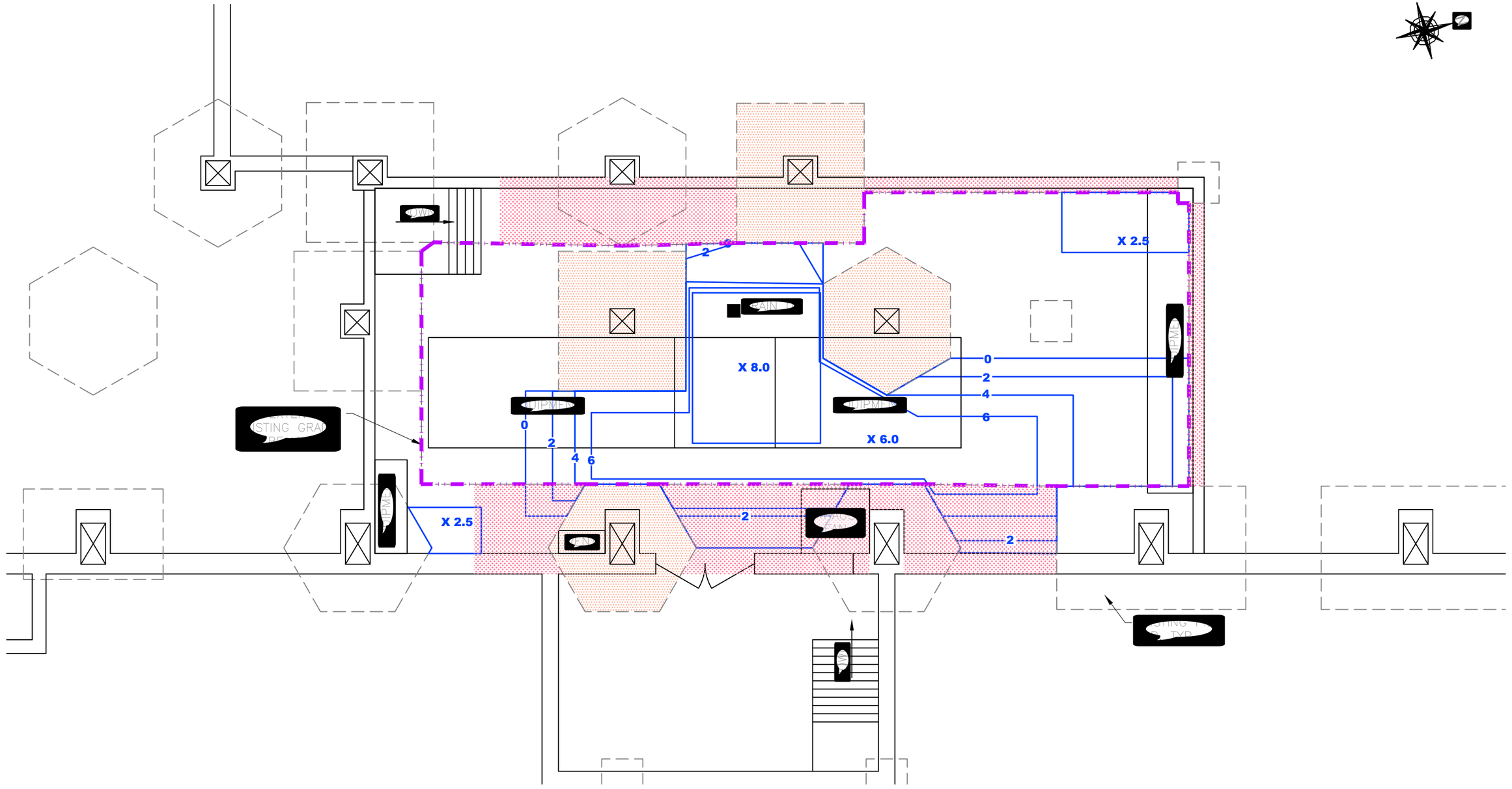
Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

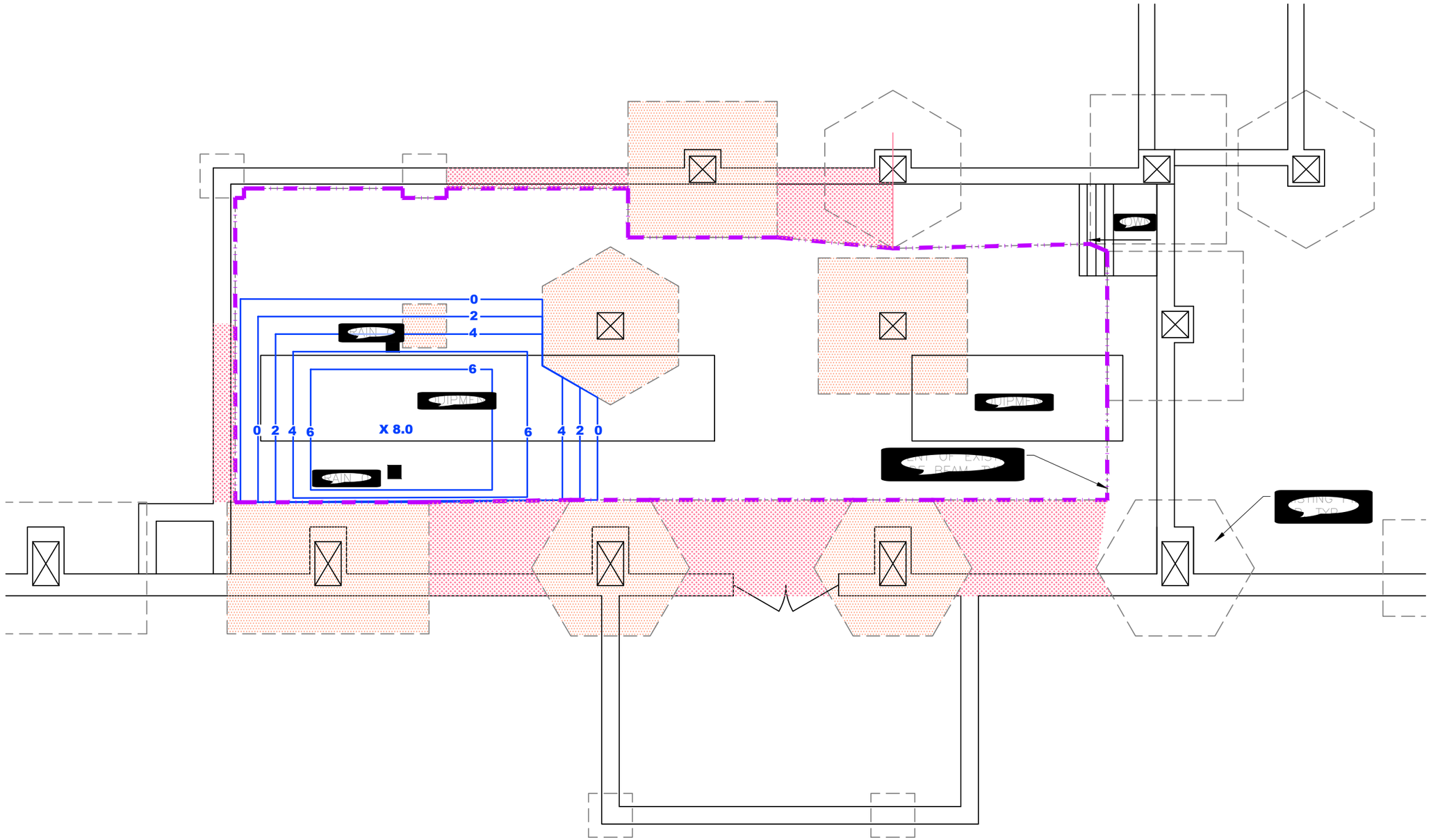
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 13

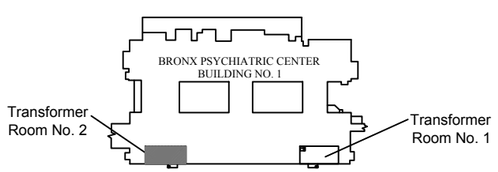
P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\910-CAD\20-SHEETS\ALT-3\60425929-ALT-3_TR1_TR2.dwg User:meisterk Mar 14, 2018 - 1:01pm


X 2.5
X 8.0
X 6.0
X 2.5
0
2
4
6
2
2
2
0
2
4
6
EQUIPMENT
EQUIPMENT
DRAIN
DRAIN
DRAIN



LOCATION MAP

NOT TO SCALE



BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

LEGEND

- Structural Column
- Former Drain
- Floor Slab Removal (Estimated)
- Impacted Soil Excavation Depth Contours (Estimated)
- Pile Cap to be Removed (Estimated)
- Grade Beam to be Removed (Estimated)

NOTE:
All locations are approximate.

Title: ALTERNATIVE 4 REMEDIATION
TRANSFORMER ROOM NO. 2

Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

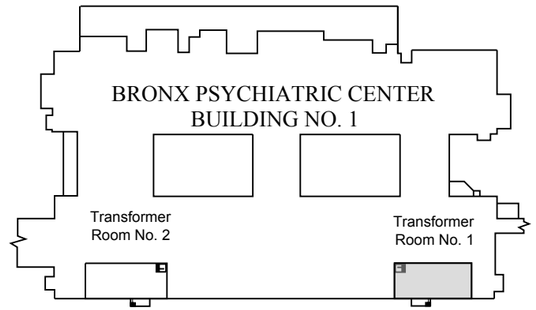
FIGURE 15

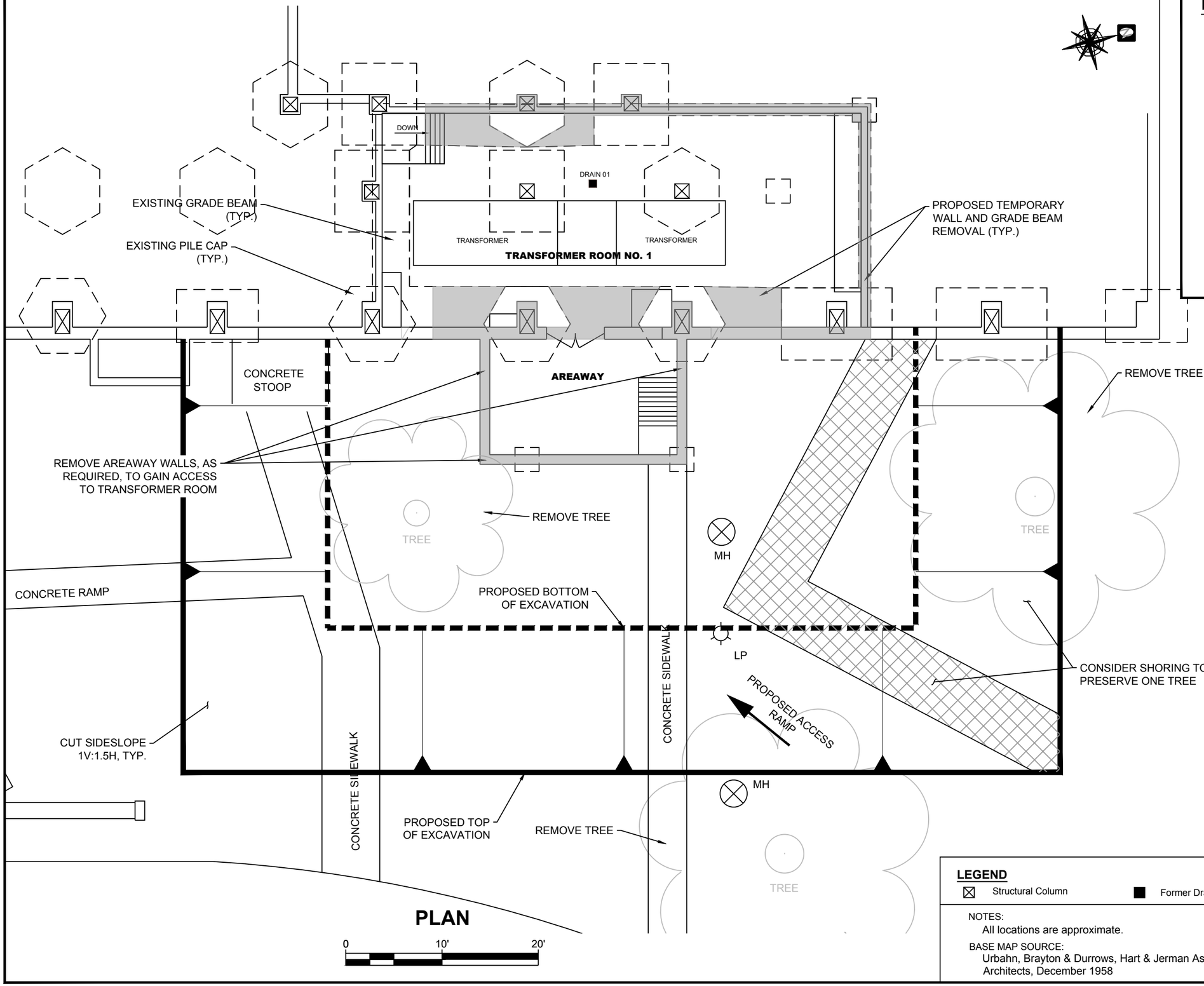
P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\2018 CAD\FIGURE 3-11 14-15.dwg User: meisterk Mar 14, 2018 - 11:57am

P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\910-CAD\20-SHEETS\ALT-4\60425929-ALT-4_TR1_TR2.dwg User:meisterk Mar 14, 2018 - 12:01pm

LOCATION MAP

NOT TO SCALE





PLAN

LEGEND

⊠ Structural Column ■ Former Drain

NOTES:
All locations are approximate.

BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated Architects, December 1958

Title: ALTERNATE 4 PROPOSED DETAILS OUTSIDE TRANSFORMER ROOM NO. 1

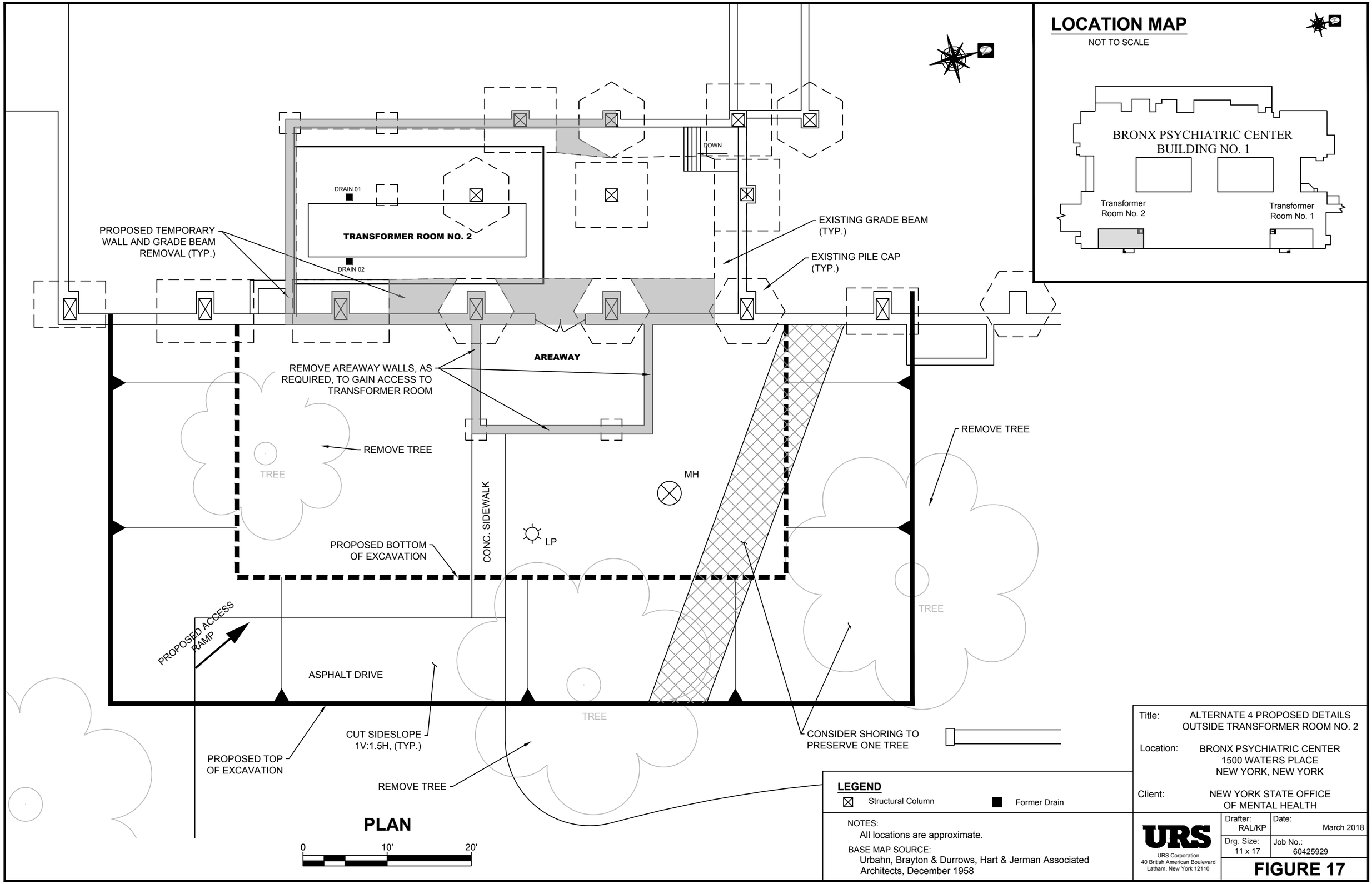
Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK

Client: NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110

Drafter: RAL/KP	Date: March 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE 16


LOCATION MAP
NOT TO SCALE
BRONX PSYCHIATRIC CENTER
BUILDING NO. 1
Transformer
Room No. 2
Transformer
Room No. 1
DOWN
DRAIN 01
TRANSFORMER ROOM NO. 2
DRAIN 02
PROPOSED TEMPORARY
WALL AND GRADE BEAM
REMOVAL (TYP.)
EXISTING GRADE BEAM
(TYP.)
EXISTING PILE CAP
(TYP.)
AREAWAY
REMOVE AREAWAY WALLS, AS
REQUIRED, TO GAIN ACCESS TO
TRANSFORMER ROOM
REMOVE TREE
TREE
MH
CONC. SIDEWALK
LP
PROPOSED BOTTOM
OF EXCAVATION
PROPOSED ACCESS
RAMP
ASPHALT DRIVE
PROPOSED TOP
OF EXCAVATION
CUT SIDESLOPE
1V:1.5H, (TYP.)
CONSIDER SHORING TO
PRESERVE ONE TREE
PLAN
0
10'
20'
LEGEND
Structural Column
Former Drain
NOTES:
All locations are approximate.
BASE MAP SOURCE:
Urbahn, Brayton & Durrows, Hart & Jerman Associated
Architects, December 1958
Title: ALTERNATE 4 PROPOSED DETAILS
OUTSIDE TRANSFORMER ROOM NO. 2
Location: BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE
NEW YORK, NEW YORK
Client: NEW YORK STATE OFFICE
OF MENTAL HEALTH
URS
URS Corporation
40 British American Boulevard
Latham, New York 12110
Drafter: RAL/KP
Date: March 2018
Drg. Size: 11 x 17
Job No.: 60425929
FIGURE 17
P:\60425929 Bronx Bldg 1 Transformer Rooms FS\900-CAD-GIS\910-CAD\20-SHEETS\ALT-4\60425929-ALT-4_TR1_TR2.dwg User:meisterk Mar 14, 2018 - 12:01pm

APPENDIX A

STRUCTURAL ANALYSIS ON THOMPSON BUILDING [BUILDING 1],
CITYSCAPE ENGINEERING, PLLC, JULY 2017

July 27, 2017
March 1, 2018

Newman Design Group
210 West Rouges Path
Cold Springs Hill, NY 11743
Attn: Mr. Mitch Newman

RE: Thompson Building- 1500 Waters Place
CSE- 17063

Dear Mr. Newman,

It is my understanding that soil remediation is required for the proposed work at the Thompson Building. The Thompson building is located in the center of the 1500 Waters street development (see figure1.0). The structure was 15 stories, with a crawl space and a penthouse. The structure was constructed of concrete encased steel frame with cast in place concrete floor slab.

It is to my understanding that a portion of the soil under the proposed transformer room is contaminated (see figure 2.0). The suggested remediation is to remove the contaminated soil and replace it with select fill, without altering any foundation system. To complete our study, drawing 57-100 to 57-172, dated October 15, 1958 were reviewed.

Load Analysis

In order to determine the impact of the excavation to the pile foundation and the structural system, the original design loading versus the proposed condition loading condition during the excavation were analyzed. The ratio between the two values represents the factor of the load reduction when the structure is vacated and stripped to the main frame. Multiplying this factor by 3 (the typical ultimate versus allowable pile capacity) yields an overall safety factor of ultimate pile capacity. This overall safety factor, combined with the slenderness ratio can be used as a means of an engineering judgement to justify the extent of disturbance resulted from the excavation work.

Prior to the excavation work, the structure will be vacated and stripped to the main frame. That means the building will be entirely unoccupied, all of the ceiling, partition walls, mechanical, electrical elements, and floor finishes will be removed, leaving only the main structural elements, ie: slab and columns.

Initial _____

CityScape Engineering

CITYSCAPE ENGINEERING

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Suite 209
Port Washington
NY 11050
(631) 978-5000

www.CityScapeEngineering.com

Based on the loading schedule on drawing 57/170 (see figure 3.0. the slab weighs 54 PSF). To be conservative, the lightest total load combinations with 54 PSF slab occurs in the bedrooms area, with a total load of 172 SF. The overall safety factor (ultimate capacity versus proposed reduced loading) is (172/54 x 3) = 9.6.

Pile slenderness will be discussed on the later section.

Deep Foundation

Based on the existing foundation plan (DWG 57/153), the foundation was comprised of a 60 ton pile, embedded between 54' to 70' ft. under the ground. The length of piles is consistent with the soil boring (dwg 57/101), which indicates the pile was bearing on top or rock strata.

The soil boring also shows the ground water is approximately 6.75' below the slab of the proposed transformer room elevation (Ground Water at el. 3'-0", slab at el. 9.75'). Any excavation below the concrete slab exceeding 6.75 ft may require dewatering. Dewatering will not create a negative skin friction condition (down drag) because all of the piles are bearing on rock. Hence, it will not cause any settlements to the remainder of the structure. Dewatering plan shall be provided by a NYS licensed professional engineer.

The foundation plan (drawing 57/153) shows the pile cut off elevation at this area is approximately at elevation 4.83' (see dwg 57/140). Soil may be removed from beneath grade beams and pile caps. Any excavation below pile cut off elevation, deeper than 5.25 ft (9.75'-4.83'+4" cover) will undermine the pile cap and unbrace the pile. For this reason, the pile was checked to determine if it will be subjected to Euler buckling slenderness (kl/r>22). The pile diameter is tapered from 18" OD to 12.75"OD with 3/8" wall (r=12.5 in). From that data, a maximum of 11.5 ft unbraced length is allowed. However, to be conservative, only a total of 10 feet of excavation below the slab (elevation 9.75') is permitted (10' deep-5.25'= only 4.75' unbraced length is proposed vs. 11.5' is allowed). A deeper excavation may be explored during excavation if deemed necessary.

Excavation and Backfill.

The foundation plan shows that two pile caps are within the work area (shaded in red on figure 2.0). Excavation is permitted around the piles and beneath the pile cap, and grade beams. Excavation within the influence line must be done manually by hand. The influence line starts from the underside of a pile cap, going outward 45 degrees down. Please note that only one pile cap maybe undermined at a time if temporary shoring is provided for the corresponding column. A temporary shoring plan must be prepared by a NYS licensed Professional Engineer.

Even though the excavation work is inside of an enclosed structure and protected from the weather precipitation, ideally, the excavation should not be left open for more than 14 days. Excavation must comply with OSHA standard guidelines.

Backfill may utilize ¾" gravel, crushed stone, or recycled concrete aggregate. Alternatively, free draining controlled fill with less than 10% fines passing #200 sieve and free of organic, moist to 95% proctor density is also permitted. Fill shall be spread in lifts not exceeding 12 inches in loose thickness and should be compacted with four passes behind a vibratory roller. When backfill is within a 45 degree influence line, the fill shall be spread in 6 inches lift and hand tamped. Use CLSM self-leveling concrete (500 psi) under pile cap where compaction is not feasible.

PCB-Impacted Concrete Pile Cap

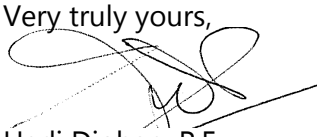
In the event that concrete is contaminated and must be removed, a temporary shoring plan must be prepared by a NYS licensed professional engineer. The temporary shoring shall support the dead load of the pertaining contributory area, hence releasing weight and allowing the removal and the reconstruction of the pile cap. The temporary shoring must describe steps and construction procedure. It is recommended that no more than one pile cap being removed and reconstructed at a time per each wing of the building. Other alternative, ie: encasing the contaminated pilecap with additional concrete and sealant barrier material may be explored (by others) during design development phase.

Summary

Based on the 9.6 overall load safety factor, combined with short unbraced pile (criteria: kl/r<22) during the excavation, it is my opinion that the removal of the slab on grade within the proposed transformer room area, and the soil remediation up to 10 feet deep would not adversely impact the foundation system and the superstructure.

I hope you find this information useful, feel free to call me should you have any questions.

Very truly yours,



Hadi Djohan, P.E.
CITYSCAPE ENGINEERING, PLLC

Appendix

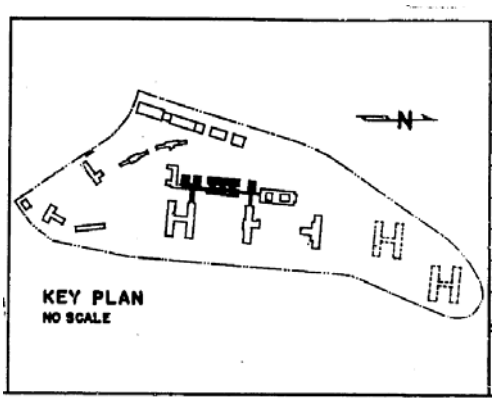


Figure 1.0 Key Plan

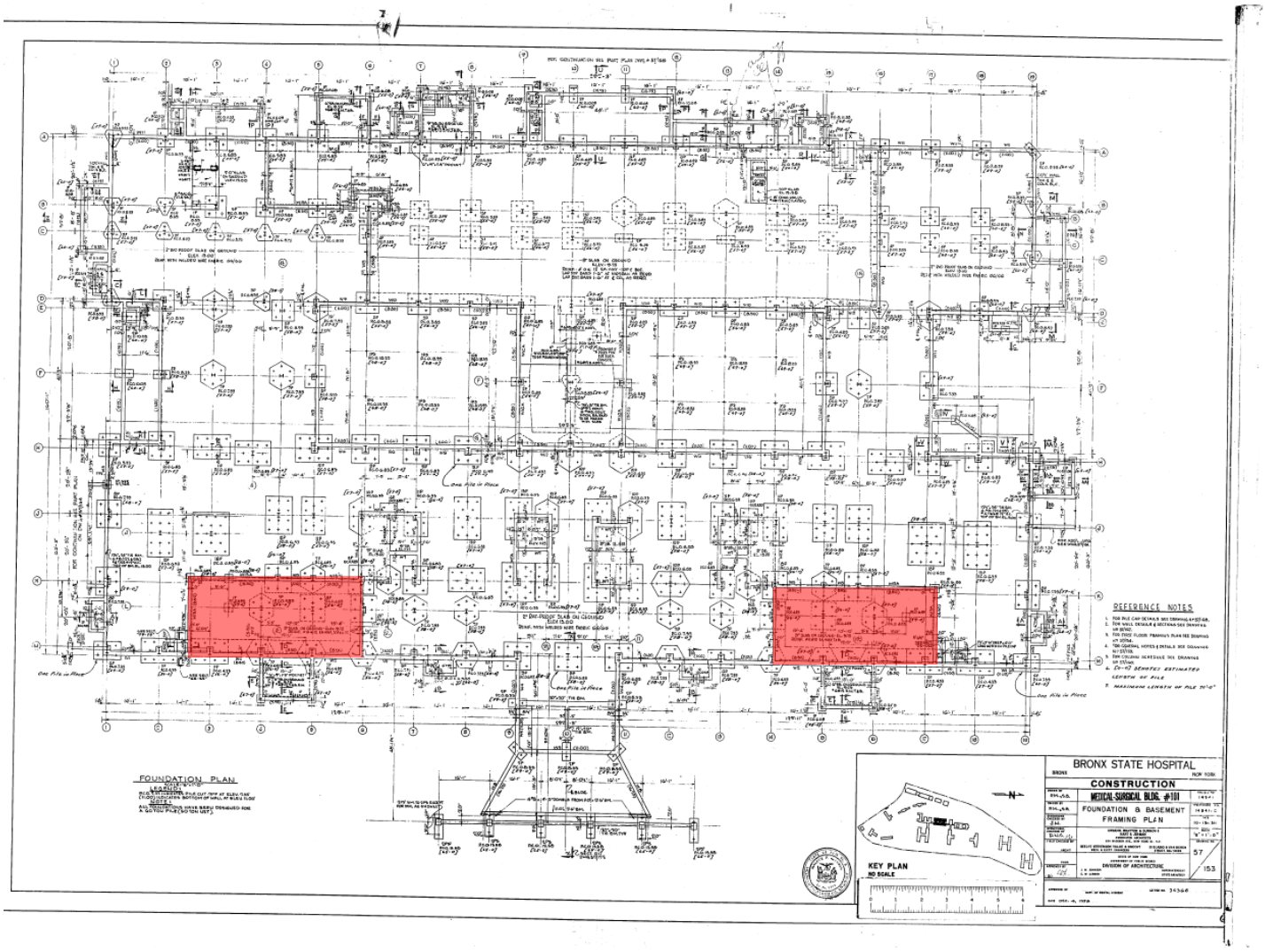
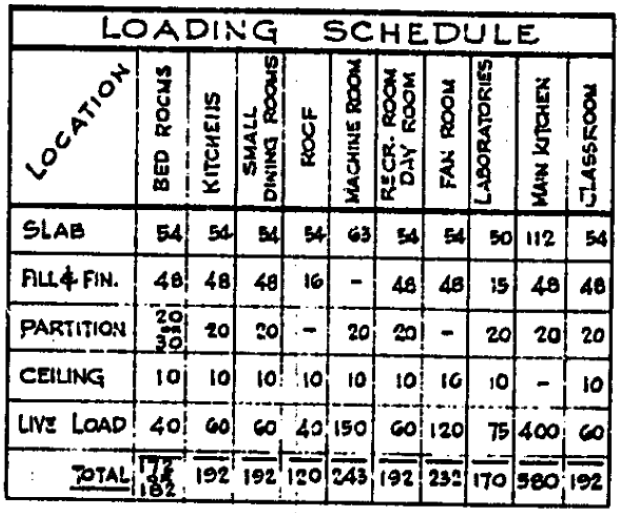


Figure 2.0 Location of the proposed soil remediation.



LOADING SCHEDULE

LOCATION	BED ROOMS	KITCHENS	SMALL DINING ROOMS	ROOF	MACHINE ROOM	RECR. ROOM DAY ROOM	FAN ROOM	LABORATORIES	MAIN KITCHEN	CLASSROOM
SLAB	54	54	54	54	63	54	54	50	112	54
FILL & FIN.	48	48	48	16	-	48	48	15	48	48
PARTITION	20 or 30	20	20	-	20	20	-	20	20	20
CEILING	10	10	10	10	10	10	10	10	-	10
LIVE LOAD	40	60	60	40	150	60	120	75	400	60
TOTAL	172 or 182	192	192	120	243	192	232	170	580	192

Figure 3.0 Loading Schedule (dwg 57/170)

APPENDIX B

FEASIBILITY STUDY COST ESTIMATES

FEASIBILITY STUDY COST ESTIMATE

Bronx Psychiatric Center
Transformer Rooms 1 and 2 PCB Remediation
Cost Estimate

1500 Waters Place
Bronx, New York

Prepared for:

Dormitory Authority of the State of New York
New York State Office of Mental Health

Prepared By:

URS Corporation
257 West Genesee Street, Suite 400
Buffalo, New York 14202

February 2018
Revised February 2019 (text only)

Table of Contents

1. Introduction 3
2. Cost Estimate Overview 3
3. Quantity Development 4
4. Unit Cost Development 4
5. Key Assumptions 4
6. Schedule 5
7. Markups 5

TABLES

Table 1 – Cost Estimate Summary
Table 2 – Quantity Takeoffs
Table 3 – Unit Cost Breakdown
Table 4 – Breakdown of Electrical Costs
Table 5 – Breakdown of Temporary Site Services
Table 6 – Breakdown of Alternative 4 Temporary Structural Stabilization
Table 7 – Breakdown of Annual Costs
Table 8 – Schedule

ATTACHMENTS

Attachment 1 – Unit Cost Backup
- 1.1 - RS Means Online Unit Prices
- 1.2 - Vendor and Contractor Quotes
- 1.3 - Quotes from Similar Previous Projects
- 1.4 - Vendor Quote for New Electrical Equipment

Attachment 2 – Alternative 4 Construction Schedule

1. Introduction

The Bronx Psychiatric Center Building 1 is a currently inactive multi-story mental health facility located at 1500 Waters Place, Bronx, New York. Leakage from two transformers, which contained polychlorinated biphenyls (PCBs), in two transformer rooms in the basement of the building have impacted the concrete floors and underlying soil. A feasibility study (FS) is being implemented to evaluate options for addressing the PCB contamination in the two rooms. The FS is a requirement of an Order on Consent and Administrative Settlement issued to the New York State Office of Mental Health (OMH) by the New York State Department of Conservation (NYSDEC) in March 2012. A FS Report was prepared to document the development and evaluation of four alternatives to address the PCB contamination. The evaluation of the alternatives will result in the selection of one based on a variety of factors including effectiveness, implementability and cost.

2. Cost Estimate Overview

This feasibility-level cost estimate was prepared to provide an approximation of anticipated costs, and to allow for a cost comparison to aid in selecting the most appropriate remedial alternative for the site. The FS includes four remedial alternatives for comparison. Detailed descriptions of the remedial alternatives are presented in Section 3 of the FS Report.

The general components of each alternative are as follows:

- Alternative 1 – No Further Action: annual inspection, sampling, and maintenance.
- Alternative 2 – Enhanced Cover System: Cleaning of Floor Slabs and Installation of new epoxy; replacement of electrical equipment; annual inspection, sampling, and maintenance.
- Alternative 3 – Limited Removal and Long Term Management: Limited excavation of contaminated soil and concrete; replacement of concrete floor slabs; replacement of electrical equipment.
- Alternative 4 – Expanded Removal to Achieve Part 375 Residential Soil Cleanup Objectives: Excavation of all contaminated soil and concrete; replacement of concrete floor slabs; replacement of electrical equipment.

Table 1 presents a side-by-side comparison of the unit costs, quantities, markups, annual costs and total costs for each remedial alternative. The estimate was developed using various sources including: RS Means Online estimating tool with 2018 cost data; quotes from vendors and contractors; bids on similar projects; and engineering judgement. Since project scopes are not fully defined at this feasibility level, engineering judgement was utilized to make assumptions where appropriate. Unit cost references and engineering assumptions are identified in the cost estimate.

3. Quantity Development

Quantities for individual work components were approximated based on existing drawings of the building, and by information presented in the FS Report. Since quantities are not completely defined at the feasibility level, engineering judgement is used to approximate many of the quantities. Quantity takeoffs are presented on Table 2. Quantities for temporary site facilities, dewatering and settlement monitoring are based on duration. To estimate duration, construction schedules for each alternative were prepared as discussed in Section 6 below.

4. Unit Cost Development

The unit costs were developed using the RS Means Online estimating tool with 2018 cost data; quotes from vendors and contractors; and bids on similar projects. Some unit costs that cannot be fully defined at the feasibility level are presented as allowances based on project experience and engineering judgement. In addition, engineering judgement and professional experience were used to make adjustments to some unit costs to suit the anticipated field conditions. Unit cost breakdowns are presented on Table 3. Cost backup from: RS Means; vendors and subcontractors; and quotes from previous projects is included as Attachment 1.

Certain construction elements are more complex and warrant a more detailed breakdown. These include: temporary structural stabilization for alternative 4, replacement of the electrical system, and temporary site services. The detailed breakdowns of these tasks are presented on Tables 4, 5 and 6 respectively.

Annual Costs

For Alternatives 1, 2 and 3, contamination will remain following remedial activities so continued site management is necessary. This site management includes an annual site inspection, sample collection and analysis, and maintenance of the epoxy floor coatings. Breakdowns of the costs for these tasks are presented on Table 7.

A present worth calculation was performed to establish the total amount of money required to cover the annual costs for a period of 30 years, using a discount rate of 4% per year. Table 1 shows the total annual cost of each alternative, and the resulting present worth amount.

5. Key Assumptions

Two of the key construction elements were estimated with limited information available and therefore some assumptions had to be made. These two elements are dewatering, and removal and replacement of the electrical components.

Dewatering

For alternative 4, the excavation inside the basement is anticipated to extend into the groundwater table. The depth of excavation will ultimately be determined based on the analytical results of soil samples collected from the bottom of the active excavations and is therefore not fully-defined. Due to the uncertainty of the depth of excavation, and the possibility that dewatering will take place during a period of heavy rain or snow melt, it is assumed that dewatering will be necessary for half the duration of the

excavation. Additional dewatering is expected during a portion of the pile cap replacement work, as the groundwater table is anticipated around the elevation of the bottom of the pile caps. Soil boring data has shown that a stiff clay layer exists at or below the bottom of the pile caps. On a nearby project, a pumping rate of 200 gallons per minute was used. Since the groundwater table has been described as being at the upper margin of that clay, a pumping rate of 100 gallons per minute was assumed.

For alternative 3, the excavation inside the basement is not expected to extend into the groundwater table except in localized "hot spot" areas. However, the sandy soils beneath the building promote groundwater flow. Since the depth of excavation is mostly above the groundwater table, it was assumed that dewatering for alternative 3 will be required at about 50 gallons per minute.

Removal and Replacement of Electrical Components

For alternatives 2, 3 and 4, replacement of the existing electrical system components in the two transformer rooms is necessary. Since limited information about the electrical systems is available, the square footage of the building was approximated to be 400,000 square feet. A power requirement of 20 watts per square foot was then assumed. This information was provided to an electrical equipment vendor who then provided estimated costs for two new transformers, and switchgear based on these assumptions. Additional electrical components (conduit, grounding, conductors and safety mats) were approximated based on the size of the rooms. The labor and equipment required to install the new components were estimated based on assumed crew compositions and durations.

6. Schedule

To estimate quantities for cost items that are duration-based (temporary site facilities, dewatering and settlement monitoring), schedules were developed for each alternative. These schedules are presented on Table 8. Engineering judgement was used to approximate durations for major components of the work.

Due to the complex nature of the work involved with completing Alternative 4, a separate MS Project schedule was developed. The MS Project schedule for Alternative 4 is included as Attachment 2. The assumption was made that the temporary structural stabilization work will be performed concurrently in each room by one crew. In room 1 there are 4 pile caps that will be replaced, and in room 2 there are 6 pile caps that will be replaced. Therefore, it is assumed that once the crew for room 1 has completed the fourth pile cap, they will work concurrently with the crew in room 2 to simultaneously complete the replacement of the 5^{th} and 6^{th} pile caps in room 2.

7. Markups

The following markups were applied to the capital costs for Alternatives 2, 3 and 4.

Contractor Overhead and Profit

Unit costs developed using information from RS Means include a markup of approximately 20% for general contractor overhead and profit. It is assumed that costs obtained from bids and subcontractors already include a markup for overhead and profit. For the electrical work, which is assumed to be subcontracted, an additional 5% subcontractor markup was applied.

Engineering and Construction Management

A 15% markup for Engineering and Construction Management has been applied to account for such tasks as design, reporting, construction oversight, Site Management Plan development, Electrical Study development, Structural Analysis, a Request for Risk-Based Approval, and preparing Self-Implementing Cleanup Notifications.

Contingency

Because the design is preliminary, and to account for unanticipated field conditions, contingency markups are included for each alternative based on engineering judgement. The amount of contingency applied varies based on the potential for uncertainty of a given alternative as follows:

Alternative 2: 10%

Alternative 3: 20%

Alternative 4: 25%

Escalation to Midpoint of Construction

An escalation rate of 3% per year was assumed for each alternative. It was assumed that the midpoint of construction would be 1 year from the estimate date for Alternatives 2 and 3, and 2 years from the estimate date for Alternative 4.

COST ESTIMATE TABLES

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 1
Construction Cost Estimate Summary

CAPITAL COSTS

Item	Description	Units	ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
			Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
1	Mobilization/Demobilization (includes construction work plans and submittals, project coordination, subcontractor, equipment and material procurement, and mobilization of personnel, materials and equipment (assume 5% of Items 2 through 27)	Lump Sum	1	$242,120	$242,120	1	$71,852	$71,852	1	$48,860	$48,860	-		$0
2	Temporary Site Services (Refer to Table 5)	Lump Sum	1	$475,466	$475,466	1	$244,449	$244,449	1	$102,071	$102,071	-		$0
3	Temporary Access Road	Square Foot	741	$2.98	$2,210	741	$2.98	$2,210	-		$0	-		$0
4	Soil Excavation, Exterior	Cubic Yard	1,815	$16	$28,783	-	$16	$0	-		$0	-		$0
5	Soil Excavation, Interior	Cubic Yard	280	$211	$59,108	72	$211	$15,199	-		$0	-		$0
6	Sawcut Concrete Floor Prior to Demolition	Lineal Feet	604	$7	$4,367	604	$7	$4,367	-		$0	-		$0
7	Sawcut Concrete/Brick Wall	Lineal Feet	104	$305	$31,684	-	$305	$0	-		$0	-		$0
8	Concrete Demolition and Removal	Cubic Yard	128	$505	$64,771	57	$505	$28,822	-		$0	-		$0
9	Dewatering, Storage and Treatment	Day	56	$10,235	$573,160	14	$5,118	$71,645	5	$221	$1,105	-		$0
10	Dispose Off-Site TSCA Soil and Demolition Material	Ton	697	$420	$292,796	222	$420	$93,393	1	$4,520	$4,520	-		$0
11	Dispose Off-Site Non-TSCA Soil and Demolition Material	Ton	3,874	$71	$273,097	1,112	$71	$78,361	-	$1,520	$0	-		$0
12	Discharge or Dispose Off-Site Contaminated Water/Liquid	Gallon	6,048,000	$0.01	$60,480	21,000	$0.01	$210	220	$11.82	$2,600	-		$0
13	Temporary Structural Stabilization	LS	1	$1,820,795	$1,820,795	-		$0	-		$0	-		$0
14	Characterization Sample Analysis - Full Analytical	Each	12	$630	$7,560	5	$630	$3,150	1	$630	$630	-		$0
15	PCB Sample Analysis	Each	60	$107	$6,420	20	$107	$2,140	-	$107	$0	-		$0
16	Purchase Clean Off-Site Material for Backfill	Tons	2,828	$37	$105,583	97	$53	$5,119	-		$0	-		$0
17	Backfill with General Fill	Cubic Yard	1,815	$9	$15,753	-	$9	$0	-		$0	-		$0
18	Backfill Basement Excavation with Pea Gravel	Cubic Yard	280	$165	$46,295	72	$165	$11,904	-		$0	-		$0
19	Floor Reconstruction	Cubic Yard	57	$431	$24,587	57	$431	$24,587	-		$0	-		$0
19a	6" TSCA Cap	Cubic Yard	-	$252	$0	42	$252	$10,475	-		$0			$0
20	Wall Reconstruction	Cubic Yard	27	$2,873	$78,240	1	$5,000	$5,000	-		$0	-		$0
21	Pile Cap Reconstruction	Cubic Yard	46	$587	$27,004	-	$587	$0	-		$0	-		$0
22	Topsoil and Seeding	Square Yard	3,544	$9.31	$32,999	2,611	$9.31	$24,309	222	$9.31	$2,069	-		$0
23	Decommission Removal/ Install Power Equipment [3]	Lump Sum	1	$811,243	$811,243	1	$811,243	$811,243	1	$811,243	$811,243	-		$0
24	Epoxy Coating (includes Surface Prep)	Square Foot	-	$24	$0	-	$24	$0	2,243	$24	$52,957	-		$0
25	Demarcation Layer	Square Foot	-	$0.29	$0	1,542	$0.29	$452	-	$0.29	$0	-		$0
	Capital Cost SubTotal				**$5,085,000**			**$1,509,000**			**$1,026,000**			**$0**

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 1
Construction Cost Estimate Summary

MARKUPS			ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
Item	Description	Units	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
	Capital Cost SubTotal				**$5,085,000**			**$1,509,000**			**$1,026,000**			**$0**
Markup 1	Engineering, Design, Permitting and Construction Management, percentage of the subtotal (Structural Analysis, Request for Risk-Based Approval, Self-Implementing Cleanup Notification)			20%	$1,017,000		20%	$301,800		15%	$153,900			$0
Markup 2	Contingency, percentage of subtotal plus Engineeing and Construction Management (25% for Alternative 4, 20% for Alternative 3 and 10% for Alternative 2)			25%	$1,525,500		20%	$362,160		10%	$117,990			$0
Markup 3	Escalation to Midpoint of Construction, 3% per year. Assume 2 years for Alternative 4; 1 year for Alternatives 2 and 3. Apply to Subtotal plus Engineering and Construction Management	3% per year	2	3%	$366,120	1	3%	$19,919	1	3%	$8,157			$0
	TOTAL CAPITAL COST				**$7,994,000**			**$2,193,000**			**$1,306,000**			**$0**

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 1
Construction Cost Estimate Summary

ANNUAL COSTS			ALTERNATIVE 4: Expanded Removal to Achieve Part 375 Residential SCO			ALTERNATIVE 3: Limited Removal and Long-Term Management			ALTERNATIVE 2: Expanded Cover System			ALTERNATIVE 1: No Further Action		
Item	Description	Units	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost	Estimated Quantity	Unit Cost	Item Cost
	TOTAL CAPITAL COST				**$7,994,000**			**$2,193,000**			**$1,306,000**			**$0**
A1	Start-Up, Project Review, Follow-Up	Lump Sum			0	1	$4,000.0	$4,000.0	1	$4,000.0	$4,000.0	1	$4,000.0	$4,000
A2	Wipe Sampling and Lab Analysis - PCB	Lump Sum			$0			$0	1	$2,456.0	$2,456.0	1	$2,456.0	$2,456
A3	Dispose Off-Site Contaminated Soil and Demolition Material: less than 50 mg/kg PCBs	Ton			$0			$0	0.40	$220.0	$88.0	0.40	$220.0	$88
A4	Epoxy Coating Spot Repair	Lump Sum			$0			$0	1	$3,505.8	$3,505.8	1	$3,505.8	$3,506
	SubTotal				**$0**			**$4,000**			**$10,000**			**$10,000**
	Contingency (15%)				**$0**			**$600**			**$1,500**			**$1,500**
	TOTAL ANNUAL COST (unescalated)				**$0**			**$4,600**			**$11,500**			**$11,500**
	PRESENT WORTH of ANNUAL COST (4% for 30 years) (1)				**$0**			**$82,725**			**$206,813**			**$206,813**
	TOTAL CAPITAL plus PW of ANNUAL COST				**$7,994,000**			**$2,276,000**			**$1,513,000**			**$207,000**

Notes:

(1) Present Worth = $\Sigma(C/(1+r)^n)$ from n=1 to n=30

Table 2
Quantity Takeoffs

Item 3 **Temporary Access Road**

Assume a temporary road is needed from the main entrance to the two work areas.

2 ea x 500 LF x 20 ft wide	20,000	sf
	2,222	sy
at 12 inches thick equals	741	cy

Item 4 **Exterior Soil Excavation**

Initial "pit" excavation to gain access to transformer rooms (Alternatives 3 and 4 only):
Each pit is approximately 35 ft x 70 ft, 10 ft deep, including benching

Total Exterior Excavation Volume:	1,815	cy

Item 5 **Interior Soil Excavation**

This item is for Alternatives 3 and 4 only. These quantities do not deduct the volume of pile caps and subgrade walls. This item does not include excavation of approximately 150 cy of soil for exposing the pile caps (Alternative 4), this excavation is included in the cost for Temporary Structural Stabilization (Table 6). This item includes the additional excavation required outside of the transformer rooms to facilitate temporary structural stabilization work.

Alt 3 PCB Soil Removal	72	cy	
Alt 4 PCB Soil Removal	130	cy	
Additonal Excavation for temporary structural stabilization, say	150	cy	Approx. 30 cy per temporary pile outside the transformer room, and an additional 30 cy for exposing subgrade walls.
Alternative 3 interior excavation volume	72	cy	
Alternative 4 interior excavation volume	280	cy	

Item 6 **Sawcut Concrete Floor**

For Alternative 4, the sawcut quantity includes the entire perimiter of each room and the perimiter of where the grade beam exists. For Alternative 3, the perimeter of each pile cap will be saw cut., in addition to the area of the floor inside where the grade beams are.
Additional cutting is required for Alternative 4 to facilitate temporary pile cap installation.

	Alt 3	Alt 4	
Room 1 slab perimeter	129	129	lf
Room 2 slab perimeter	135	135	lf
Total slab perimeters subtotal	264	264	lf
Cut around interior pile cap perimeters, say	200	-	
Cut around grade beams, both rooms, say	140	140	lf
Additional floor area for temporary pile caps, say	-	200	
Total	604	604	lf

Item 7 **Sawcut Concrete/Brick Wall**

This item is for Alternative 4 only. This assumes that all load bearing supports are the pile-to-bedrock-supported columns that shall remain in place. Figures 1 and 2 from Sept 4, 2013 Supplemental RI Report shows locations of structural columns and other features to avoid during demolition work (e.g., electrical panel, existing access ways).

Room #1: assume 16 x 10 =	52	lf
Room #2: assume 16 x 10 =	52	lf
Total saw-cut quantity	104	lf
Wall thickness =	1.25	ft
Wall volume to remove =	15	cy
Say	20	cy

Item 8 **Concrete Demolition and Removal**

Demolition and removal of concrete floor slab (Alternatives 3 and 4), pile caps (Alternative 4), and wall (Alternative 4). Concrete slab thickness varies about 6 to 18 inches, assume 12 inch average. For alternative 4, additional areas outside of the transformer rooms will require floor slab removal to facilitate temporary pile cap installation. The quantities for the temporary pile caps are calculated on Table 6.

Concrete Floor Slabs	Alt 3	Alt 4	
Approximate Floor Area	1,542	1,542	sf
	Alt 3	Alt 4	
Assume 12 inch thick, Subtotal	57	57	cy

Pile Caps (Alternative 4 only)			
Estimated volume of pile caps per Table 6:	0	46	cy

Estimated volume of below-grade walls (Alternative 4 only)		
Room 1 wall length	116	lf
Room 2 wall length	110	lf
Average wall width	1.25	ft
Average wall depth	0.5	ft
Subtotal	5	cy
Above-grade Walls	20	cy

	Alt 3	Alt 4	
Concrete demolition:	57	128	cy
Assume 2 ton/cy	114	257	tons

Table 2
Quantity Takeoffs

Item 9 **Dewatering, Storage and Treatment**

Assume that excavation will be sequenced to minimize dewatering; dewatering will be required for excavations that extend more than 4 ft below the basement slab. For alternative 2, there is no excavation but water pumping and removal will be required during the floor scarifying and washing work. For Alternative 3, assume dewatering will be required for the half the duration of excavation and backfill. Since Alternative 4 requires more excavation into the water table due to pile cape work, assume that the duration for dewatering will be half of the interior excavation duration, plus 5 days per pile cap excavation. Dewatering, when implemented, will take place 24/7. Refer to item 12 for discharge and off-site disposal.

Dewatering (system rental and oversight)			
Alternative 2, assume 5 days	5	day	
Alternative 3	14	day	
Alternative 4	56	day	21 days for excavation, 30 days for pile cap work

Item 10/11 **Disposal Off Site of Soil and Demo Debris**

Assume none of the excavated soil can be reused (reference: October 2014 delineation report showing exceedences of unrestricted use). Assume all soil and concrete excavated from inside the transformer rooms is classified as TSCA waste. Any soil and concrete excavated from outside the transformer rooms is assumed to be clean soil that can be placed in a landfill.

	Alt 2	Alt 3	Alt 4		
Exterior Soil Excavation (non-TSCA)	-	0	1,815	cy	
Interior Soil Excavation (TSCA)	-	72	280	cy	
Temporary Road Excavation (non-TSCA)	-	741	741	cy	
Pile Cap Soil Excavation (TSCA)	-	0	40	cy	
TSCA subtotal	-	72	320	cy	
TSCA tons		108	480	ton	Assume 1.5 ton/cy
Non-TSCA subotal	-	741	2,556	cy	
Non-TSCA tons		1,112	3,834	ton	Assume 1.5 ton/cy
Concrete/brick					
Floor Slabs (TSCA)	-	57	57	cy	
Walls (non-TSCA)	-	0	20	cy	
Pile Caps (TSCA)	-	0	46	cy	
Below-grade walls (TSCA)	-	0	5	cy	
TSCA subtotal	-	57	108	cy	
TSCA tons	-	114	217	ton	Assume 2 ton/cy for concrete/brick
Non-TSCA subotal		0	20	cy	
Non-TSCA tons		0	40	ton	Assume 2 ton/cy for concrete/brick
Non-TSCA Disposal	-	1,112	3,874	ton	
TSCA Disposal	-	222	697	ton	
Drum Disposal	4	-	-	drums	Assume 1 cy (4 drums) generated from removing old epoxy.

Item 12 **Discharge or Disposal Off Site of Contaminated Water/Liquid**

For Alternative 4, conservatively assume 100 gpm pumped 24/7 during the excavation of basement soil.

Alternative 2 — Assume cleaning of slab will generate decon water, but a small amount that can be contained in drums
Say 2 rooms @ two 55-gallon drums each = 220 gal

Alternative 3 — Assume decon water will be generated over the course of the project, and minimal excavation dewatering will be required.
Assume one frac tank (21,000 gal) 21,000 gal

Alternative 4: It is estimated that excavation dewatering will take place at a rate of 100 gpm, which is 144,000 gpd. For an assumed dewatering duration of 6 weeks 24/7, this equates to 6,048,000 gal.

6,048,000 gal

Item 13 **Structural Stabilization**

For Alternative 4, structural stabilization measures will be necessary during removal and replacement of the buried portion of the perimiter walls and pile caps. There are 10 pile caps per room plus 2 single-pile caps per room; it is assumed that structural stabilization is not required for the single-pile caps. Four pile caps will be replaced in room 1 and 6 will be replaced in room 2. 5 temporary pile caps will be required in room 1 and 6 will be required in room 2. Temporary pile caps will support either 3, 4 or 6 mini piles, depending on the locaton. Stabilization will include the installation of micropiles, temporary pile caps, and needle beams, and jacking to transfer loads to the temporary support; once the permanent pile cap is replaced, the temporary measures will be removed (however, the micropiles and temporary pile caps will be left in place). This process will be repeated for each pile cap. 7 days are required for each temporary cap and each permanent cap to cure before loads can be transferred.

In each room there are sections of the wall where there are no large pile caps, so it is assumed that four needle beam supports will be required per room to support the walls; and these supports will be constructed on temporary shallow footings.

Refer to Table 6 for a breakdown of the quantities

Item 14/15 **Sample Analysis**

Pre-Characterization - Full Analytical (for disposal)			
Alternative 2	One sample for four drums	1	ea
Alternative 3	One sample per 250 tons up to 1,000 tons, then 1/500 tons =	5	ea
Alternative 4	One sample per 250 tons up to 1,000 tons, then 1/500 tons =	12	ea

PCB End Point			
Alternative 3	One event @ 10 each from each transformer room =	20	each
Alternative 4	One event @ 30 each from each transformer room =	60	each

Table 2
Quantity Takeoffs

Item 16 **Purchase Clean Off-Site Material for Backfill**

Backfill will consist of general fill in the outdoor excavation pits, and pea gravel inside the basement.

Pea gravel inside transformer rooms	Alt 3	Alt 4	
Purchase clean fill	72	280	cy
Assume 1.35 ton/cy	97	378	ton
General Fill for pits	Alt 3	Alt 4	
Purchase clean fill	-	1,815	cy
Assume 1.35 ton/cy	-	2,450	ton
Total	97	2,828	ton

Item 17 **Backfill with General Fill**

General fill will be used only to backfill the excavation pits (Alternative 4) using a front loader. The quantity was not reduced to account for the volume of topsoil required.

	Alt 3	Alt 4	
General Fill	-	1,815	cy

Item 18 **Backfill Basement Excavation with pea gravel**

Pea gravel will be used to backfill the basement excavations. No compaction is required, and dewatering does not need to take place during this task.

	Alt 3	Alt 4	
Pea gravel backfill	72	280	cy

Item 19 **Concrete Floor Reconstruction**

The quantity of concrete floor requiring reconstruction is the same as the quantity removed, refer to Item 8. Alternative 4 includes the replacement of slab sections removed for pile cap installation in the areas outside the transformer rooms.

Concrete Floor Slabs	Alt 3	Alt 4	
Approximate Floor Area	1,542	1,542	sf
	Alt 3	Alt 4	
Assume 12 inch thick, Subtotal	57	57	cy

Item 19a **6" TSCA Cap**

This quantity will be the entire surface area of the floor in each room, 6" thick. This is for Alternative 3 only.

	Alt 3	
Room 1 Floor Area	1,088	sf
Room 2 Floor Area	1,155	sf
Total Volume	42	cy

Item 20 **Wall Reconstruction**

The quantity of walls requiring reconstruction is the same as the quantity removed, refer to Item 8. This is for Alternative 4 only. Assume 2 additional cy for repairs for needle beam damage

Wall reconstruction (poured and brick)	27	cy

Item 21 **Pile Cap Reconstruction**

Pile Cap Quantities were approximated based on the Foundation Drawings and FFS Report Figures.

Pile Caps	46	cy

Item 22 **Topsoil and Seed**

Topsoil and Seeding will be required to restore the pit excavation areas (Alternative 4), the temporary access road (Alternatives 3 and 4), the temporary stockpile area (Alternatives 3 and 4), and miscellaneous areas (equipment laydown, areas with high equipment traffic, etc.). For Alternative 2 assume only the miscellaneous area. For Alternative 3 assume there is no pit excavation area and half of the stockpile and misc. areas.

Pit excavation surface area = 2 x (35 ft x 70 ft) =	4,900	sf
Additional area for temporary access road =	20,000	sf
Approx. 600 cy stockpile, say 5,000 sf	5,000	sf
Additional miscellaneous area assume	2,000	sf
Total, all areas =	31,900	sf

	Alt 2	Alt 3	Alt 4	
Total per Square Yard	222	2,611	3,544	sy

Item 23 **Decommission/ Removal and Installation of Power Equipment**

This is a lump sum item. Refer to Table 4 for a breakdown of power equipment

Item 24 **Epoxy Coating**

Assume entire basement slab surface area for only alternative 2.

Epoxy Coating	2,243	sf

Items 25/26 **Demarcation Layer**

Quantity is the floor area for alternatives 3.

Demarcation Layer (Alternative 3 only)	1,542	sf

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 3
Unit Cost Breakdown

Item 1 **Mob/demob**
Assume 5% of Capital Costs.

Item 2 **Temporary Site Services**
Refer to Temporary Site Services Page for Breakdown

Alternative 2	**$102,071**	LS
Alternative 3	**$244,449**	LS
Alternative 4	**$475,466**	LS

Item 3 **Temporary Access Road**
A gravel temporary access road will be constructed, 12 inches thick per DSNY requirements, underlain by a woven geotextile.
This item is only required for Alternatives 3 and 4.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Construct Temporary Access Road 8"	$16.92	sy	RS Means	015523500100
Adjusted to 12" (increase unit cost 50%)	$25.38	sy		
woven geotextile	$1.47	sy	RS Means	313219161500
	$26.85	sy		
Total	**$2.98**	**sf**		

Item 4 **Soil Excavation, Exterior**

Unit Cost Item	Unit Cost	UOM	Reference/Source
Excavation (Excavator) and Hauling/stockpiling (FE Loader)	**$ 15.86**	**cy**	Ronkonkoma Average Subcontractor Bid (2017)

Item 5 **Soil Excavation, Interior**

Excavation of interior soil will be performed using a mini excavator, skid steer or by hand. The RS means unit cost was doubled to account for working in close quarters and using small equipment. Alternatives 3 and 4 only.

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Excavation, structural for footings, etc.	$45.76	cy	RS Means	312316166035	$22.88/cy, double unit cost
Haul with skid steer	$165.34	cy	RS Means	320610102160	$82.67/cy, double unit cost
Total	**$211.10**	**cy**			

Item 6 **Sawcut Concrete Floor**

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Saw Cut Concrete Floor (3")	$3.63	lf	RS Means	038113500520	
Addon for Additional Inch (x3)	$3.60	lf	RS Means	038116500820	$1.20 per inch
Total	**$7.23**	**lf**			

Item 7 **Saw Cut Foundation Wall**

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Saw Cut Reinforced wall per inch of thickness	$20.31	lf	RS Means	038116500820
15" thick per drawings	**$304.65**	**lf**		

Item 8 **Concrete Demolition and Removal**
Assume concrete is broken into pieces, and then loaded into a skid-steer or buggy for removal from the building. A crane is included in the temporary site services cost (Item 2) to

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Reinforced Concrete Demo, break into pieces	$422.00	cy	RS Means	030505100050	$211/cy, double unit cost
Haul with skid steer	$82.67	cy	RS Means	320610102160	
Total	**$504.67**	**cy**			

Item 9 **Dewatering, Storage and Treatment**
The Alternative 3 and 4 excavations are anticipated to extend below the groundwater table in some instances. Therefore pumping, storage, treatment and discharge are required. The cost for water disposal is estimated separately and is presented as Item 12. Dewatering costs are approximated based on information provided in Correspondence between URS and NYCDEP, and a bid provided for a confidential URS project in the vicinity of this one. Soil boring data for the outside of the transformer rooms indicates loose to medium compact fill, with stiff clay slightly below the bottom of the pile caps. Since the groundwater table is described as being at the upper margin of clay, it is anticipated that groundwater inflow into excavations will be modest, so conservatively assume 100 gpm.

Per the aforementioned bid, the cost for dewatering at 200 gpm was $63,140 + $8,500 for 7 days, or $10,235 per day. To account for oversight, equipment and operation and maintenace, it is assumed that the cost would be the same for this project. For Alternative 3, it is anticipated that some dewatering will be required but at a much smaller scale, so assume 50% of the daily cost for Alternative 4. For Alternative 2, only decon water is anticipated, which can be pumped by hand during cleaning and stored in drums on site. Therefore, only the daily cost for a pump and hose are assumed (Assume 10 sections of 20 ft hose). The cost for drums and disposal is included as Item 12 - Dispose Off-Site Contaminated Water/Liquid.

Unit Cost Item	Unit Cost	UOM	Reference/Source
Alternative 2 Dewatering (see breakdown below)	**$220.94**	**day**	
Alternative 3 Dewatering	**$5,117.50**	**day**	50% of Alternative 4 cost
Alternative 4 Dewatering	**$10,235.00**	**day**	Confidential URS project

Alternative 2 Dewatering Breakdown	Unit Cost	UOM	Reference/Source	
4" submersible pump, monthly rental w/ hourly oper. Cost	$4,444.77	mo	RS Means	015433404900
4" discharge hose, 20 ft, monthly rental w/ hourly oper. Cost	$416.00	mo	RS Means	015433403270 $41.60 ea, assume 5 sections (100 lf total)
Dewatering total per work day	**$220.94**	**day**	22 work days per month	

Item 10/11 **Dispose Off Site Contaminated Soil and Demo Debris**
It is assumed that no excavated soil will be re-usable and will require disposal at an off-site facility. It is assumed that soil excavated from outside the transformer rooms is non-tsca and can be disposed of at a landfill. For Alternative 2, a minor quantity of soil is anticipated so it is assumed that drums will be used. For the purpose of incorporating the pickup cost per truck load into the unit cost, it is assumed that four drums will be picked up. One ton of soil requires approximately 4 drums.

Alternatives 3 and 4	Unit Cost	UOM	Reference/Source
TSCA Soil			Clean Harbors Quote, February 2012
Disposal	$180.00	ton	
Recovery Fee	$18.00	ton	
Tax	$10.00	ton	
Transport	$193.18	ton	
Fuel Surcharge	$19.09	ton	
Total	**$420**	**ton**	
Non-TSCA soil			
Disposal	$38.00	ton	
Transport	$32.50	ton	
Total	**$71**	**ton**	

Alternative 2	Unit Cost	UOM	Reference/Source
Drum pick up (per truckload)	$480.00	ea	Subcontractor bid for Stuart Olver Holtz Site, January 2018
Drum disposal (haz) per 55-gal drum	$445.00	ea	
Drum disposal (non-haz) per 55-gal drum	$70.00	ea	
Assume unit costs are double to scale the cost from Rochester, NY to Bronx, NY.			
Drum pickup and disposal per ton (haz)	**$4,520.00**	**ton**	
Drum pickup and disposal per ton (non-haz)	**$1,520.00**	**ton**	

Table 3
Unit Cost Breakdown

Item 12 **Discharge or Dispose Off Site Contaminated Water/Liquid**

Assume for Alternatives 3 and 4 that water will be stored and treated on site, and then discharged to the sewer. Dewatering and disposal costs are approximated based on information provided in Correspondence between URS and NYCDEP, and a bid provided for a confidental URS project in the vicinity of this one. $5.69 per 100 cf in 2013, say $6 per 100 cf, or $0.01/gal. For Alternative 2, a minimal amount of water is anticipated, so it is assumed that it can be stored on site in drums. Conservatively assume that all water will be treated as hazardous; for the purpose of incorporating the pickup cost per truck load into the unit cost, it is assumed that four drums will be picked up.

Alternatives 3 and 4	Unit Cost	UOM	Reference/Source
Discharge Cost ($6/100 cf)	**$0.01**	**gal**	Confidential URS Project

Alternative 2	Unit Cost	UOM	Reference/Source
Drum pick up (per truckload)	$480.00	ea	Stuart Olver Holtz Bid 2018
Drum disposal (haz) per 55-gal drum	$205.00	ea	
Drum disposal (non-haz) per 55-gal drum	$100.00	ea	
Assume unit costs are double to account for using overpacks, and to scale the cost from Rochester, NY to Bronx, NY.			
Drum pickup and disposal per gallon (haz)	**$11.82**	**gal**	
Drum pickup and disposal per gallon (non-haz)	**$8.00**	**gal**	

Item 13 **Temporary Structural Stabilization**

This is a Lump Sum Item. Refer to Table 6 for a breakdown of the cost. **$1,820,795.04** **LS**

Item 14 **Characterization Sample Analysis**

Assume Full TCLP; TCL PCBs; and RCRA ignitability, corrosivity and reactivity. The cost for sample collection is not included because it is assumed that the on site inspector will collect and prepare the samples for shipment.

Unit Cost Item	Unit Cost	UOM	Reference/Source
Full Waste Characterization, per sample	**$630.00**	**ea**	URS Subcontractor Bid Comparison for Analytical Services

Item 15 **PCB Sample Analysis**

The cost for sample collection is not included because it is assumed that the on site inspector will collect and prepare the samples for shipment. The cost for analysis is the same for water, soil and wipe samples.

Unit Cost Item	Unit Cost	UOM	Reference/Source
Analysis of soil or water sample for PCBs, with 24 hr TAT	**$107.00**	**ea**	URS Subcontractor Bid Comparison for Analytical Services ($53.5 ea x 2 for rush turnaround)

Item 16 **Purchase Clean Off-Site Backfill**

This item is for general fill for the outdoor excavation (Alternative 4) and pea gravel for the basement slab subbase (alternatives 3 and 4). Assume the cost for Alternate 3 is 100% pea gravel, and for Alternate 4 it is 50% of each. The material costs were taken from RS Means, and a 50% increase was added to account for the cost for delivery.

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Pea Gravel (Alternative 3)	$52.67	ton	RS Means	329313100900	
General Fill	$22.01	ton	RS Means	312323150020	$14.67/cy
Alternative 4 average	**$37.34**	**ton**			

Item 17 **Backfill with General Fill**

This item is for backfilling the pits excavated outside the building for access to the basement. This only applies to Alternative 4. This work is outdoors with a front loader and roller for compaction.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Outside dumping/spreading with FE Loader	$8.05	cy	RS Means	312323141000
Outdoor Compaction with Roller	$0.63	cy	RS Means	312323235100
Total outdoor	**$8.68**	**cy**		

Item 18 **Backfill Basement Excavation with Pea Gravel**

This item is for backfill in the basement using pea gravel. Productivity is decreased by half because this work takes place indoors, in tight quarters with limited access. This is for Alternatives 3 and 4 only. Compaction is not required.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Indoor spreading with Skid Steer and by Hand	**$165.34**	**cy**	RS Means	320610102160

Item 19 **Concrete Floor Reconstruction**

This item is for formwork, rebar and placement of concrete to construct the new basement floor slab. Assume 100 lb of rebar per cy of concrete. Assume 5 lf of formwork per cy of concrete It is assumed that the concrete will be pumped. Alternatives 3 and 4 only.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Slab on grade pumped	$46.73	cy	RS Means	033113704650
5,000 psi Concrete material	$147.85	cy	RS Means	033113350400
Reinforcing	$189.37	cy	RS Means	032111600600 $3,787.30/ton @ 100 lb per cy of concrete = $189.37/cy
Subtotal	$383.95	cy		
Add Dowels to Subtotal	$6.52	ea	RS Means	032111602400 Assume 1 per cy
Forms	$40.05	cy	RS Means	031113653000 $8.01/lf at 5 lf per cy of concrete
Total	**$430.52**	**cy**		

Item 19a **6" TSCA Cap**

A 6" TSCA Cap is required in addition to the concrete slab. It will be constructed in the same manner as the concrete slab, but with wire mesh reinforcing instead of rebar. This will be poured flush with the walls so no formwork is required. This is for Alternative 3 only.

Slab on grade pumped	$46.73	cy	RS Means	033113704650	
5,000 psi Concrete material	$147.85	cy	RS Means	033113350400	
Reinforcing	$57.61	cy	RS Means	032211100100	$106.69/csf = $57.61/cy
Total	**$252.19**	**cy**			

Item 20

Wall Reconstruction

The basement wall is approximately 15 inches thick, and is constructed of both cast-in-place concrete and brick. It is assumed that the wall will be replaced in kind, and this

ALTERNATIVES 2 and 3

For Alternatives 2 and 3, it is assumed that the existing door and adjacent louvered panels will be removed prior to construction and then replaced during restoration. This item is

Unit Cost Item	Unit Cost	UOM	Reference/Source
Labor	$1,238.40	day	Labor rate per RS Means 2018, $60/hr loaded x 29% city index markup
Total Allowance for 4 days, say	**$5,000.00**	**LS**	

ALTERNATIVE 4

Unit Cost Item	Unit Cost	UOM	Reference/Source	
Wall Pumped 12" thick 8ft high	$788.45	cy	RS Means	033053404260 $630.76/cy, Add 25% for 15 in wall
Brick wall 12" thick, 5 ft high	$2,078.18	cy	RS Means	042710301300 $75.57/sf, Add 25% for 15 in wall, approx. 22 sf/cy
Subtotal	*$2,866.63*	*cy*		*Weighted average of concrete (62%) and brick (38%)*
Add Dowels to Subtotal	$6.52	ea	RS Means	032111602400 Assume 1 per cy
Total	**$2,873.15**	**cy**		

Table 3
Unit Cost Breakdown

Item 21

Pile Cap Reconstruction
This item is for reconstruction of the pile caps.

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Rectangular Pile Caps	$391.36	cy	RS Means	033053405950	
Hexagonal Pile Caps	$348.62	cy	RS Means	033053406050	
Addon for close working quarters	50%				
Total (use more conservative price for rectangular caps)	**$587.04**	**cy**			

Item 22

Topsoil and Seeding
It is assumed that topsoil removed for construction of the access road and excavations will not be reused. The RS Means item used for this cost includes grading and seeding.

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Spread 6" deep from stockpile with loader	$4.86	sy	RS Means	312323157060	$29.15/bcy 6" deep = $4.86/sy
Fine grade and seed	$4.45	sy	RS Means	329119131000	
Total	**$9.31**	**sy**			

Item 23

Decommission/Remove and Install Power Equipment
This item is for the removal and replacement of electrical equipment in the two transformer rooms, and is applicable to Alternatives 2, 3 and 4. The equipment was assumed

Unit Cost Item	Unit Cost	UOM	Reference/Source
Equipment	$510,306.38	ls	Refer to Table 4
Labor	$262,306.41	ls	Refer to Table 4
Subtotal	$772,612.79	ls	
Subcontractor Markup, assume 5%	$38,630.64		
Total	**$811,243.43**	**ls**	

Item 24

Epoxy Coating (includes surface prep)
This item is for Alternatives 2, 3 and 4. The RS Means epoxy item used is for composition flooring, but it is assumed that the same crew and output apply for a concrete floor. This also includes scarifying the concrete with a shot blaster.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
	6.59	sf	RS Means	90505200700
1/4" heavy duty epoxy >10,000 sf	**$17.02**	**sf**	RS Means	096723231600
Total	**$23.61**	**sf**		

Item 25

Demarcation Layer and Geotextile Cushion
Orange snow fence will be used as a demarcation layer, placed at the bottom of the excavation. The RS Means item for placing geotextile was used but the material cost was

Unit Cost Item	Unit Cost	UOM	Reference/Source		
Place demarcation barrier	$0.05	sf	RS Means	313219161500	
Material Cost	$0.08	sf	Quote - Home Depot Online		
Demarcation Barrier Total Cost	$0.13	sf			
Place Geotextile Cushion	$0.16	sf	RS Means	313219161500	Woven geotextile $1.47/sy
Total Cost for Demarcation Barrier and Geotextile Cushion	**$0.29**	**sf**			

Item 26

60-mil Geomembrane
This item is for Alternatives 3 and 4 only.

Unit Cost Item	Unit Cost	UOM	Reference/Source	
60 mil HDPE Liner	**$1.99**	**sf**	RS Means	310519531200

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 4
Breakdown of Electrical Costs

Equipment

Item	Item Description	quantity	UOM	Unit Cost	Total Cost	Source
1	Transformer, 3 phase 15kV to 480V, 2,000kVA	2	EA	$65,600.00	$131,200.00	Square D (Schneider Electric)
2	Switchgear (includes 1kVA transformer, lighting and telecon controls, power panel, tie breaker, enclosures, lifting device, busses, cable feeds, metering, main breakers, feeder breakers, and switch assemblies)	1	ea	$361,000.00	$361,000.00	Square D (Schneider Electric)
3	Grounding Rods [10' long x 3/4"]	12	EA	$43.80	$525.60	RSMeans 260526800100
4	Ground Cable 4/0 AWG bare stranded	5	CLF	$456.87	$2,284.35	RSMeans 260526801000
5	Safety Mats [75' roll]	2	EA	$5,895.00	$11,790.00	Mitchell Instruments
6	Cable Tray	80	LF	$22.14	$1,771.20	RSMeans 260536202040
7	Conduit 1-1/2" EMT x 10LF	25	EA	$31.28	$782.00	www.zoro.com
8	Conduit 3/4" EMT x 10LF	15	EA	$7.95	$119.25	www.zoro.com
9	Armoured Cable [4 conductor #10]	3	CLF	$186.52	$559.56	RSMeans 260519200320
10	10/2 wire [2 power, 1 ground] x 250LF	2	EA	$137.21	$274.42	Hardware world
	Subtotal				**$510,306.38**	

Labor and Equipment

Task	Task Description	Qty (weeks)	Weekly Cost	Total Cost	Crew
1	Remove decommissioned equipment	4	$26,731.38	$106,925.52	Foreman, 4 elec, 1 med equip op
2	Install Floor Drainage System, Equipment Foundations, Grounding System	1	$29,512.62	$29,512.62	Foreman, 3 elec, 2 conc finisher, 1 med equip op
3	Install and test equipment (existing or new) update to present code	4	$26,731.38	$106,925.52	Foreman, 4 elec, 1 med equip op
	Equipment - Skid Steer Rental	9	$2,104.75	$18,942.75	Skid Steer Weekly Rental: RS Means 015433204890
	TOTAL	9		**$262,306.41**	

Labor Rates, Reference RS Means Online Database, 2018	Hourly Rate (incl. O&P)	City Index Markup	Total	Hours per Week	Cost/ WK
Elec. Foreman*	$89.00	29%	$114.81	40	$4,592.40
Electrician	$87.00	29%	$112.23	40	$4,489.20
Cement Finisher	$70.45	29%	$90.88	40	$3,635.22
Equip Op (med)	$81.05	29%	$104.55	40	$4,182.18

*Electrical foreman assume $2.00 per hour over standard rate

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 5
Breakdown of Temporary Site Services

				Alt 2		Alt 3		Alt 4	
RS Means No.	Description	Unit Cost	UOM	Qty	Cost	Qty	Cost	Qty	Cost
015113500 (various)	Temporary Electric (underground feeder, transformer, connections, light stanchion, switchgear)	$18,524.96	ls	0.5	$9,262.48	1	$18,524.96	1	$18,524.96
015213200550	Office Trailer (delivery considered part of mob/demob)	$497.97	mo	4	$1,991.88	8	$3,983.76	20	$9,959.40
015213201500	Storage Trailer (Buy)	$4,962.27	ea	1	$4,962.27	1	$4,962.27	1	$4,962.27
015113800700	Water Bill	$76.46	mo	4	$305.84	8	$611.68	20	$1,529.20
015213400140	Phone/Internet Bill	$95.07	mo	4	$380.28	8	$760.56	20	$1,901.40
015213400160	HVAC/Light	$178.06	mo	4	$712.24	8	$1,424.48	20	$3,561.20
015213400120	Office supplies	$90.54	mo	4	$362.16	8	$724.32	20	$1,810.80
015213400100	Office equipment	$227.36	mo	4	$909.44	8	$1,818.88	20	$4,547.20
015626500100	Temporary Fence	$10.80	lf	200	$2,160.00	1000	$10,800.00	1000	$10,800.00
	Security Guard (assume during non-work hours) $15/hr per salary.com. 50% markup for O&P = $22.50/hr	$12,240.00	mo	4	$48,960.00	8	$97,920.00	20	$244,800.00
017123131100	Survey	$2,241.17	day	0	$0.00	3	$6,723.51	3	$6,723.51
	Tree and Utility Protection Allowance	$2,000.00	ls	0	$0.00	1	$2,000.00	1	$2,000.00
	H&S Allowance	$2,000.00	ls	1	$2,000.00	1	$2,000.00	1	$2,000.00
	E&S Control Allowance	$2,000.00	ls	0	$0.00	1	$2,000.00	1	$2,000.00
015433602400	rent truck mounted crane, 12 ton (includes operating cost). Assume duration is from start to end of interior electrical work	$10,021.63	mo	3	$30,064.89	9	$90,194.67	16	$160,346.08
	Total				$102,071.48		$244,449.09		$475,466.02

Note - Temporary facilities durations are based on the durations shown on Table 8.

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 6
Breakdown of Temporary Structural Stabilization

Temporary Structural Stabilization

For Alternative 4, structural stabilization measures will be necessary during removal and replacement of the buried portion of the perimiter walls and pile caps. Stabilization will include the installation of mini piles, concrete pile caps, hydraulic jacks and needle beams, and jacking to transfer loads to the temporary support. Once the existing pile cap is removed and reinstalled, the needle beams and jacks will be removed (however, the mini piles and pile caps will be left in place). This process will be repeated for each pile cap. Temporary pile cap construction conservatively assumes that rectangular piles will be used (refer to item 21). This breakdown does not include any costs for demolotion, removal, or reinstallation of the existing pile caps - these costs are estimated in Items 8 and 21.

In each room there are sections of the wall where there are no large pile caps, so it is assumed that four needle beam supports will be required per room to support the walls; and these supports will be constructed on shallow footings. Assume the shallow footings will be left in place.

Unit Cost Item	qty	uom	unit cost	total cost	References/Assumptions
Install mini piles	2,280	lf	$300.00	$684,000.00	Quote from Hayward Baker $275/lf, increase to $300 due to site constraints. 38 piles total, 60 lf per pile.
Temporary Pile Cap Installation	46	cy	$587.04	$27,003.84	Refer to Item 21 on Table 3 for Unit Cost breakdown. 46 cy required (8 @ 3cy ea; 2 @ 7cy ea; 1 @ 8 cy)
Shallow Footing Installation	16	cy	$424.00	$6,784.00	Assume same cost as concrete slab, refer to Item 19 on Table 3. Assume 1 cy per footing, 2 footings per support, 4 supports per room.
Needle Beams (assume W36x302)	400	lf	$499.80	$199,920.00	Material cost only, assume largest beam available (RS Means 051223758100). Approximately 150 lf for room 1, 230 for room 2, say 400 lf total.
Jack Rental	42	mo	$992.70	$41,693.40	RS Means 015433605500 for 100 ton jack ($198.54), assume 5x cost for larger jack. 4 jacks needed per room for pile cap support, and 2 per room for wall support, and 4 spare (14 @ 3 mo ea).
Install needle beam and jacks, perform load transfers	11	week	$25,000.00	$275,000.00	Labor for installing needle beams, jacks, and transferring loads. Assume allowance of $25,000 per week for crew of 1 steel worker foreman, 3 steel workers, 1 welder, welding equipment, and a forklift. A support crane is included in temporary site facilities. 1 week per pile cap.
Cut hole in wall for wall support	80	lf	$304.65	$24,372.00	Assume about 3 ft x 2 ft hole per support for 8 total supports
Remove needle beam and jacks, perform load transfers, repair columns	11	week	$25,000.00	$275,000.00	Labor for removing needle beams, jacks, and transferring loads. Assume allowance of $25,000 per week for crew of 1 steel worker foreman, 3 steel workers, 1 welder, welding equipment, and a forklift. A support crane is included in temporary site facilities. 1 week per pile cap.
Excavtion to expose pile cap	150	cy	$211.10	$31,665.00	Refer to Item 5 on Table 3 for unit cost breakdown. Assume the same cost as interior excavation. Assume 15 cy per pile x 10 piles
Allowance for pile cap excavation support (timber lagging)	1	LS	$20,000.00	$20,000.00	Assume that excavation support will be required when excavating soil from around the pile caps. These will be constructed of vertical wooden beams and wood sheeting.
Subtotal for Structural Stabilization				**$1,585,438.24**	**LS**

Settlement Monitoring

Real-time settlement monitoring with alarms will be required during the remediation of structural building components. This will be underway for the duration of the temporary structure stabilization.

Unit Cost Item	Unit Cost	UOM	Total qty	Total Cost	Reference/Source
Settlement Monitoring System, Monthly Rate	$20,000.00	mo	7	$140,000.00	Allowance based on engineering judgement
Full-time technician for setlement monitoring	$13,622.40	mo	7	$95,356.80	Assume RS Means Laborer rate ($60/hr x 29% city cost index)
Subtotal				**$235,356.80**	**LS**

TOTAL COST FOR STRUCTURAL SUPPORT	**$1,820,795.04**	**LS**

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 7
Breakdown of Annual Costs

PCB Wipe Sampling
Frequency: Annual
Duration: 30 Years
Locations: 4 Locations at each Transformer Room

Sample qty	8	each annually	
Lab Cost:	$107.00	ea	Refer to Table 3, Item 15.
Field Cost	$ 1,600	per trip	One annual trip for 30 years (Assume 16 hours total per event for travel, sampling, lab coordination, sample preparation). Assume $100/hr
Total annual cost	$2,456.00	ls	Includes labor and analysis of 8 samples.

Inspect and Maintain Concrete Slab and Epoxy Coating Annually
Assume 10% of the floor surface needs re-application

Total qty	224.3	sf	
Labor	$ 2,400	per trip	One annual trip for 30 years (Assue 24 hours total per event for travel, inspection, surface treatment, material purchase). Assume $100/hr
Material Cost	$4.93	per sf	RS Means 096723231600, material only
Total annual cost	$3,505.80	ls	Includes labor and material.

Disposal

Refer to Item 10 on Table 3. Assume that annual epoxy maintenance will require some minimal disposal cost of removed epoxy every year. Say one (1) drum annually in total. Assume 110 lb/cf, so 1 drum is approximately 0.4 tons

Total qty	0.4	ton	
Unit cost	$ 550	ton	Refer to Item 10 on Table 3. Cost for 1 truck ($480) + 1 drum ($70)
Total cost	$220.00	ls	

Start-Up, Project Review, and Follow-Up

Say 40 hours at $100/hr = $4,000.00

Bronx Psychiatric Center
Feasibility Study Cost Estimate

Table 8
Schedule

Alternative 2	Duration (weeks)
Mobilization/Demobilization	6
Remove decommissioned electrical equipment	4
Clean floor slabs and re-epoxy	1
Install and test new electrical equipment	4
Site restoration	2
Closeout, record survey, submittals	2
TOTAL DURATION	19
Duration for Temporary Site Services	17

Alternative 3	Duration (weeks)
Mobilization/Demobilization	6
Remove decommissioned electrical equipment	4
Demolition - concrete floors	4
Excavate and dispose of interior soil (includes dewatering)	4
Backfill interior	2
Install new floor slabs and TSCA cap	5
Install Equipment Foundations, Grounding System	2
Install and test new electrical equipment	4
Site restoration	2
Closeout, record survey, submittals	4
TOTAL DURATION	37
Duration for Temporary Site Services	33
Duration for Dewatering (Half of Interior Excavation)	2

Alternative 4 (refer to MS Project Schedule, Attachment 2)	Duration (weeks)
Mobilization/Demobilization	12
Remove decommissioned electrical equipment	4
Excavate and dispose of exterior soil	4
Remove underground building service and reroute exterior (2) light poles cables	2
Demolition - exterior walls	2
Demolition - Concrete Floors	4
Excavate and dispose of interior soil (includes dewatering)	6
Backfill interior prior to temporary structural support	1
Removal and Replacement of Pile Caps and Grade Beams, including Temporary Structural Support	27
Backfill interior	2
Install new floor slabs	3
Install Equipment Foundations, Grounding System	2
Reconstruct exterior walls	5
Backfill Exterior Pits	2
Install and test new electrical equipment	4
Install new underground electric service	1
Site restoration	4
Closeout, record survey, submittals	8
TOTAL DURATION	93
Duration for Temporary Site Services	*85*
Duration for Dewatering (Half of Interior Excavation, plus 5 days per pile cap)	*8*
Duration for Settlement Monitoring	*27*

ATTACHMENT 1
UNIT COST BACKUP

Attachment 1.1 – RS Means Online Unit Prices
Attachment 1.2 – Vendor and Contractor Quotes
Attachment 1.3 – Quotes from Similar Previous Projects
Attachment 1.4 – Vendor Quote for New Electrical Equipment

ATTACHMENT 1.1
RS Means Online Unit Prices

Bronx Psych Center FS
RS Means Unit Cost Items
Data Release : Year 2018

Quantity	LineNumber	Line Source		Description	Crew	Daily Output	Labor Hours	Unit	Ext. Mat. O&P	Ext. Labor O&P	Ext. Equip. O&P	Ext. Total O&P
1	015523500100			Temporary, roads, gravel fill, 8" gravel depth, excl surfacing	B14	615	0.08	S.Y.	$ 7.44	$ 8.89	$ 0.59	$ 16.92
1	313219161500			Geosynthetic soil stabilization, geotextile fabric, woven, 200 lb. tensile strength	CLAB	2500	0.01	S.Y.	$ 1.04	$ 0.43	$ -	$ 1.47
1	312316166035			Structural excavation for minor structures, bank measure, for spread and mat footings, elevator pits, and small building foundations, common earth, 3/4 C.Y. bucket, machine excavation, hydraulic backhoe	B12F	90	0.18	B.C.Y.	$ -	$ 14.28	$ 8.60	$ 22.88
1	320610102160			Sidewalks, driveways, and patios, sidewalk, load, dump and spread stone, 100' haul, with skid steer, excludes base	B62	24	1	C.Y.	$ -	$ 74.28	$ 8.39	$ 82.67
1	038113500500			Concrete sawing, concrete slabs, rod reinforced, up to 3" deep, includes blade cost, layout and set up time	B89	800	0.02	L.F.	$ 0.20	$ 2.82	$ 0.61	$ 3.63
1	038113500520			Concrete sawing, concrete, existing slab, rod reinforced, for each additional inch of depth over 3", includes blade cost, layout and set up time	B89	2400	0.01	L.F.	$ 0.06	$ 0.94	$ 0.20	$ 1.20
1	030505100050			Selective concrete demolition, reinforcing less than 1% of cross-sectional area, break up into small pieces, excludes shoring, bracing, saw or torch cutting, loading, hauling, dumping	B9	24	1.67	C.Y.	$ -	$ 199.72	$ 11.28	$ 211.00
1	038116500820			Concrete sawing, concrete walls, rod reinforcing, per inch of depth	B89B	150	0.11	L.F.	$ 0.06	$ 15.08	$ 5.17	$ 20.31
1	033053405950			Structural concrete, in place, pile cap (3000 psi), square or rectangular, over 10 C.Y., includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	C14C	75	1.49	C.Y.	$ 192.81	$ 198.16	$ 0.39	$ 391.36
1	033053406050			Structural concrete, in place, pile cap (3000 psi), triangular or hexagonal, over 10 C.Y., includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	C14C	85	1.32	C.Y.	$ 172.83	$ 175.44	$ 0.35	$ 348.62
1	033053402750			Structural concrete, in place, elevated slab (4000 psi), one way beam and slab, 125 psf superimposed load, 25' span, includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	C14B	28.36	7.33	C.Y.	$ 290.71	$ 1,018.08	$ 36.72	$ 1,345.51
1	329119131000			Topsoil placement and grading, loam or topsoil, fine grading and seeding, with equipment	B14	1000	0.05	S.Y.	$ 0.53	$ 3.56	$ 0.36	$ 4.45
1	310519531200			Pond and reservoir liners, membrane lining systems HDPE, 100,000 S.F. or more, 60 mil thick, per S.F.	SKWK	1600	0.02	S.F.	$ 0.65	$ 1.34	$ -	$ 1.99
1	015433602400			Rent crane truck mounted, hydraulic, 12 ton capacity, Incl. Hourly Oper. Cost.		0	0	Month	$ -	$ -	$ 10,021.63	$ 10,021.63
1	015436501700			Mobilization or demobilization, crane, truck-mounted, up to 75 ton, (driver only)	EQHV	4	2	Ea.	$ -	$ 301.16	$ -	$ 301.16
1	312323237040			Compaction, around structures and trenches, 4 passes, 18" wide, 6" lifts, walk behind, vibrating plate	A1D	140	0.06	E.C.Y.	$ -	$ 3.84	$ 0.26	$ 4.10
1	312323141000			Backfill, structural, common earth, 55 HP wheeled loader, 50' haul, excludes compaction	B11C	200	0.08	L.C.Y.	$ -	$ 6.25	$ 1.80	$ 8.05
1	312323235100			Compaction, riding, vibrating roller, 4 passes, 12" lifts	B10Y	2600	0	E.C.Y.	$ -	$ 0.38	$ 0.25	$ 0.63
1	033113704650			Structural concrete, placing, slab on grade, pumped, over 6" thick, includes leveling (strike off) & consolidation, excludes material	C20	185	0.35	C.Y.	$ -	$ 40.91	$ 5.82	$ 46.73
1	033113350400			Structural concrete, ready mix, heavyweight, 5000 psi, includes local aggregate, sand, Portland cement (Type I) and water, delivered, excludes all additives and treatments		0	0	C.Y.	$ 147.85	$ -	$ -	$ 147.85
1	033113703250			Structural concrete, placing, grade beam, pumped, includes leveling (strike off) & consolidation, excludes material	C20	180	0.36	C.Y.	$ -	$ 41.81	$ 5.98	$ 47.79
1	031113500150			C.I.P. concrete forms, grade beam, plywood, 4 use, includes erecting, bracing, stripping and cleaning	C2	605	0.08	SFCA	$ 1.15	$ 11.68	$ -	$ 12.83

Bronx Psych Center FS
RS Means Unit Cost Items
Data Release : Year 2018

Quantity	LineNumber	Line Source		Description	Crew	Daily Output	Labor Hours	Unit	Ext. Mat. O&P	Ext. Labor O&P	Ext. Equip. O&P	Ext. Total O&P
1	032111600100			Reinforcing steel, in place, beams and girders, #3 to #7, A615, grade 60, incl labor for accessories, excl material for accessories	RODM	1.6	20	Ton	$ 1,071.00	$ 3,956.35	$ -	$ 5,027.35
1	032111600600			Reinforcing steel, in place, slab on grade, #3 to #7, A615, grade 60, incl labor for accessories, excl material for accessories	RODM	2.3	13.91	Ton	$ 1,071.00	$ 2,716.30	$ -	$ 3,787.30
1	031113653000			C.I.P. concrete forms, slab on grade, edge, wood, to 6" high, 4 use, includes erecting, bracing, stripping and cleaning	C1	600	0.05	L.F.	$ 0.35	$ 7.66	$ -	$ 8.01
1	042710301300			Brick walls, alt method of estimating by square foot, common brick, 20.25 brick per square foot, 12" thick wall, incl mortar, 3% brick waste and 25% mortar waste, vertical reinforcement and grout, excl scaffolding & horizontal joint reinforcement	D8	90	0.44	S.F.	$ 16.42	$ 59.15	$ -	$ 75.57
1	033053404260			Structural concrete, in place, free-standing wall (3000 psi), 12" thick x 8' high, includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	C14D	64.32	3.11	C.Y.	$ 181.82	$ 432.68	$ 16.26	$ 630.76
1	072610101200			Vapor retarders, building paper, polyethylene vapor barrier, standard, 10 mil (.010" thick)	CARP	37	0.22	Sq.	$ 9.84	$ 29.78	$ -	$ 39.62
1	032111602400			Reinforcing steel, in place, dowels, deformed, 2' long, #3, A615, grade 60	RODM	520	0.03	Ea.	$ 0.45	$ 6.07	$ -	$ 6.52
1	311413231550			Topsoil stripping and stockpiling, loam or topsoil, remove and stockpile on site, by dozer,1,101-4,000 S.Y., 6" deep, 200' haul	B10B	4000	0	S.Y.	$ -	$ 0.25	$ 0.37	$ 0.62
1	312323157060			Borrow, topsoil or loam, 1-1/2 C.Y. bucket, loading and/or spreading, front end loader, wheel mounted	B10S	970	0.01	B.C.Y.	$ 27.72	$ 1.02	$ 0.41	$ 29.15
1	096723231600			Composition flooring, epoxy, heavy duty epoxy topping, 1/4" thick, over 10,000 S.F.	C6	480	0.1	S.F.	$ 4.93	$ 11.96	$ 0.13	$ 17.02
1	015419500100			Crane crew, daily use for small jobs, 12-ton truck-mounted hydraulic crane, portal to portal	A3H	1	8	Day	$ -	$ 1,202.85	$ 723.81	$ 1,926.66
1	030513250250			Aggregate, crushed bank gravel, loaded at the pit, prices per ton, includes material only		0	0	Ton	$ 21.69	$ -	$ -	$ 21.69
1	312323150020			Borrow, material only, bank run gravel		0	0	Ton	$ 14.67	$ -	$ -	$ 14.67
1	312323160100			Fill by borrow and utility bedding, for pipe and conduit, crushed stone, 3/4" to 1/2", excludes compaction	B6	150	0.16	L.C.Y.	$ 30.74	$ 11.73	$ 2.40	$ 44.87
1	312323160500			Fill by borrow and utility bedding, for pipe and conduit, compacting bedding in trench	A1D	90	0.09	E.C.Y.	$ -	$ 5.98	$ 0.41	$ 6.39
1	033113354350			Structural concrete, ready mix, flowable fill, structural, 1000 psi, includes ash, Portland cement Type I, aggregate, sand and water, delivered, excludes all additives and treatments		0	0	C.Y.	$ 95.90	$ -	$ -	$ 95.90
1	015433404900			Rent pump submersible electric 4" diam., 560 GPM, Incl. Hourly Oper. Cost.		0	0	Month	$ -	$ -	$ 4,444.77	$ 4,444.77
1	015433403270			Rent hose, water, discharge, 4" diameter, 20' long w/coupling, Incl. Hourly Oper. Cost.		0	0	Month	$ -	$ -	$ 41.60	$ 41.60
1	329313100900			Ground cover, pea gravel, truckload lots	B1	28	0.86	Ton	$ 35.11	$ 61.37	$ -	$ 96.48
1	015433605500			Rent jacks hydraulic 100 ton, Incl. Hourly Oper. Cost.		0	0	Month	$ -	$ -	$ 198.54	$ 198.54
1	051223758100			Structural steel beam or girder, 100-ton project, 1 to 2 story building, W36x302, A992 steel, shop fabricated, incl shop primer, bolted connections	E5	1035	0.08	L.F.	$ 499.80	$ 11.52	$ 1.99	$ 513.31
1	315216101300			Cofferdams, soldier beams & lagging, H-piles with wood sheeting horizontal between piles, no hydrostatic head, 1 line of braces, 3" wood sheeting, 15' deep, minimum	B50	635	0.18	S.F.	$ 13.23	$ 15.19	$ 4.76	$ 33.18
1	015433204890			Rent loader, skid steer, wheeled, 1 CY 78 HP, diesel, Incl. Hourly Oper. Cost.		0	0	Week	$ -	$ -	$ 2,104.75	$ 2,104.75
1	032211100100			Welded wire fabric, plain, sheets, 6 x 6 - W1.4 x W1.4 (10 x 10) 121 lb./C.S.F., ASTM A185, incl labor for accessories, excl material for accessories	2 Rodm	35	0.46	C.S.F.	$ 16.93	$ 89.76	$ -	$ 106.69

Bronx Psych Center FS
RS Means Unit Cost Items
Data Release : Year 2018

Quantity	LineNumber	Line Source		Description	Crew	Daily Output	Labor Hours	Unit	Ext. Mat. O&P	Ext. Labor O&P	Ext. Equip. O&P	Ext. Total O&P
1	015113800700			Temporary utilities, temporary construction water bill per month, average		0	0	Month	$ 76.46	$ -	$ -	$ 76.46
1	015113500120			Temporary electrical power equipment (pro-rated per job), underground feed, 3 uses, 200 amp	1 Elec	1.15	6.96	Ea.	$ 528.15	$ 1,078.11	$ -	$ 1,606.26
1	015113500240			Temporary electrical power equipment (pro-rated per job), transformers, 3 uses, 112.5 kVA	1 Elec	0.4	20	Ea.	$ 4,275.50	$ 3,118.50	$ -	$ 7,394.00
1	015113500280			Temporary electrical power equipment (pro-rated per job), feeder, PVC conduit and CU wire, 200 amp, in trench	1 Elec	59	0.14	L.F.	$ 13.93	$ 21.03	$ -	$ 34.96
1	015113500730			Temporary electrical power equipment (pro-rated per job), connections, compressor or pump, 60 amp	1 Elec	5.3	1.51	Ea.	$ 31.19	$ 233.44	$ -	$ 264.63
1	015113500880			Temporary electrical power equipment (pro-rated per job), connections, office trailer, 100 amp	1 Elec	3	2.67	Ea.	$ 100.60	$ 413.42	$ -	$ 514.02
1	015113500530			Temporary electrical power equipment (pro-rated per job), light stanchion, 3 uses	1 Elec	8	1	Ea.	$ 85.01	$ 155.03	$ -	$ 240.04
1	014523501950			Concrete testing, compressive strength test, incl. picked up by lab, average		0	0	Ea.	$ -	$ -	$ -	$ 26.92
1	014523502600			Concrete testing, mix design, one batch mix		0	0	Ea.	$ -	$ -	$ -	$ 383.61
1	015213200550			Office trailer, furnished, rent per month, 50' x 12', excl. hookups		0	0	Ea.	$ 497.97	$ -	$ -	$ 497.97
1	015213200800			Office trailer, delivery, add per mile		0	0	Mile	$ 13.28	$ -	$ -	$ 13.28
1	015213201200			Storage boxes, buy, 20' x 8'	2 Skwk	1.8	8.89	Ea.	$ 3,697.05	$ 1,265.22	$ -	$ 4,962.27
1	015213400100			Field office expense, office equipment rental, average		0	0	Month	$ 227.36	$ -	$ -	$ 227.36
1	015213400120			Field office expense, office supplies, average		0	0	Month	$ 90.54	$ -	$ -	$ 90.54
1	015213400140			Field office expense, telephone bill; average bill/month, incl. long distance		0	0	Month	$ 95.07	$ -	$ -	$ 95.07
1	015213400160			Field office expense, field office lights & HVAC		0	0	Month	$ 178.06	$ -	$ -	$ 178.06
1	015626500100			Temporary fencing, chain link, 6' high, 11 ga	2 Clab	300	0.05	L.F.	$ 5.03	$ 5.77	$ -	$ 10.80
1	017123131100			Boundary & survey markers, crew for building layout, 2 person crew	A6	1	16	Day	$ -	$ 2,182.95	$ 58.22	$ 2,241.17
1	015632500020			Watchman, security service, uniformed person, monthly basis, min		0	0	Hr.	$ -	$ -	$ -	$ 37.02
1	260526800100			Grounding rod, copper clad, 10' long, 3/4" diameter	1 Elec	4.4	1.82	Ea.	$ 43.80	$ 295.85	$ -	$ 339.65
1	260526801000			Ground wire, copper wire, bare stranded, 4/0	2 Elec	5.7	2.81	C.L.F.	$ 456.87	$ 457.38	$ -	$ 914.25
1	260536202040			Cable tray, solid bottom, aluminum, 24" wide, to 15' elevation, incl fittings & supports	2 Elec	90	0.18	L.F.	$ 22.14	$ 29.04	$ -	$ 51.18
1	260519200320			Armored cable, copper, solid, 600 V, 4 conductor, #10, BX, exposed	1 Elec	1.4	5.71	C.L.F.	$ 186.52	$ 934.73	$ -	$ 1,121.25
1	090505200700			Flooring demolition, concrete, scarify skin	A1A	225	0.04	S.F.	$ -	$ 5.49	$ 1.10	$ 6.59

Installing Contractor's Overhead & Profit

Below are the average installing contractor's percentage markups applied to base labor rates to arrive at typical billing rates.

Column A: Labor rates are based on union wages averaged for 30 major U.S. cities. Base rates, including fringe benefits, are listed hourly and daily. These figures are the sum of the wage rate and employer-paid fringe benefits such as vacation pay, employer-paid health and welfare costs, and pension costs, plus appropriate training and industry advancement funds costs.

Column B: Workers' compensation rates are the national average of state rates established for each trade.

Column C: Column C lists average fixed overhead figures for all trades. Included are federal and state unemployment costs set at 7.8%; social security taxes (FICA) set at 7.65%; builder's risk insurance costs set at 0.80%; and public liability costs set at 2.02%. All the percentages except those for social security taxes vary from state to state as well as from company to company.

Columns D and E: Percentages in Columns D and E are based on the presumption that the installing contractor has annual billing of $4,000,000 and up. Overhead percentages may increase with smaller annual billing. The overhead percentages for any given contractor may vary greatly and depend on a number of factors such as the contractor's annual volume, engineering and logistical support costs, and staff requirements. The figures for overhead and profit will also vary depending on the type of job, the job location, and the prevailing economic conditions. All factors should be examined very carefully for each job.

Column F: Column F lists the total of Columns B, C, D, and E.

Column G: Column G is Column A (hourly base labor rate) multiplied by the percentage in Column F (O&P percentage).

Column H: Column H is the total of Column A (hourly base labor rate) plus Column G (Total O&P).

Column I: Column I is Column H multiplied by eight hours.

		A		B	C	D	E	F	G	H	I
		Base Rate Incl. Fringes		Workers' Comp. Ins.	Average Fixed Overhead	Overhead	Profit	Total Overhead & Profit		Rate with O & P	
Abbr.	Trade	Hourly	Daily					%	Amount	Hourly	Daily
Skwk	Skilled Workers Average (35 trades)	$52.35	$418.80	11.8%	18.3%	13.0%	10%	53.1%	$27.80	$ 80.15	$641.20
	Helpers Average (5 trades)	37.80	302.40	15.0		11.0		54.3	20.55	58.35	466.80
	Foreman Average, Inside ($.50 over trade)	52.85	422.80	11.8		13.0		53.1	28.05	80.90	647.20
	Foreman Average, Outside ($2.00 over trade)	54.35	434.80	11.8		13.0		53.1	28.85	83.20	665.60
Clab	Common Building Laborers	39.85	318.80	13.0		11.0		52.3	20.85	60.70	485.60
Asbe	Asbestos/Insulation Workers/Pipe Coverers	56.30	450.40	10.9		16.0		55.2	31.10	87.40	699.20
Boil	Boilermakers	63.65	509.20	7.2		16.0		51.5	32.80	96.45	771.60
Bric	Bricklayers	50.30	402.40	13.8		11.0		53.1	26.70	77.00	616.00
Brhe	Bricklayer Helpers	39.30	314.40	13.8		11.0		53.1	20.85	60.15	481.20
Carp	Carpenters	50.70	405.60	13.0		11.0		52.3	26.50	77.20	617.60
Cefi	Cement Finishers	47.55	380.40	8.9		11.0		48.2	22.90	[illegible]	563.60
Elec	Electricians	58.20	465.60	5.2		16.0		49.5	28.80	[illegible]	696.00
Elev	Elevator Constructors	82.20	657.60	4.7		16.0		49.0	40.30	122.50	980.00
Eqhv	Equipment Operators, Crane or Shovel	56.10	448.80	8.5		14.0		50.8	28.50	84.60	676.80
Eqmd	Equipment Operators, Medium Equipment	53.75	430.00	8.5		14.0		50.8	27.30	[illegible]	648.40
Eqlt	Equipment Operators, Light Equipment	51.30	410.40	8.5		14.0		50.8	26.05	77.35	618.80
Eqol	Equipment Operators, Oilers	48.60	388.80	8.5		14.0		50.8	24.70	73.30	586.40
Eqmm	Equipment Operators, Master Mechanics	56.30	450.40	8.5		14.0		50.8	28.60	84.90	679.20
Glaz	Glaziers	48.50	388.00	12.1		11.0		51.4	24.95	73.45	587.60
Lath	Lathers	49.15	393.20	8.5		11.0		47.8	23.50	72.65	581.20
Marb	Marble Setters	49.05	392.40	13.8		11.0		53.1	26.05	75.10	600.80
Mill	Millwrights	52.75	422.00	6.6		11.0		45.9	24.20	76.95	615.60
Mstz	Mosaic & Terrazzo Workers	47.00	376.00	8.7		11.0		48.0	22.55	69.55	556.40
Pord	Painters, Ordinary	42.55	340.40	11.2		11.0		50.5	21.50	64.05	512.40
Psst	Painters, Structural Steel	43.50	348.00	27.3		11.0		66.6	28.95	72.45	579.60
Pape	Paper Hangers	42.60	340.80	11.2		11.0		50.5	21.50	64.10	512.80
Pile	Pile Drivers	51.30	410.40	13.4		16.0		57.7	29.60	80.90	647.20
Plas	Plasterers	46.45	371.60	10.7		11.0		50.0	23.25	69.70	557.60
Plah	Plasterer Helpers	39.75	318.00	10.7		11.0		50.0	19.90	59.65	477.20
Plum	Plumbers	62.15	497.20	6.3		16.0		50.6	31.45	93.60	748.80
Rodm	Rodmen (Reinforcing)	54.65	437.20	10.4		14.0		52.7	28.80	83.45	667.60
Rofc	Roofers, Composition	43.95	351.60	29.0		11.0		68.3	30.00	73.95	591.60
Rots	Roofers, Tile & Slate	44.15	353.20	29.0		11.0		68.3	30.15	74.30	594.40
Rohe	Roofers, Helpers (Composition)	32.85	262.80	29.0		11.0		68.3	22.45	55.30	442.40
Shee	Sheet Metal Workers	59.80	478.40	8.3		16.0		52.6	31.45	91.25	730.00
Spri	Sprinkler Installers	59.90	479.20	6.7		16.0		51.0	30.55	90.45	723.60
Stpi	Steamfitters or Pipefitters	63.00	504.00	6.3		16.0		50.6	31.90	94.90	759.20
Ston	Stone Masons	50.95	407.60	13.8		11.0		53.1	27.05	78.00	624.00
Sswk	Structural Steel Workers	54.65	437.20	21.2		14.0		63.5	34.70	89.35	714.80
Tilf	Tile Layers	46.85	374.80	8.7		11.0		48.0	22.50	69.35	554.80
Tilh	Tile Layers Helpers	37.20	297.60	8.7		11.0		48.0	17.85	55.05	440.40
Trlt	Truck Drivers, Light	44.50	356.00	11.3		11.0		50.6	22.50	67.00	536.00
Trhv	Truck Drivers, Heavy	46.00	368.00	11.3		11.0		50.6	23.30	69.30	554.40
Sswl	Welders, Structural Steel	54.65	437.20	21.2		14.0		63.5	34.70	89.35	714.80
Wrck	*Wrecking	39.85	318.80	18.0		11.0		57.3	22.85	62.70	501.60

*Not included in averages

DIVISION		NEW MEXICO			NEW YORK														
		TUCUMCARI			ALBANY			BINGHAMTON			BRONX			BROOKLYN			BUFFALO		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		111.0	111.0		115.8	115.8		121.0	121.0		106.9	106.9		112.3	112.3		98.9	98.9
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	98.4	102.4	101.2	83.9	104.7	98.5	96.2	93.2	94.1	92.6	113.7	107.4	120.9	125.5	124.1	99.6	101.6	101.0
0310	Concrete Forming & Accessories	97.1	64.0	68.5	99.3	105.9	105.0	100.6	90.7	92.0	99.1	193.1	180.2	106.7	182.5	172.1	102.3	120.3	117.8
0320	Concrete Reinforcing	108.7	71.0	89.7	103.7	119.5	111.7	100.4	104.2	102.3	96.4	172.4	134.8	101.8	222.6	162.8	108.6	115.3	111.9
0330	Cast-in-Place Concrete	94.6	70.0	85.3	79.7	116.1	93.5	105.1	107.6	106.1	86.4	173.4	119.5	107.2	171.7	131.7	108.3	125.3	114.8
03	CONCRETE	101.9	68.7	86.7	84.1	112.9	97.3	93.4	101.3	97.0	89.4	181.7	131.6	104.6	184.0	140.9	105.1	120.6	112.2
04	MASONRY	118.3	60.0	82.1	90.5	116.0	106.3	106.8	104.1	105.1	90.1	182.8	147.6	117.2	182.8	157.9	113.5	123.6	119.7
05	METALS	104.8	90.8	100.5	101.2	128.8	109.7	94.2	134.4	106.6	90.8	170.3	115.2	102.1	167.5	122.2	99.4	108.2	102.1
06	WOOD, PLASTICS & COMPOSITES	92.4	64.6	77.0	94.4	102.3	98.8	105.6	86.6	95.0	98.0	197.8	153.6	107.2	183.4	149.6	100.9	119.7	111.4
07	THERMAL & MOISTURE PROTECTION	98.2	70.8	86.6	106.6	110.3	108.2	107.1	95.0	102.0	104.4	168.9	131.7	107.3	166.6	132.4	104.8	113.3	108.4
08	OPENINGS	96.5	65.8	89.5	95.4	104.5	97.5	91.9	92.8	92.1	92.8	200.7	117.6	89.4	190.6	112.7	99.8	114.0	103.1
0920	Plaster & Gypsum Board	77.6	63.4	68.1	102.5	102.3	102.3	107.2	85.9	92.9	96.7	200.3	166.3	103.4	185.8	158.7	105.4	120.1	115.3
0950, 0980	Ceilings & Acoustic Treatment	102.3	63.4	76.1	99.6	102.3	101.4	94.1	85.9	88.6	85.2	200.3	162.8	89.9	185.8	154.5	97.3	120.1	112.7
0960	Flooring	98.5	69.5	90.4	90.6	111.1	96.3	99.4	99.2	99.4	92.6	189.9	119.6	106.3	189.9	129.5	95.2	118.5	101.7
0970, 0990	Wall Finishes & Painting/Coating	93.6	52.8	69.8	93.8	102.3	98.8	87.4	99.6	94.5	103.8	159.9	136.5	114.2	159.9	140.8	97.8	115.8	108.3
09	FINISHES	92.5	63.6	76.8	90.3	105.9	98.8	91.4	92.2	91.8	92.6	190.5	145.8	104.3	181.9	146.5	100.1	120.1	111.0
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	84.0	96.5	100.0	102.0	100.4	100.0	98.8	99.7	100.0	137.9	108.4	100.0	135.5	107.9	100.0	108.1	101.8
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	98.1	68.8	85.6	100.2	109.0	103.9	100.6	99.6	100.2	100.2	170.4	130.2	99.7	170.2	129.9	100.0	103.4	101.5
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	91.7	88.5	90.0	95.5	110.9	103.5	99.4	100.8	100.1	94.2	181.5	129.2	99.1	181.5	141.9	98.9	106.0	102.6
MF2016	WEIGHTED AVERAGE	99.5	75.0	88.8	95.8	111.2	102.5	97.2	101.7	99.2	94.7	173.4	129.2	101.6	172.5	132.7	101.2	111.6	105.8

DIVISION		NEW YORK																	
		ELMIRA			FAR ROCKAWAY			FLUSHING			GLENS FALLS			HICKSVILLE			JAMAICA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		123.0	123.0		112.3	112.3		112.3	112.3		115.8	115.8		112.3	112.3		112.3	112.3
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	102.2	92.8	95.6	124.2	125.5	125.1	124.2	125.5	125.1	74.3	104.2	95.3	113.8	124.6	121.3	118.4	125.5	123.4
0310	Concrete Forming & Accessories	83.5	96.0	94.3	93.1	193.0	179.2	97.0	193.0	179.8	84.8	96.3	94.8	89.6	162.1	152.1	97.0	193.0	179.8
0320	Concrete Reinforcing	108.1	108.3	108.2	101.8	222.7	162.8	103.5	222.7	163.6	99.3	111.3	105.4	101.8	222.5	162.7	101.8	222.7	162.8
0330	Cast-in-Place Concrete	98.3	106.7	101.5	115.9	171.8	137.1	115.9	171.8	137.1	77.0	110.8	89.8	98.5	168.2	125.0	107.2	171.8	131.7
03	CONCRETE	89.5	104.3	96.2	110.7	188.8	146.4	111.2	188.8	146.7	78.3	105.3	90.6	96.6	173.4	131.7	104.0	188.8	142.7
04	MASONRY	105.1	105.1	105.1	122.0	182.8	159.7	115.9	182.8	157.4	96.6	108.1	103.7	111.7	178.0	152.8	119.9	182.8	158.9
05	METALS	95.2	137.2	108.1	102.1	167.5	122.2	102.1	167.5	122.2	94.6	125.1	104.0	103.6	164.4	122.3	102.1	167.5	122.2
06	WOOD, PLASTICS & COMPOSITES	84.7	94.3	90.0	91.1	197.5	150.3	95.6	197.5	152.3	87.2	92.9	90.4	87.8	159.5	127.7	95.6	197.5	152.3
07	THERMAL & MOISTURE PROTECTION	103.2	95.6	100.0	107.2	168.2	133.0	107.2	168.2	133.0	99.7	105.3	102.1	106.9	161.4	130.0	107.0	168.2	132.9
08	OPENINGS	98.3	97.3	98.0	88.1	198.4	113.5	88.1	198.4	113.5	90.4	98.6	92.3	88.5	177.4	108.9	88.1	198.4	113.5
0920	Plaster & Gypsum Board	101.8	94.1	96.6	92.5	200.3	164.9	94.8	200.3	165.6	95.0	92.6	93.4	92.1	161.2	138.5	94.8	200.3	165.6
0950, 0980	Ceilings & Acoustic Treatment	98.5	94.1	95.5	79.7	200.3	161.0	79.7	200.3	161.0	85.6	92.6	90.3	78.7	161.2	134.4	79.7	200.3	161.0
0960	Flooring	86.5	102.4	90.9	101.1	189.9	125.7	102.6	189.9	126.9	82.3	111.1	90.3	100.0	176.4	121.2	102.6	189.9	126.9
0970, 0990	Wall Finishes & Painting/Coating	94.8	91.5	92.9	114.2	159.9	140.8	114.2	159.9	140.8	89.8	97.3	94.2	114.2	159.9	140.8	114.2	159.9	140.8
09	FINISHES	92.0	96.5	94.5	99.6	190.2	148.9	100.4	190.2	149.3	82.4	98.2	91.0	98.2	164.1	134.1	100.0	190.2	149.1
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	97.9	99.5	100.0	137.1	108.3	100.0	137.1	108.3	100.0	98.1	99.6	100.0	124.9	105.5	100.0	137.1	108.3
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	97.1	96.5	96.9	96.6	170.2	128.1	96.6	170.2	128.1	97.1	104.4	100.3	99.7	159.5	125.3	96.6	170.2	128.1
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	97.7	103.8	100.9	105.9	181.5	145.2	105.9	181.5	145.2	90.7	110.9	101.2	98.6	142.4	121.4	97.6	181.5	141.2
MF2016	WEIGHTED AVERAGE	96.5	103.0	99.3	102.0	174.8	133.9	101.9	174.8	133.8	91.4	106.4	98.0	99.6	158.9	125.6	100.2	174.8	132.9

DIVISION		NEW YORK																	
		JAMESTOWN			KINGSTON			LONG ISLAND CITY			MONTICELLO			MOUNT VERNON			NEW ROCHELLE		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
015433	CONTRACTOR EQUIPMENT		91.9	91.9		112.3	112.3		112.3	112.3		112.3	112.3		106.9	106.9		106.9	106.9
0241, 31 - 34	SITE & INFRASTRUCTURE, DEMOLITION	103.7	93.5	96.6	145.6	120.7	128.1	122.0	125.5	124.5	140.6	121.2	127.0	97.5	109.9	106.2	97.3	109.9	106.1
0310	Concrete Forming & Accessories	83.6	89.1	88.3	86.2	128.1	122.4	101.3	193.0	180.4	93.3	128.1	123.3	89.4	140.1	133.1	104.5	140.1	135.2
0320	Concrete Reinforcing	108.3	114.5	111.4	99.8	156.7	128.5	101.8	222.7	162.8	99.0	156.7	128.1	95.2	170.9	133.4	95.3	170.9	133.4
0330	Cast-in-Place Concrete	102.0	85.3	95.7	103.9	145.2	119.6	110.6	171.8	133.8	97.3	145.2	115.5	96.5	150.7	117.1	96.5	150.7	117.1
03	CONCRETE	92.4	92.3	92.4	98.3	138.6	116.7	107.0	188.8	144.4	93.6	138.6	114.2	98.7	149.4	121.9	98.1	149.4	121.5
04	MASONRY	114.6	101.4	106.4	111.3	150.7	135.7	114.0	182.8	156.7	104.2	150.7	133.0	95.9	154.7	132.4	95.9	154.7	132.4
05	METALS	92.7	102.6	95.7	102.9	134.2	112.5	102.1	167.5	122.2	102.9	134.2	112.5	90.6	162.5	112.7	90.8	162.4	112.8
06	WOOD, PLASTICS & COMPOSITES	83.3	86.1	84.8	88.4	122.0	107.1	101.4	197.5	154.9	95.2	122.0	110.1	88.6	134.9	114.3	105.4	134.9	121.8
07	THERMAL & MOISTURE PROTECTION	102.7	94.0	99.0	123.4	143.5	131.9	107.2	168.2	133.0	123.1	143.5	131.7	105.4	146.6	122.8	105.4	146.6	122.9
08	OPENINGS	98.1	94.8	97.3	92.6	140.8	103.7	88.1	198.4	113.4	88.3	140.8	100.3	92.8	165.9	109.6	92.9	165.9	109.6
0920	Plaster & Gypsum Board	88.9	85.6	86.7	97.2	122.8	114.4	99.4	200.3	167.2	97.9	122.8	114.6	91.7	135.6	121.2	104.9	135.6	125.5
0950, 0980	Ceilings & Acoustic Treatment	95.1	85.6	88.7	76.3	122.8	107.6	79.7	200.3	161.0	76.3	122.8	107.6	83.5	135.6	118.6	83.5	135.6	118.6
0960	Flooring	89.0	102.4	92.7	98.7	162.9	116.5	104.3	189.9	128.0	101.1	162.9	118.2	84.6	173.4	109.3	92.0	173.4	114.6
0970, 0990	Wall Finishes & Painting/Coating	96.4	95.1	95.6	118.7	129.0	124.7	114.2	159.9	140.8	118.7	129.0	124.7	102.2	159.9	135.9	102.2	159.9	135.9
09	FINISHES	90.6	91.4	91.0	96.0	134.0	116.7	101.3	190.2	149.7	96.4	134.0	116.9	89.6	147.5	121.1	93.5	147.5	122.8
COVERS	DIVS. 10 - 14, 25, 28, 41, 43, 44, 46	100.0	96.6	99.3	100.0	115.9	103.5	100.0	137.1	108.3	100.0	115.9	103.5	100.0	119.9	104.4	100.0	116.8	103.7
21, 22, 23	FIRE SUPPRESSION, PLUMBING & HVAC	97.0	89.0	93.6	97.1	125.7	109.3	99.7	170.2	129.9	97.1	121.8	107.6	97.2	140.6	115.8	97.2	140.6	115.8
26, 27, 3370	ELECTRICAL, COMMUNICATIONS & UTIL.	96.7	93.8	95.2	92.0	121.0	107.1	98.1	181.5	141.4	92.0	121.0	107.1	92.4	149.6	122.2	92.4	149.6	122.2
MF2016	WEIGHTED AVERAGE	96.6	93.9	95.4	100.0	131.6	113.8	101.2	174.8	133.5	98.5	130.8	112.7	95.1	145.6	117.2	95.5	145.5	117.4

ATTACHMENT 1.2
Vendor and Contractor Quotes

McDaid, Daniel

From: Floess, Carsten H.
Sent: Tuesday, February 20, 2018 9:28 AM
To: Peppin, Karen
Cc: Murphy, Robert E (Buffalo); McDaid, Daniel; Gillies, Jennifer; Meister, Keith
Subject: FW: minipiles

Karen:

FYI, see below.

I also asked a few follow up questions regarding production rates. Will forward responses when I receive them.

Thanks,

Carsten H. Floess, P.E., D.GE.
Senior Geotechnical Engineer, Transportation
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Built to deliver a better world

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FORTUNE WORLD'S MOST ADMIRED COMPANIES 2018

From: Grillo, John [mailto:JRGrillo@HaywardBaker.com]
Sent: Tuesday, February 20, 2018 9:06 AM
To: Floess, Carsten H.
Cc: Grant, Michael; Pastore, Joseph
Subject: RE: minipiles

Carsten,

Below is my contact information.

[redacted]

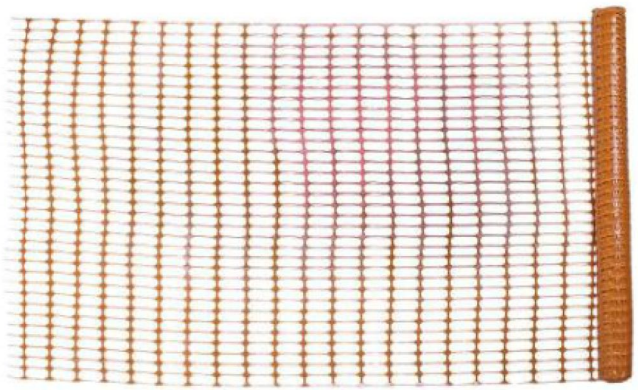
In response to your questions:

- Minipiles are a reasonable approach. Headroom of 10' is adequate; would install with 3' sections of threaded casing. We can comfortably achieve 150 tons on a 9.625" pile.
- Budget price for installation is abou[redacted]rice can vary widely based on access and drilling conditions.
- Budget price for mobilization is about $75k. Assume $2k/hr for standby.
- Multiple casings will likely be drilled and socketed into rock prior to grouting. We are usually ok with drilling an adjacent pile the next day; don't expect to be that tight on a rock job.

Model # 14993-0-48 Internet #202520880 Store SKU #121969 Store SO SKU #319716







Everbilt

4 ft. x 100 ft. Orange Safety Barrier Fence

- Ideal fencing option for construction sites and crowd control
- Round mesh is UV protected for easy visibility
- Easy install and removal makes it a great choice for events

$28.97 /roll

Plus 8.875% sales tax = $31.54/roll or $0.08/sf

[redacted]

TABLE 1
HYPOTHETICAL WORK ASSIGNMENT BID COMPARISON
MULTIMEDIA ANALYTICAL SERVICES
STANDBY CONTRACT # D007622 FOR ENGINEERING SERVICES

Description - Liquid/Solid Analytical Services			TESTAMERICA		H2M		MITKEM		HAMPTON CLARK		
Type of Analysis	Analytical Method	QUANTITY	UNIT COST Cat. B Report	EXTENDED	UNIT COST Cat. B Report	EXTENDED	UNIT COST Cat. B Report	EXTENDED	UNIT COST Cat. B Report	EXTENDED	
NON-AQUEOUS SAMPLE											
TCL PCBs	8082	4	$ 53.00	$ 212.00	$ 51.00	$ 204.00	$ 55.00	$ 220.00	$ 55.00	$ 22[illegible]	$ 53.50
NON-AQUEOUS SAMPLE											
Full TCLP	1311	4	$ 433.00	$ 1,732.00	$ 528.00	$ 2,112.00	$ 557.00	$ 2,228.00	$ 495.00	$ 1,98[illegible]	$ 503.25
RCRA CHARACTERISTICS											
Ignitability	1030	4	$ 28.00	$ 112.00	$ 24.00	$ 96.00	$ 33.00	$ 132.00	$ 12.00	$ 4[illegible]	$ 24.25
Corrosivity	pH		$ 5.00	$ 20.00	$ 6.00	$ 24.00	$ 6.00	$ 24.00	$ 4.00	$ 1[illegible]	$ 5.[illegible]
Reactivity	Ch 7		$ 44.00	$ 176.00	$ 52.00	$ 208.00	$ 44.00	$ 176.00	$ 35.00	$ 14[illegible]	$ [illegible]
			TOTAL	$ 2,252.00	**TOTAL**	$ 2,644.00	**TOTAL**	$ 2,780.00	**TOTAL**	$ 2,40[illegible]	

[redacted]

TABLE 1

UNIT PRICE SCHEDULE
INVESTIGATION DERIVED WASTE DISPOSAL SERVICES
STUART OLVER HOLTZ SITE, # 828079
TOWN OF HENRIETTA, MONROE COUNTY, NEW YORK
WORK ASSIGNMENT D007622-8.1

BID				
Transportation and Disposal[1]	**Unit**	**Estimated Quantity**	**Unit Cost** [2]	**Estimated Total Cost**
Pick-up from Site and Transportation to Disposal Facility* (hazardous and non-hazardous)	Each vehicle	1		480.00
Non-Hazardous Solid Waste				
Solids Drum Disposal	Each	3	$ 70.00	210.00
Liquid Drum Disposal	Each	1	$ 100.00	100.00
RCRA Hazardous Solid Waste				
Solids Drum Disposal	Each	3		1,335.00
Liquid Drum Disposal	Each	9		1,845.00
			Total	$ 3,970.00

*Any fuel surcharges shall be included in the unit cost above. Price shall include travel to/from site, intermediate facility and disposal facility, per diem and subsistence (if needed)

Notes:
1. The cost of all activities required by the Scope of Work and not specifically identified above as Payment Items shall be spread among and included within the quoted costs for the listed Payment Items.

2. Quantities are estimated. Actual payment will be made based on the actual, approved work performed. The unit prices are fixed and not subject to renegotiation due to an increase or decrease in quantities and/or fuel surcharges.

Company Name: SUN ENVIRONMENTAL CORP.

Authorizing Signature: [signature]

Name / Title: SHERRIE LYNCH, PROJECT MGR.

Date: 01/31/18

McDaid, Daniel

From: Scarano, Michael A <SCARANO.MICHAEL@cleanharbors.com>
Sent: Monday, February 12, 2018 3:34 PM
To: McDaid, Daniel
Subject: RE: Budgetary Cost for T&D of PCB-contaminated soil, concrete and debris

Corrected the recovery fee for the greater than 50 ppm and corrected the typo- listing MI instead of Stanely, NY

My apologies

Safety Starts with Me: Live It 3-6-5

Michael A. Scarano
Technical Services Account Manager
Mobile: 716 695-5612
Office: 716 283-4508
Scarano.michael@cleanharbors.com
www.cleanharbors.com

From: McDaid, Daniel [mailto:daniel.mcdaid@aecom.com]
Sent: Monday, February 12, 2018 3:27 PM
To: Scarano, Michael A <SCARANO.MICHAEL@cleanharbors.com>
Subject: RE: Budgetary Cost for T&D of PCB-contaminated soil, concrete and debris

Thanks Mike!

A couple questions:

1. Do you add the recovery fee onto the total with tax? (i.e. $180/ton + $10/ton tax = $190/ton x *10% = $209/ton)- correct
2. Can you confirm that the transport cost for <50ppm is correct for going to Ontario County, New York and the "…to Detroit, MI" is a typo. Also, any recovery fees for this? No recovery fees for disposal- and it was a typo
3. Is it safe to assume 22 tons per trailer? Yes- this is reasonable Some drivers are really picky about their loads, especially in NY and PA!- you are correct

Dan McDaid
Civil Engineer
D: (716) 923-1166 C: (716) 903-6500
Daniel.McDaid@aecom.com

AECOM
257 West Genesee Street, Suite 400, Buffalo, New York 14202
T: (716) 856-5636
www.aecom.com

From: Scarano, Michael A [mailto:SCARANO.MICHAEL@cleanharbors.com]
Sent: Monday, February 12, 2018 3:14 PM
To: McDaid, Daniel
Subject: RE: Budgetary Cost for T&D of PCB-contaminated soil, concrete and debris

Daniel- Please see the below budgetary transportation and disposal rates you requested and please feel free to contact me if I can assist further.

Regards,

Safety Starts with Me: Live It 3-6-5

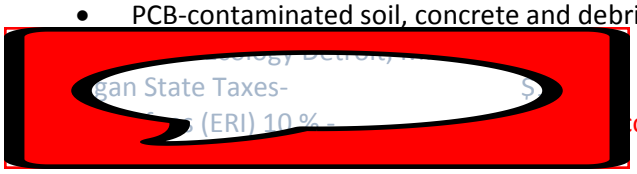
Michael A. Scarano
Technical Services Account Manager
Mobile: 716 695-5612
Office: 716 283-4508
Scarano.michael@cleanharbors.com
www.cleanharbors.com

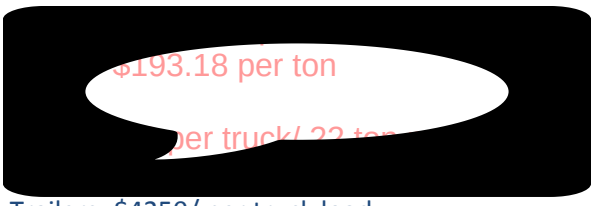
From: McDaid, Daniel [mailto:daniel.mcdaid@aecom.com]
Sent: Monday, February 12, 2018 10:24 AM
To: Scarano, Michael A <SCARANO.MICHAEL@cleanharbors.com>
Subject: Budgetary Cost for T&D of PCB-contaminated soil, concrete and debris

Good Morning Mike,

I am following up on our phone conversation this morning regarding T&D cost of PCB-contaminated materials for a project in the Bronx. We are looking for ballpark per-ton costs for approximately 2,000 tons of each of the following:

- PCB-contaminated soil, concrete and debris >50 ppm-





Transportation: New York City to Detroit: 22 ton per load max. in dump Trailers- $4250/ per truck load
Recovery fees: (Fuel Surcharges) $420 / per truck load

- PCB-contaminated soil, concrete and debris <50 ppm

Disposal at Casella Ontario County Landfill Stanley, NY- $48/ ton
Transportation: New York City to Stanley, NY: $2650/ 22 ton per load max. in dump trailers- corrected my typo

Please Note: All services are subject to a complete analysis of the waste, a signed waste profile and review and approval of the disposal facilities.

Thanks for your help!

Dan McDaid
Civil Engineer
D: (716) 923-1166 C: (716) 903-6500
Daniel.McDaid@aecom.com

AECOM
257 West Genesee Street, Suite 400, Buffalo, New York 14202
T: (716) 856-5636
www.aecom.com

How much does a **Security Guard** make an hour? The median hourly wage for a [redacted] as of January 30, 2018, with a range usually between **$13-$17**, however this can vary widely depending on a variety of factors. Our team of Certified Compensation Professionals has analyzed survey data collected from thousands of HR departments at companies of all sizes and industries to present this range of hourly wages for people with the job title **Security Guard** in the United States.

COMPANALYST DRIVES ENTERPRISE SUCCESS

Learn how best-in-class companies use CompAnalyst to create new, personalized talent management experiences for their employees.

Explore CompAnalyst

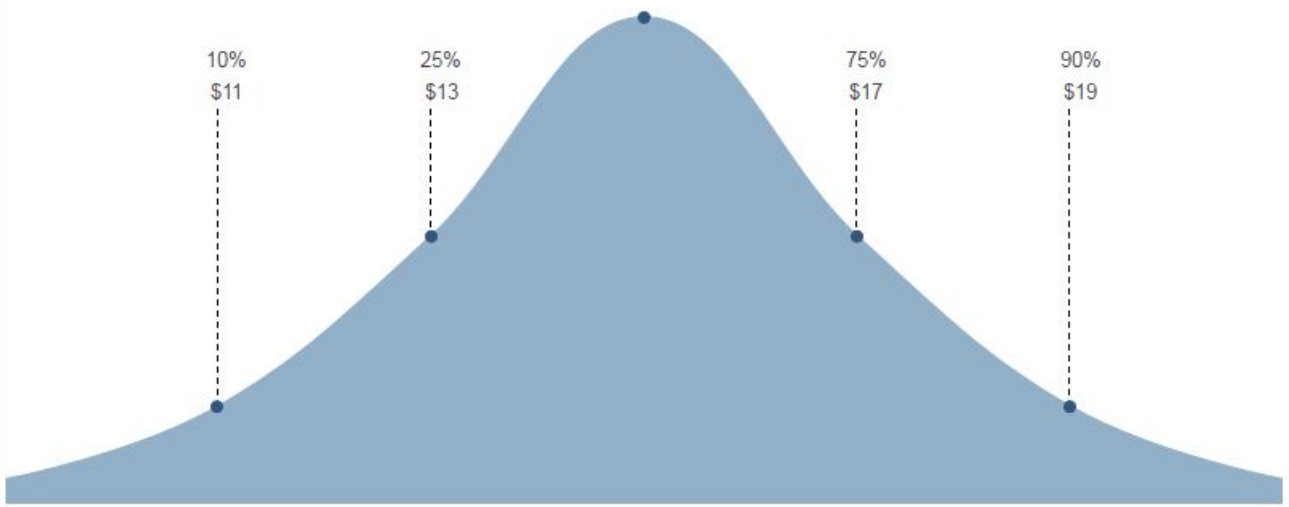
This chart describes the expected percentage of people who perform the job of Security Guard in the United States that make less than that hourly rate. For example the median expected hourly pay for a typical Security Guard in the United States is $15 an hour, so 50% of the people who perform the job of Security Guard in the United States are expected to make less than $15.

Source: HR Reported data as of January 30, 2018

Salary | Salary + Bonus | Benefits

Hourly

view as table



Related Content

- 9 Things Not to Say For a Raise
- 8 Jobs That Pay $50K
- 11 Odd Jobs With High Salaries

This is NATIONAL SALARY DATA

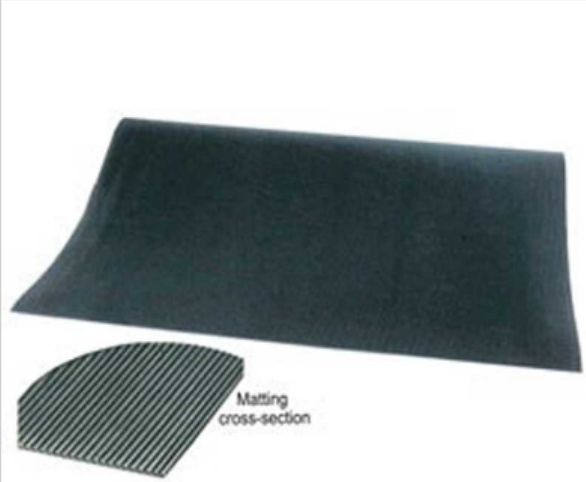
Get more specific data by entering your city, state or zip code here.

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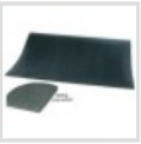
http://www.mitchellinstrument.com/salisbury-m36-4-insulating-switchboard-rubber-matting.html?gclid=EAIaIQobChMIy-i3taqm2QIVAbcbCh3JKgYcEAYYBiABEgJE7fD_BwE

Request a FREE Catalog Click Here
Free Ground Shipping on orders over $100 (some restrictions apply)
We offer complete Calibration Services
Best Price Guarantee We will get you the best price!!
Secure Credit Card Checkout VISA, Mastercard and AMEX
Magnum Pro Calibration Hand Pumps · Virtually Indestructible! · 2 year "quibble free" warranty
Megger MIT1525 15KV Insulation Tester
TKSA 31 Laser Shaft Alignment Only $3,295.00



Double click on above image to view full picture

MORE VIEWS



Be the first to review this product

Salisbury M36-4 Switchboard Matting Class 4 (75' Roll)

SALISBURY by Honeywell

See other Salisbury products

Mitchell Part Number: SAL-M36-4

Availability: **Typically In stock - Call if Urgent!**

$5,895.00

Qty: 1 Add to Cart Add to Compare

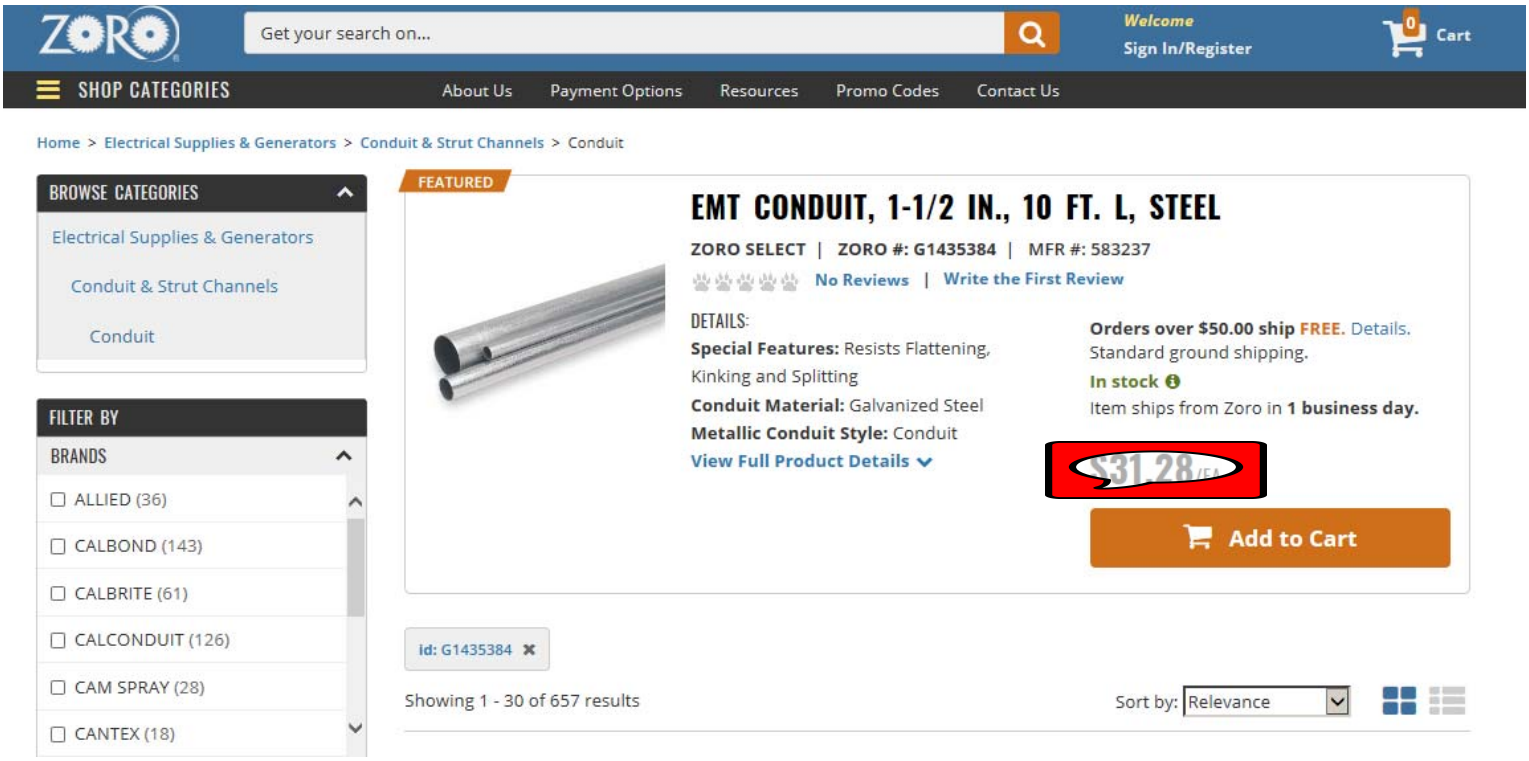
Quick Overview

Switchboard matting is placed permanently in front of switchgear, motor control centers and other high voltage apparatus to provide an additional level of protection for electrical workers. Made from high quality rubber, 1/4 thick and tested to 20kV to comply with ASTM D178, Class 2 specifications. Corrugated surface acts as a safety tread while reducing the possibility of metal particles becoming embedded. Class 4 maximum use voltage 36,000VAC.

Product Description | Additional Information | Product Tags

Corrugated switchboard matting designed to protect workers from electrical shock.

https://www.zoro.com/value-brand-emt-conduit-1-12-in-10-ft-l-steel-583237/i/G1435384/feature-product?gclid=EAIaIQobChMIkN3UjrGm2QIVRWV-Ch0BdweWEAQYASABEgIwS_D_BwE



https://www.zoro.com/zoro-select-emt-conduit-34-in-10-ft-l-steel-583203/i/G2051707/#description

EMT CONDUIT, 3/4 IN., 10 FT. L, STEEL

ZORO SELECT | **ZORO #: G2051707** | MFR #: 583203

1 Review | Write a Review



In stock

$7.95 /EA

Item ships from Zoro in **1 business day.**

qty 1 Add to Cart

Orders over $50.00 ship FREE. Details.
Standard ground shipping.

DETAILS:

Special Features: Resists Flattening, Kinking and Splitting
Conduit Material: Galvanized Steel
Metallic Conduit Style: Conduit
View Full Product Details

SAVE 15%*
Sign up for Z-mail

https://www.hardwareworld.com/pkzr273/NonMetallic-Sheathed-Cable-10-2-Ground-Wire-250-Ft?gclid=EAIaIQobChMIz9TojfKq2QIV2LbACh0eYwZlEAQYAyABEgITKfD_BwE

HARDWARE WORLD

BRANDS INDEX Enter Keyword or Item #

ELECTRICAL > PROFESSIONAL ELECTRICAL SUPPLY > ELECTRICAL WIRE > SOUTHWIRE CO > NON-METALLIC SHEATHED CABLE, 10/2 GROUND WIRE ~ 250 FT



BY SOUTHWIRE

Non-Metallic Sheathed Cable, 10/2 Ground Wire ~ 250 Ft

UNIT:	250 Foot
MODEL #:	28829055
SIZE:	10/2G-250 Ft.RI
STOCK STATUS:	In Stock
STOCK ON HAND:	33

$137.21

QUANTITY: 1

ADD TO CART

Expected to ship **Today** if order placed in the **9 minutes.**

View larger image

Description:

Item # KZR273 UPC: 032886163104

NON-METALLIC SHEATHED CABLE

Type NM B cable is designed specifically for use in residential and commercial wiring of branch circuits. Installation above ground and in dry locations only. Approved for service to 600V. PVC jacket and PVC insulated, nylon jacketed conductors with ground (WG). Flame retardant and crush resistant. UL listed.

- Type NM-B (non-metallic-sheathed cable)
- Used for residential wiring as branch circuits
- For outlets, switches & other wiring needs
- May be run in air voids in masonry block or wall
- Do not use in damp or wet locations
- Voltage rating is 600 volts
- Conductors are annealed soft copper or-

ATTACHMENT 1.3
Quotes from Similar Previous Projects

[redacted]

REQUEST FOR BID

COMPANY SUBMITTING BID:

[redacted] final URS Source for dewatering

Item	*Estimated Quantity*	*Units*	*Unit Price*	*Amount*	*Comment*
Loading of Soil onto Trucks provided by Others (Includes Equipment and Operator)	4	10hr Day	$ 4,800	$ 19,200	
Dewatering (During Excavation and Backfill Activities)					
Option 1: 24-hour/day discharge to storm	7		$	$85,610	Costs for dewatering equipment, pre-treatment of water, and 24-hour/day surveillance of equipment and discharge
[redacted] Frac Tank(s) on 24-hour to storm sewer during	7	Day	$	$ 63,140 +$8,500	Costs for dewatering equipment, treatment of water, 24-hour/day surveilla excavation/frac tanks, cleaning of frac ta project. Must meet STIP wast
work hours and discharge to storm sewer during normal work hours	7	Day	$	$ 37,880 +$8,500	during normal work hours, cleaning of frac tank at end of project. Must meet STIP wastewater discharge limits (attached).
No Dewatering					
Option 1: Gravel base (no Dewatering)		Cubic Yard	$ 73	$	
	Total			$	

[redacted] 0 for 7 days, or $10,235 per day. ould equate to approximate

2/27/2013

Mar 06 2013 5:33PM HP Fax page 4

NYC Environmental Protection

Carter H. Strickland, Jr.
Commissioner

Joseph F. Singleton, Jr.
Deputy Commissioner
Customer Services
customerservice@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-7000
F: (718) 595-7337

July 10, 2013

URS
3 Corporate Drive, Suite 203
Clifton Park, NY 12065
Attn: **Michael Chevalier, P.E**

Re: **Groundwater Discharge,** [redacted]

Dear Mr. Chevalier:

Below are the calculations for the permit fee for [redacted]
DEWATERING PERMIT FOR
946,472 GALLONS OF DISCHARGE (7/2013 thru 8/2013)
[redacted] 69 PER HUNDRED CUBIC FE
$7,199.77 PERMIT FEE.

Please bring a check for the above amount payable to The NYC Water Board and a copy of this letter to any of our Borough Offices to obtain the permit.

Sincerely,

Michael Moran
Chief of Operations

[redacted] per 100 cf in 2013, say $6 per [redacted] for site water disch

[redacted]

TABLE 1

RONKONKOMA BID TABULATION

Results of August 4, 2017 Bid Opening:				Bidder: *Average All Bids*	
				Bid Rank:	N/A
Payment Item No.	**Bid Item Description**	**QTY**	**Units**	**Unit Price Cost**	**Bid Item Total**
1	**Mobilization/Demobilization And Site Preparation**	1	LS	$ 164,305.60	$ 164,305.60
2	**Site Services**	65	DAYS	$ 1,355.60	$ 88,114.00
3	**Health and Safety**	44	DAYS	$ 1,590.80	$ 69,995.20
4	**Community Air Monitoring**	44	DAYS	$ 1,486.80	$ 65,419.20
5	**Tree and Brush Clearing and Grubbing**	1	LS	$ 52,955.20	$ 52,955.20
[redacted]	Excavation	6,870	CY	[redacted]	108,985.68
7	**Handling, Transport and Off-Site Disposal of Non-Hazardous Soil and Debris**	9,275	TONS	$ 88.26	$ 818,611.50
8	**Well Decommissioning**	250	LF	$ 18.30	$ 4,575.00
9	**General Fill**	4,925	CY	$ 42.66	$ 210,100.50
10	**Topsoil**	11,670	SY	$ 8.91	$ 104,026.38
11	**Seeding**	11,670	SY	$ 2.01	$ 23,456.70
12	**Post-Excavation Compliance Sampling and Analysis**	75	EA	$ 244.50	$ 18,337.50
13	**Construction Water Management and Dewatering**	1	LS	$ 25,793.10	$ 25,793.10
14	**Handling, Transport and Off-Site Disposal of Hazardous Soil and Debris**	1,050	TONS	$ 189.11	$ 198,565.50
					$ 1,953,241.06

ATTACHMENT 1.4
Vendor Quote for New Electrical Equipment

Proposal Name: Budgetary

Quote Name: 4000A SWGR - AECOM

Proposal Number: P-180215-127213

Quote Number: Q-122262

Quote Date: February 16, 2018

Through Addenda Number: 0

Sales Representative: James Jurin

Conditions of Sale

This Quotation is subject to Coordinated Project Terms. See https://www.schneider-electric.us/en/download/document/0100PL0043

Clarifications and Exceptions

Pricing

Total DISTRIBUTOR SELL PRICE	**$425,993.89**
Total Warranty	**$0.00**
Total FOB	**$0.00**
Quote Total US DOLLARS	**$425,993.89**

Budgetary

Life Is On

SQUARE D by Schneider Electric

Proposal Name: Budgetary

Quote Name: 4000A SWGR - AECOM

Quote Number: Q-122262

Seq #	Qty	Product Description	Price Each	Subtotal
1	1	**Designation :** 2000kVA XFMR Unit Substation Transformers **Product Details** 1-CLASS 7240 UNIT SUBSTATION XFMR-SQUARE D SECONDARY UNIT SUBSTATION ---------- LIQUID FILLED: LESS FLAMMABLE SEED OIL 2000 kva rated PRIMARY VOLT: 13800 DELTA 95 KV BIL SECONDARY VOLT: 480GY/277 30 KV BIL STANDARD 60 HERTZ IMPEDANCE: 5.75% +/- 7.5% TOLERANCE CONDUCTOR: COPPER WINDINGS TEMP: 120 DEGREES INSULATION CLASS 65 RISE OVER 30 AVG - 40 MAX AMB TAPS: 2-2.5% FCAN, 2-2.5% FCBN ALTITUDE: STD. 3300 FEET MAXIMUM 61 DB SOUND LEVEL MODIFICATIONS: ---------- KNAN RATING ONLY DIAL TYPE THERMOMETER LIQUID LEVEL GUAGE PRESSURE VACUUM GAUGE W/BLEEDER DRAIN VALVE WITH SAMPLER DEVICE PRESSURE RELIEF VALVE STANDARD PRESSURE RELIEF DIAPHRAGM NITROGEN TEST PORT ALUMINUM TRANSFORMER NAMEPLATE UL LISTING SHRINK WRAPPED FOR SHIPPING PAINT COLOR ANSI 49 ENERGY EFFICIENT PER DOE 2016 MIN EFFICIENCY (50% LOAD) = 99.51% HIGH VOLTAGE TERMINATIONS: ---------- SIDEWALL MOUNTED ON LEFT (SEGMENT-2) FULL HEIGHT ATC 18 IN. DEEP SIDE (END) ACCESSIBLE ONLY BOTTOM FEED CABLE ENTRY NO SURGE ARRESTERS 1 PRIMARY 2/0 COMPRESSION LUGS/PH LOW VOLTAGE TERMINATIONS: ---------- SIDEWALL MOUNTED ON RIGHT (SEGMENT-4) FULL HEIGHT ATC 36 IN. DEEP SIDE (END) ACCESSIBLE ONLY BOTTOM FEED CABLE ENTRY EPOXY LOW VOLTAGE BUSHINGS TIN-PLATED COPPER BUSHING CONDUCTOR 11 SECONDARY 500 KCMIL MECH LUGS/PH 16 HOLE SPADE TERMINATION SECONDARY SPADE SUPPORTS TRANSFORMER TESTS: ---------- RATIO TEST POLARITY TEST PHASE RELATION TEST NO-LOAD LOSS TEST EXCITATION CURRENT TEST IMPEDANCE VOLTAGE TEST LOAD LOSS TEST APPLIED POTENTIAL TEST INDUCED POTENTIAL TEST	$65,548.36	$65,548.36

Budgetary

LEAK TEST
POWER FACTOR TEST
RESISTANCE MEASUREMENT TEST
TEST REPORT REQUIRED (STD FORMAT)
FACTORY QC IMPULSE TST HV ONLY

NOTES:

SPECIFICATION NOT ON RECORD
STANDARDS: IEEE C57.SERIES

SECONDARY LUGS AND FLEX CONNECTORS ARE
NOT INCLUDED UNLESS LISTED ABOVE.

Revision (03132014/04012014) XX
Estimated days to ship, excluding transit: 75 working days after customer release to manufacturer. See Conditions of Sale.

Seq #	Qty	Product Description	Price Each	Subtotal
2	1	**Designation :** 4000A SWGR LV Drawout **Product Details** 1-POWER-ZONE 4 SWITCHGEAR-LOW VOLTAGE SWITCHGEAR with Smart System Communications Network Main(M1)-Tie-Main(M2) - End Fed 480/277V,3PH-4W,60HZ 4000A Copper Main Bus Solidly Grounded Neutral 100% Neutral Two - 1KVA Control Power Transformers 65kA Maximum Available Fault Current Indoor NEMA 1 Style Enclosure ANSI 49 Exterior Color Paint Network Communications only - No Breaker Web Pages Ethernet Modbus TCP Customer RJ45 Connection Breakers (Masterpact) on Modbus RS485 Serial Network connected to Ethernet Modbus TCP Interface All devices pre-wired and pre-tested to the customer connection Control Power Transfer Manually Operated Overhead Lifting Device 24VDC to Trip Unit Display White Back Pans ENCLOSURE OPTIONS 6 - Section(s) with 4000A, Thermal Silver Plated Vertical Bus 3 - 36", 4000A, 4W, 100%N, Indoor Vertical Section 7 - 72" Deep Enclosure 7 - Rodent Barriers and Bottom Plates 4 - 22", 4000A, 4W, 100%N, Indoor Vertical Section 1 - Section(s) with 3200A, Thermal Silver Plated Vertical Bus INCOMING ONE: CONNECTIONS & METERING OPTIONS Freestanding Cable Fed - Bottom Incoming 4000A UL Service Entrance Label 320kA High Exposure SPD SPD Surge Counter SPD Dry Contacts 4000A 4W Mechanical 1-Hole Lugs MAIN ONE: CIRCUIT BREAKER 4000A, NW40H2, Manually Operated Main	360,445.53	$360,445.53

Blogetary

Breaker
DESCRIPTION: MAIN 1
Power Measurement Unit (6.0P), LSIG
Communications Wired - Main/Tie
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 4000
Energy Reduction Maintenance Switch - Locally Mounted
ION7550 Meter; 5MB Memory/256 Sampling; Serial and Ethernet Comms
Three PTs - Incoming
Modified Differential Ground Fault - Main
Breaker ID Nameplate - Main
Breaker Padlock Attachment on Circuit Breaker
4A Form C Contacts Auxiliary Switch
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
1 Kirk Key Interlock on Main Breaker
Metering CTs
Cell - 1 BC

FEEDER CIRCUIT BREAKERS & INSTRUMENTATION
800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 1 A

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1200A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1200
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 2 B

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1200A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1200
Energy Reduction Maintenance Switch - Locally Mounted

Budgetary

1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 2 C

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1600A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1600
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 2 D

800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 3 A

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1600A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1600
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 3 B

800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A

Budgetary

Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 3 C

800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 3 D

TIE
4000A, NW40H2, Manually Operated Tie Breaker
DESCRIPTION: TIE
Power Measurement Unit (6.0P), LSIG
Communications Wired - Main/Tie
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 4000
Energy Reduction Maintenance Switch - Locally Mounted
Modified Differential Ground Fault - Tie
4A Form C Contacts Auxiliary Switch
1 Kirk Key Interlock on Tie Breaker
Breaker Padlock Attachment on Circuit Breaker
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker ID Nameplate - Tie
Cell - 4 BC

INCOMING TWO: CONNECTIONS & METERING OPTIONS
Freestanding Cable Fed - Bottom Incoming
4000A UL Service Entrance Label
320kA High Exposure SPD
SPD Surge Counter
SPD Dry Contacts
4000A 4W Mechanical 1-Hole Lugs

MAIN TWO: CIRCUIT BREAKER
4000A, NW40H2, Manually Operated Main Breaker
DESCRIPTION: MAIN 2
Power Measurement Unit (6.0P), LSIG
Communications Wired - Main/Tie
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 4000
Energy Reduction Maintenance Switch - Locally Mounted

Budgetary

ION7550 Meter; 5MB Memory/256 Sampling;
Serial and Ethernet Comms
Three PTs - Incoming
Modified Differential Ground Fault - Main
Breaker ID Nameplate - Main
Breaker Padlock Attachment on Circuit
Breaker
4A Form C Contacts Auxiliary Switch
1C Connected, 1C Test, 1C Disconnected Cell
Switch Assembly
1 Kirk Key Interlock on Main Breaker
Metering CTs
Cell - 7 BC

FEEDER CIRCUIT BREAKERS & INSTRUMENTATION
800A, NW08H1, Manually Operated Feeder
Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch -
Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell
Switch Assembly
Breaker Padlock Attachment on Circuit
Breaker
Cell - 4 D

1600A, NW16H1, Manually Operated Feeder
Breaker
DESCRIPTION: 1600A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1600
Energy Reduction Maintenance Switch -
Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell
Switch Assembly
Breaker Padlock Attachment on Circuit
Breaker
Cell - 5 B

800A, NW08H1, Manually Operated Feeder
Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch -
Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell
Switch Assembly
Breaker Padlock Attachment on Circuit
Breaker
Cell - 5 C

Budgetary

800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 5 D

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1200A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1200
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 6 B

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1200A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1200
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 6 C

1600A, NW16H1, Manually Operated Feeder Breaker
DESCRIPTION: 1600A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 1600
Energy Reduction Maintenance Switch - Locally Mounted
1600A, 4W, Mechanical 1-Hole Lugs
4A Form C Contacts Auxiliary Switch
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly

Budgetary

Breaker Padlock Attachment on Circuit Breaker
Cell - 6 D

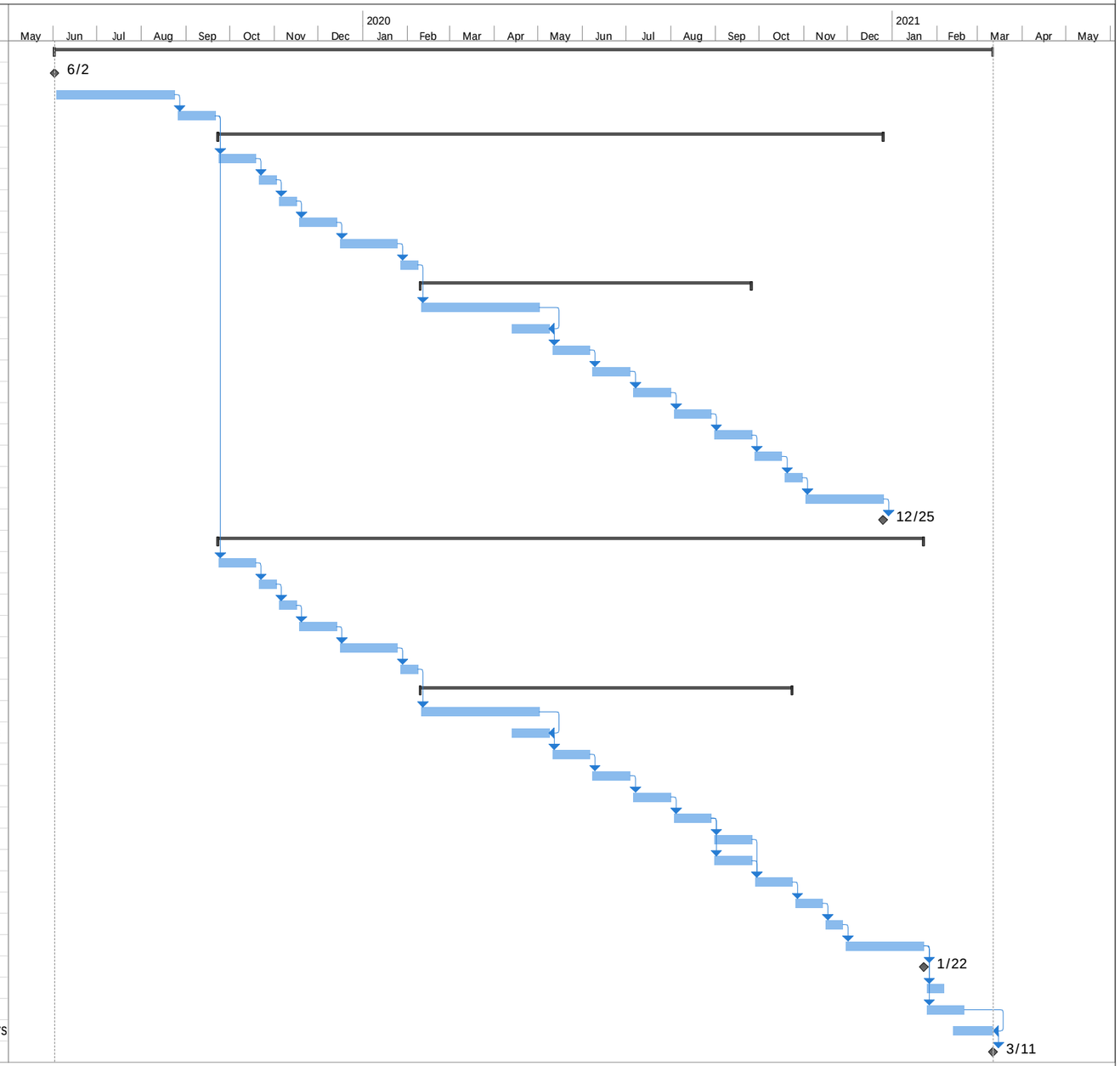
800A, NW08H1, Manually Operated Feeder Breaker
DESCRIPTION: 800A FEEDERS
Power Measurement Unit (6.0P), LSIG
Communications Wired - Feeder
Sensor Rating Plug - A
Plug Dial Setting - 1.0
Trip Setting (Amps) - 800
Energy Reduction Maintenance Switch - Locally Mounted
4A Form C Contacts Auxiliary Switch
800A, 4W, Mechanical 1-Hole Lugs
Breaker ID Nameplate - Feeder
1C Connected, 1C Test, 1C Disconnected Cell Switch Assembly
Breaker Padlock Attachment on Circuit Breaker
Cell - 7 A
Estimated days to ship, excluding transit: 90 working days after customer release to manufacturer. See Conditions of Sale.

Budgetary

ATTACHMENT 2
ALTERNATIVE 4 CONSTRUCTION SCHEDULE

Bronx Psychiatric Center
FS Alternative 4
Construction Schedule

ID	Task Name	Duration	Start	Finish	Predecessors
1	Summary	464 days	Sun 6/2/19	Thu 3/11/21	
2	Construction Start	0 days	Sun 6/2/19	Sun 6/2/19	
3	Mobilization	60 days	Mon 6/3/19	Fri 8/23/19	
4	Decommision Electrical	20 days	Mon 8/26/19	Fri 9/20/19	3
5	Room 1	330 days	Mon 9/23/19	Fri 12/25/20	
6	Excavate exterior soil	20 days	Mon 9/23/19	Fri 10/18/19	4
7	Re-route exterior Elect. Service	10 days	Mon 10/21/19	Fri 11/1/19	6
8	Demo Exterior Walls for Access	10 days	Mon 11/4/19	Fri 11/15/19	7
9	Demo Floor	20 days	Mon 11/18/19	Fri 12/13/19	8
10	Interior soil excavation (inlcudes dewatering)	30 days	Mon 12/16/19	Fri 1/24/20	9
11	Backfill	10 days	Mon 1/27/20	Fri 2/7/20	10
12	Tempory sturctural support	165 days	Mon 2/10/20	Fri 9/25/20	
13	Install mini piles (38 ttl)	60 days	Mon 2/10/20	Fri 5/1/20	11
14	Install temporary pile caps (11 ttl)	20 days	Mon 4/13/20	Fri 5/8/20	13FF+5 days
15	Transfer column load, remove and replace pile cap (location 1)	20 days	Mon 5/11/20	Fri 6/5/20	14
16	Transfer column load, remove and replace pile cap (location 2)	20 days	Mon 6/8/20	Fri 7/3/20	15
17	Transfer column load, remove and replace pile cap (location 3)	20 days	Mon 7/6/20	Fri 7/31/20	16
18	Transfer column load, remove and replace pile cap (location 4)	20 days	Mon 8/3/20	Fri 8/28/20	17
19	Remove and rebuild wall sections	20 days	Mon 8/31/20	Fri 9/25/20	18
20	Install new slab	15 days	Mon 9/28/20	Fri 10/16/20	19
21	Install equipment pads and grounding	10 days	Mon 10/19/20	Fri 10/30/20	20
22	Reconstruct exterior walls and backfill	40 days	Mon 11/2/20	Fri 12/25/20	21
23	End Room 1 Structural	0 days	Fri 12/25/20	Fri 12/25/20	22
24	Room 2	350 days	Mon 9/23/19	Fri 1/22/21	
25	Excavate exterior soil	20 days	Mon 9/23/19	Fri 10/18/19	4
26	Re-route exterior Elect. Service	10 days	Mon 10/21/19	Fri 11/1/19	25
27	Demo Exterior Walls for Access	10 days	Mon 11/4/19	Fri 11/15/19	26
28	Demo Floor	20 days	Mon 11/18/19	Fri 12/13/19	27
29	Interior soil excavation (inlcudes dewatering)	30 days	Mon 12/16/19	Fri 1/24/20	28
30	Backfill	10 days	Mon 1/27/20	Fri 2/7/20	29
31	Tempory sturctural support	185 days	Mon 2/10/20	Fri 10/23/20	
32	Install mini piles (38 ttl)	60 days	Mon 2/10/20	Fri 5/1/20	30
33	Install temporary pile caps (11 ttl)	20 days	Mon 4/13/20	Fri 5/8/20	32FF+5 days
34	Transfer column load, remove and replace pile cap (location 1)	20 days	Mon 5/11/20	Fri 6/5/20	33
35	Transfer column load, remove and replace pile cap (location 2)	20 days	Mon 6/8/20	Fri 7/3/20	34
36	Transfer column load, remove and replace pile cap (location 3)	20 days	Mon 7/6/20	Fri 7/31/20	35
37	Transfer column load, remove and replace pile cap (location 4)	20 days	Mon 8/3/20	Fri 8/28/20	36
38	Transfer column load, remove and replace pile cap (location 5)	20 days	Mon 8/31/20	Fri 9/25/20	37
39	Transfer column load, remove and replace pile cap (location 6)	20 days	Mon 8/31/20	Fri 9/25/20	37
40	Remove and rebuild wall sections	20 days	Mon 9/28/20	Fri 10/23/20	38,39
41	Install new slab	15 days	Mon 10/26/20	Fri 11/13/20	40
42	Install equipment pads and grounding	10 days	Mon 11/16/20	Fri 11/27/20	41
43	Reconstruct exterior walls and backfill	40 days	Mon 11/30/20	Fri 1/22/21	42
44	End Room 2 Structural	0 days	Fri 1/22/21	Fri 1/22/21	43
45	Install new underground electric service	10 days	Mon 1/25/21	Fri 2/5/21	43
46	Install new electrical equipment	20 days	Mon 1/25/21	Fri 2/19/21	43
47	Site Resortoration	20 days	Fri 2/12/21	Thu 3/11/21	46FF+14 days
48	Completion of construciton	0 days	Thu 3/11/21	Thu 3/11/21	47



APPENDIX C

CONCEPTUAL SHORING PLAN

URS

40 British American Blvd.
Latham, New York 12110
www.aecom.com

515 951 2200 tel
518 951 2300 fax

Memorandum

To	File 60425929	Page	1
CC			
Subject	Concept for Removal and Replacement of Concrete Pile Caps and Perimeter Wall, Transformer Rooms 1 & 2, Bronx Psychiatric Center, Bronx NY.		
From	Carsten H. Floess, P.E.		
Date	March 13, 2018		

Based on available analytical data, some of the pile caps within the interior and along the perimeter of Transformer Rooms 1 and 2 require removal. Likewise, sections of the buried portion of the perimeter wall also require removal. Assumed removals are illustrated on the attached Figures TR-1 and TR-2.

Concepts to remove impacted pile cap concrete and the buried portion of the perimeter wall are summarized herein. These concepts are based on available structural/foundation drawings and photographs. No detailed site inspections, structural analyses, or geotechnical analyses have been performed.

Existing Conditions

The two transformer rooms are similar; therefore, only Transformer Room No. 2 is considered in detail herein, being representative of both. The following information for Transformer Room No. 2 is summarized from available drawings and photographs:

- There are two interior columns and eight perimeter columns supported on groups of 7 to 11 piles. In addition, there are single piles at 3 locations. These single piles do not support columns and appear to support the floor slab and perimeter wall.
- Top of floor slab in the Transformer Room is Elev. 9.75'. The floor is indicated to have thickness of 9 inches, thickening to 15 inches over the pile caps.
- Top of floor slab in the adjacent crawl spaces to the north, south, and west sides of the Transformer Room is higher, Elev. 13.0'. Exterior grade to the east is indicated to be Elev. 18.75'.
- Top of finish floor in the first floor is Elev. 21.5'. This indicates approximately 10 feet of headroom in the Transformer Room.
- Top of pile cap is Elev. 8.5.
- Pile caps have thickness of 2.0 to 4.5 feet, as summarized below:

Pile Group Size	Cap Thickness, feet	Elev., Bottom of Pile Cap, feet
1 pile	2.0	6.5
7 to 8 piles	4.0	4.5
9 to 11 piles	4.5	4.0

- Piles have capacity of 60 tons. Therefore, foundations supported on groups of 7 to 11 piles can carry loads of 420 to 660 tons.

- Bottom of the perimeter wall is Elev. 8.5'. This corresponds to top of pile cap.

- Photos indicate that the lower portion of the interior perimeter walls is concrete, with an upper section of brick. The concrete portion appears to function as a retaining wall, supporting the higher grades outside of the Transformer Room. The upper brick section of the wall is interpreted to be non-load bearing.

- Columns are steel, encased in concrete.

It is noted that groundwater has previously been measured to be about Elev. 4.75'± (5 feet below the Transformer Room floor slab). Therefore, bottom of pile cap (Elev. 4.0' to 4.5') appears to extend below groundwater level.

Pile Cap Removal Concept

It is assumed that pile cap removal will be accomplished with conventional underpinning methods using needle beams to temporarily support the column, as illustrated conceptually in Figure 1(b). This general methodology was discussed with Hayward Baker, a national geotechnical specialty contractor, who concurred that this was a reasonable approach.

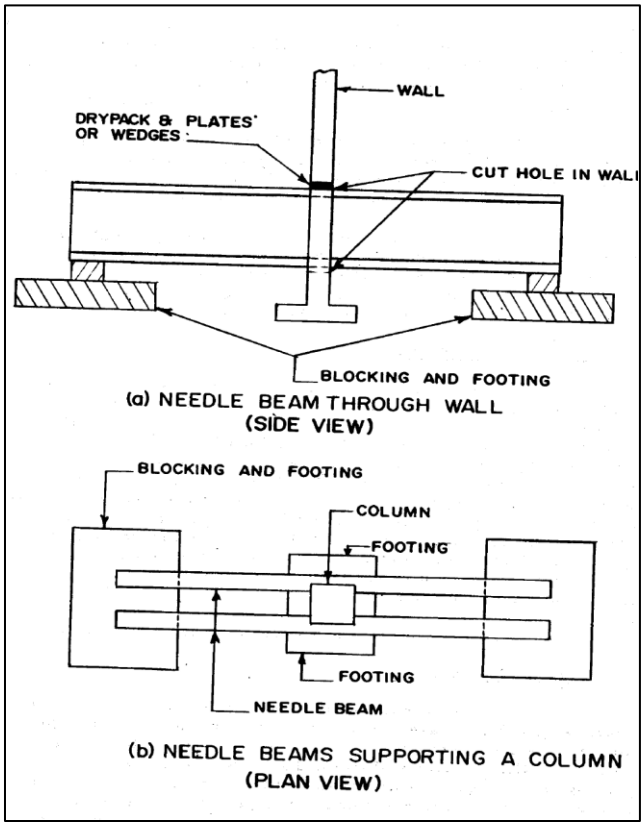


Figure 1. Needle Beam Concept (FHWA, 1976)

Conceptually, needle beams will be used to temporarily transfer the column load to adjacent foundations. The actual needle beam configuration may vary from the typical configuration shown in Figure 1. Because of poor soil conditions, including "urban fill," it is assumed that temporary needle beam foundations will be supported on drilled and grouted minipiles extending into rock. These are routinely constructed in low headroom conditions. It is also assumed that minipiles in rock will have nominal axial capacity on the order of 100 to 150 tons (personal communication, Hayward Baker). A minimum of 3 minipiles is assumed for each temporary foundation, capable of supporting loads as high as 450 tons. Jacks will be set at the support points to transfer loads and also to control movement of the structure during remediation.

It is understood that the building will be completely stripped during remediation work, and actual column loads would be less than design values. Therefore, existing pile foundations may have excess capacity, and it may be feasible to temporarily transfer a column load to neighboring pile caps. Because the actual construction sequence is uncertain, however, it is conservatively assumed that new foundations will be needed to support needle beams.

A conceptual construction sequence may include the following steps:

1. Site preparation: provide access for equipment; install settlement monitoring system, preferably a continuous real-time system with alarms; etc.

2. Remove floor slab. Provide temporary bracing for walls as needed.

3. Install dewatering system to depress groundwater levels as needed.

4. Excavate and replace impacted soil that is accessible. (This way, minipiles will be installed through uncontaminated soil, avoiding potential cross contamination.)

5. Install minipiles and construct pile caps (temporary supports).

6. Install needle beams and blocking.

7. Set jacks and transfer column loads. Maintain jacking system throughout to provide mechanism to control building settlement.

8. Demolish existing pile cap.

9. If necessary, remove impacted soil below pile cap.

10. If necessary, repair damage to pile tops.

11. Backfill as needed, and reconstruct pile cap.

12. Transfer column loads back to the reconstructed pile cap. Repair existing column.

13. Remove needle beams and jacks. Abandon temporary pile caps in place.

14. Repeat procedure at next location.

Note that these steps require several waiting periods to allow curing for minipile grout, temporary pile cap concrete, and the reconstructed pile cap concrete.

Conceptually, it is conservatively assumed that individual pile caps will be replaced sequentially. The actual sequence of work will be determined by the underpinning contractor and may be more efficient.

Wall Removal Concept

It is assumed that the walls are non-load bearing, serving primarily to support higher grades on the opposite side of the wall. This assumption is based primarily on photos of the Transformer Rooms that show concrete walls to a height of several feet, followed by brickwork. The upper brick walls are interpreted to serve as partitions. The perimeter walls would need to be inspected and evaluated during design development to verify this assumption.

Conceptually, needle beams could be used to temporarily support the perimeter walls of the Transformer Rooms, as illustrated in Figure 1(a). In this way, the lower, impacted portions of the wall can be removed and reconstructed. Because the walls are assumed to be non-load bearing, however, it may be simpler to completely remove and reconstruct the entire perimeter wall where impacts occur. Complete removal and reconstruction is assumed.

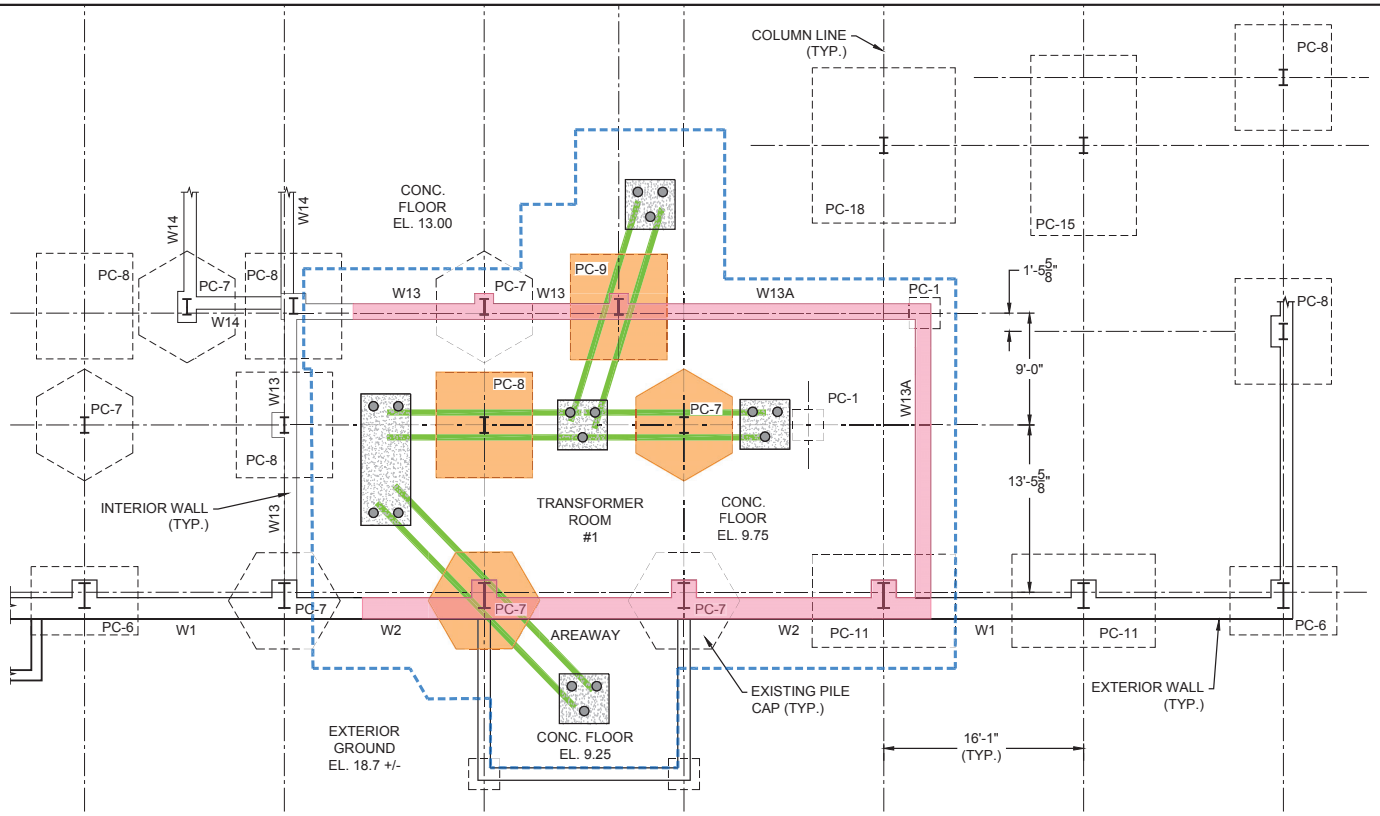
Concept Drawings

Conceptual figures illustrating removal and replacement of existing pile caps are attached (Figures TR1 to TR-4). The intent of these figures is to illustrate project geometry, to show how pile cap removal/replacement could be accomplished, and to provide a basis for developing feasibility study cost estimates.

References

1. FHWA-RD-75-130, *Lateral Support Systems and Underpinning, Vol. III, Construction Methods,* Federal Highway Administration, 1976.

Figures

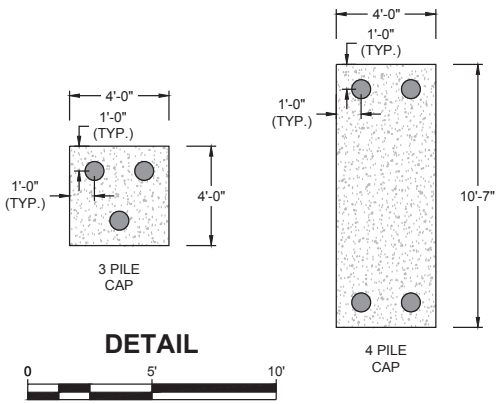


LEGEND

- EXISTING COLUMN
- EXISTING PILE CAP
- PC-7 — EXISTING PILE CAP DESIGNATION (No. OF PILES)
- W13A — EXISTING WALL DESIGNATION
- EXISTING PILE CAP TO BE REMOVED AND REPLACED
- EXISTING WALL SEGMENT TO BE REMOVED AND REPLACED
- PROPOSED NEW PILE CAP
- PROPOSED MINI-PILE
- PROPOSED NEEDLE BEAM
- APPROX. LIMITS OF EXCAVATION FOR PILE CAP REPLACEMENT WORK (SHORE AS REQUIRED)

PLAN

0 10' 20'



DETAIL

0 5' 10'

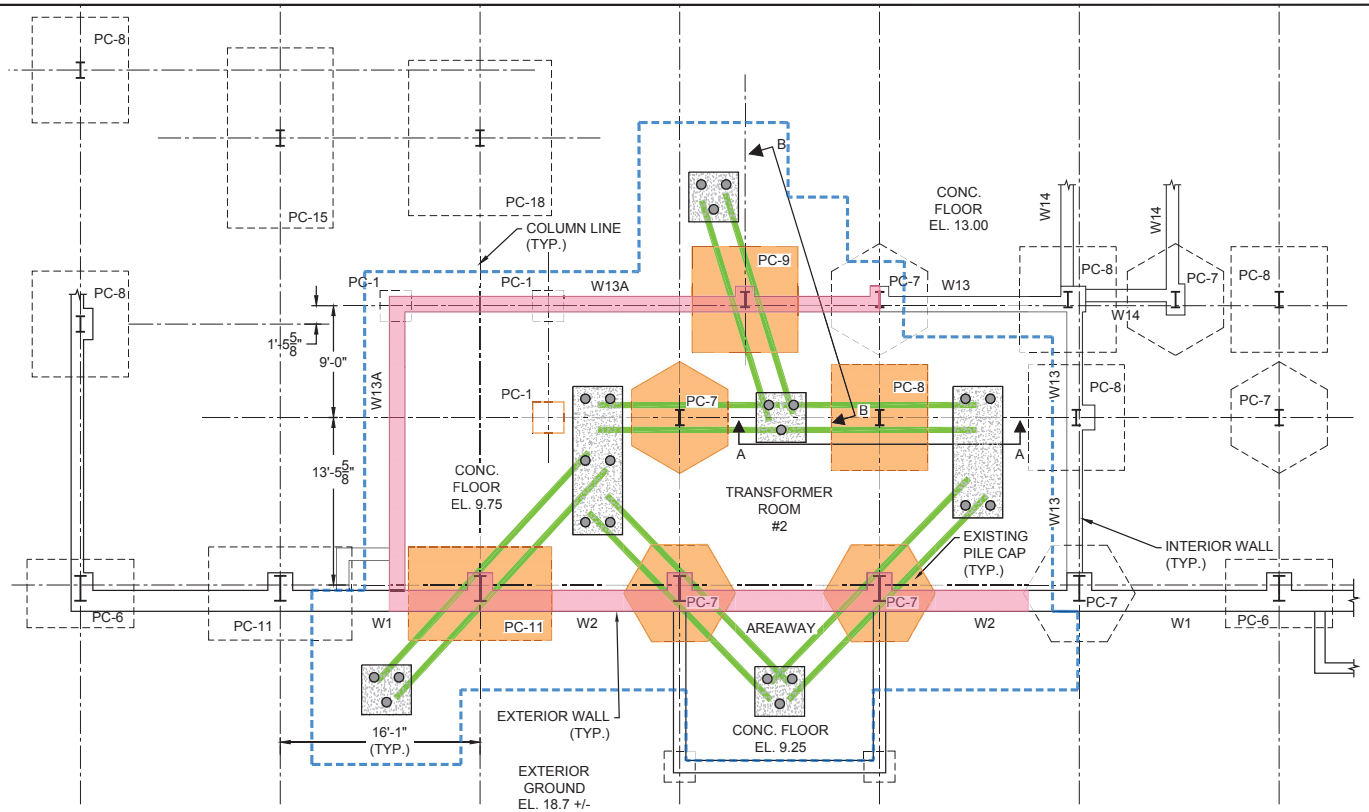
Conceptual Approach Not for Construction

Title:	TRANSFORMER ROOM NO. 1 PLAN AND DETAIL
Location:	BRONX PSYCHIATRIC CENTER 1500 WATERS PLACE NEW YORK, NEW YORK
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

URS
URS Corporation
40 British American Boulevard
Latham, New York 12110-1424

Drafter: KAM	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE TR-1

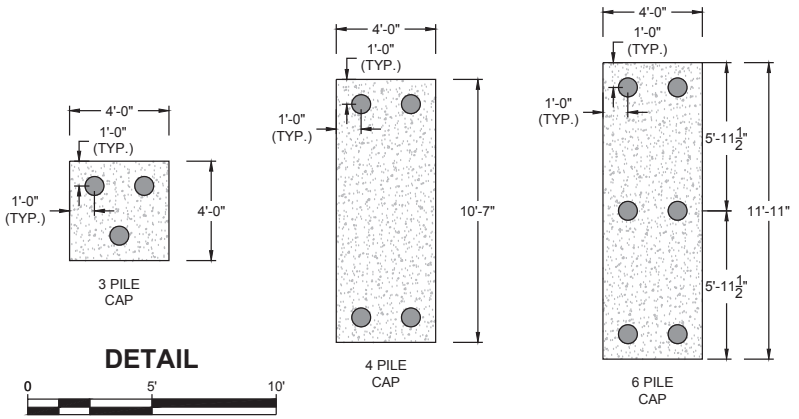


LEGEND

- EXISTING COLUMN
- EXISTING PILE CAP
- PC-7 — EXISTING PILE CAP DESIGNATION (No. OF PILES)
- W13A — EXISTING WALL DESIGNATION
- EXISTING PILE CAP TO BE REMOVED AND REPLACED
- EXISTING WALL SEGMENT TO BE REMOVED AND REPLACED
- PROPOSED NEW PILE CAP
- PROPOSED MINI-PILE
- PROPOSED NEEDLE BEAM
- APPROX. LIMITS OF EXCAVATION FOR PILE CAP REPLACEMENT WORK (SHORE AS REQUIRED)

PLAN

0 10' 20'



DETAIL

0 5' 10'

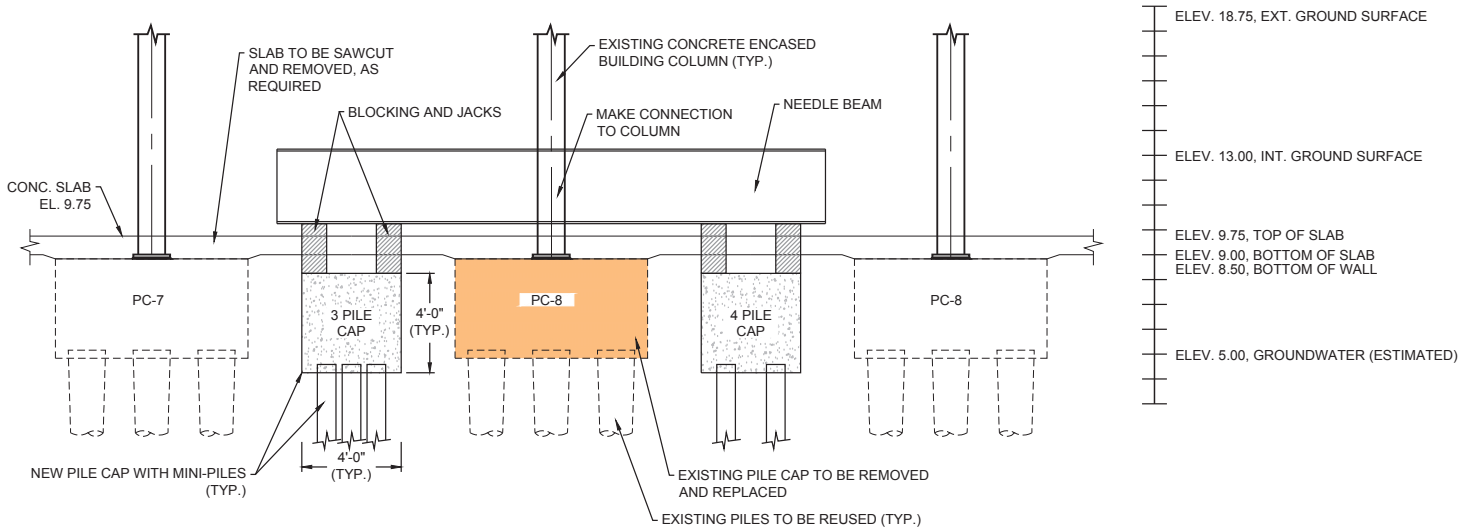
Conceptual Approach Not for Construction

Title:	TRANSFORMER ROOM NO. 2 PLAN AND DETAIL
Location:	BRONX PSYCHIATRIC CENTER 1500 WATERS PLACE NEW YORK, NEW YORK
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

URS Corporation
40 British American Boulevard
Latham, New York 12110-1424

Drafter: KAM	Date: February 2018
Drg. Size: 11 x 17	Job No.: 60425929

FIGURE TR-2



SECTION A - A

0 5' 10'

1. REMOVE SLABS AND EXPOSE TOP OF PILE CAPS.
2. EXCAVATE AND REMOVE WALLS, AS REQUIRED.
3. INSTALL NEW MINI PILES TO BEDROCK.
4. INSTALL NEW CONCRETE PILE CAPS.
5. INSTALL NEEDLE BEAMS AND SUPPORTS ON NEW PILE CAPS.
6. MAKE CONNECTION TO EXISTING COLUMN.
7. TRANSFER LOAD ONTO NEW PILE CAPS.
8. REMOVE EXISTING PILE CAPS, PROTECT PILES.
9. RECONSTRUCT EXISTING PILE CAPS.
10. TRANSFER LOAD BACK TO RECONSTRUCTED PILE CAPS.

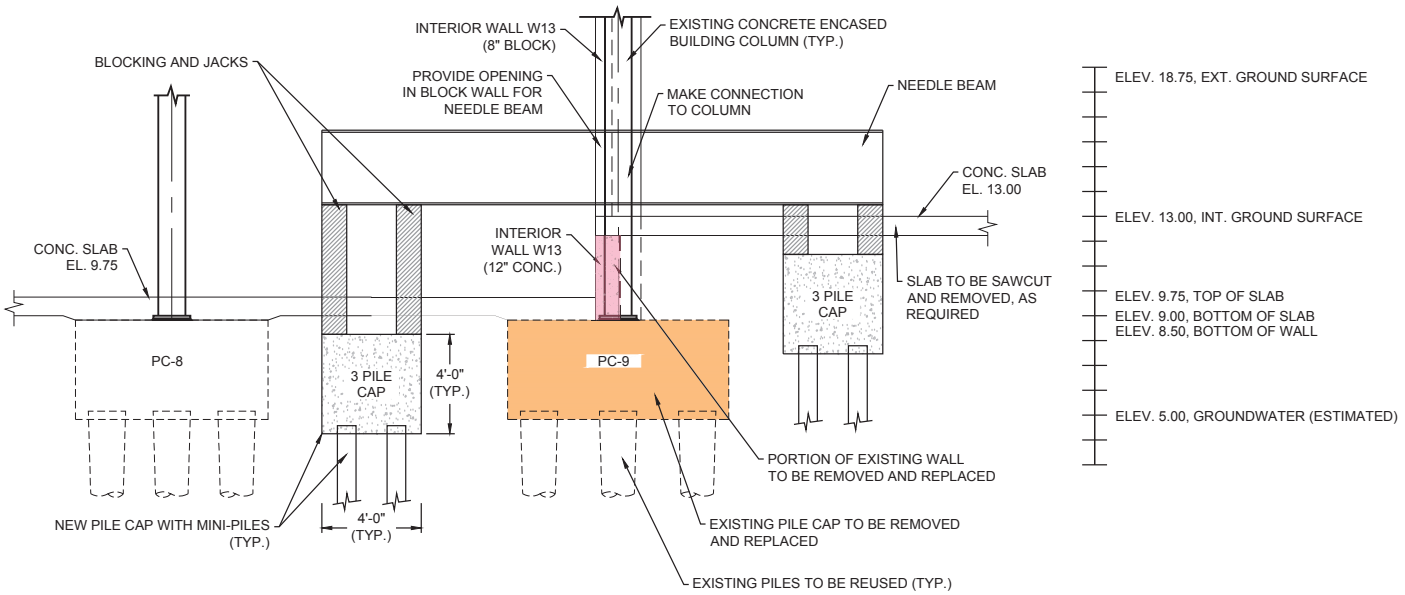
Conceptual Approach Not for Construction

Title:	TRANSFORMER ROOM NO. 2 SECTION A - A
Location:	BRONX PSYCHIATRIC CENTER 1500 WATERS PLACE NEW YORK, NEW YORK
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

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Drg. Size: 11 x 17	Job No.: 60425929

FIGURE TR-3



SECTION B - B

0 5' 10'

1. REMOVE SLABS AND EXPOSE TOP OF PILE CAPS.
2. EXCAVATE AND REMOVE WALLS, AS REQUIRED.
3. INSTALL NEW MINI PILES TO BEDROCK.
4. INSTALL NEW CONCRETE PILE CAPS.
5. INSTALL NEEDLE BEAMS AND SUPPORTS ON NEW PILE CAPS.
6. MAKE CONNECTION TO EXISTING COLUMN.
7. TRANSFER LOAD ONTO NEW PILE CAPS.
8. REMOVE EXISTING PILE CAPS, PROTECT PILES.
9. RECONSTRUCT EXISTING PILE CAPS.
10. TRANSFER LOAD BACK TO RECONSTRUCTED PILE CAPS.

Conceptual Approach Not for Construction

Title:	TRANSFORMER ROOM NO. 2 SECTION B - B
Location:	BRONX PSYCHIATRIC CENTER 1500 WATERS PLACE NEW YORK, NEW YORK
Client:	NEW YORK STATE OFFICE OF MENTAL HEALTH

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Drg. Size: 11 x 17	Job No.: 60425929

FIGURE TR-4