SESI
CONSULTING ENGINEERS

REMEDIAL ACTION WORKPLAN

For:

WP Mall Cleaners & Gas Station Site
250 Hamilton Avenue
White Plains, New York
NYSDEC BCP Site # C360221

Prepared for:

Hamilton Green I Partners LLC
c/o Knauf Shaw
2600 Innovation Square
100 S. Clinton Avenue
Rochester, New York 14604

Prepared by:

SESI CONSULTING ENGINEERS, D.P.C.
46 Route 46E, Floor 3, Suite 300
Parsippany, New Jersey 07054

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CERTIFICATIONS

I, Fuad Dahan, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10)

Fuad Dahan	12-22-2023	
NYS Professional Engineer (# 090531)	Date	Signature

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education.

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LIST OF ACRONYMS

Acronym	Definition
ACM	Asbestos-Containing Material
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BTEX	benzene, toluene, ethylbenzene, xylenes
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
COC	Certificate of Completion
Con Ed	Consolidated Edison, Inc.
DER	Division of Environmental Remediation
DER-10	NYSDEC Technical Guidance for Site Investigation & Remediation
DUSR	Data Usability Summary Report
EE	Environmental Easement
ESA	Environmental Site Assessment
FER	Final Engineering Report
ft-bgs	feet below ground surface
HASP	Health and Safety Plan
IEC	Institutional and Engineering Controls
IRM	Interim Remedial Measures
MNA	Monitored Natural Attenuation
MTBE	methyl-tertiary-butyl-ether
MW	Monitoring Well
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORC	Oxygen Releasing Compound
PCB	Polychlorinated Biphenyls
PFAS	Per and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PHC	Petroleum Hydrocarbon
ppt	parts per trillion
PRR	Periodic Review Report
QAPP	Quality Assurance Project Plan

Acronym	Definition
QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
REC	Recognized Environmental Condition
RI	Remedial Investigation
RIR	Remedial Investigation Report
RI/IRMWP	Remedial Investigation/Interim Remedial Measures Work Plan
RSCO	Residential Soil Cleanup Objectives
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objectives
SGS	SGS North America
SESI	SESI Consulting Engineers, DPC
SMP	Site Management Plan
SOE	Support of Excavation
SSDS	Sub-slab Depressurization System
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operations Guidance Series
USCO	Unrestricted Use Soil Cleanup Objectives
UST	Underground Storage Tank
VI	Vapor Intrusion
VOCs	Volatile Organic Compounds

EXCUTIVE SUMMARY

Site Description/Physical Setting/Site History

Hamilton Green I Partners LLC (the "Volunteer") entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate the WP Mall Cleaners & Gas Station Site in White Plains, New York (herein referred to as the "Site"). The Site is located in an urban area and is approximately 1.808 acres in size. The Volunteer entered into BCA Index No C360221-03-22, with an effective date of April 22, 2022, for the Site, which is identified as Site Number C360221. The BCA was amended on April 11, 2023 when the Volunteer Hamilton Green I Partners LLC became the title owner of the WP Mall Cleaners & Gas Station Site by deed dated November 30, 2022 and recorded with the Westchester County Clerk's office on December 8, 2022. The authorized signatory also changed from Katherine Machol to Todd Rechler in this amendment.

Summary of the Remedial Investigation

Historic research indicates that the Site contained several private residential dwellings with automotive garages, a candy manufacturer, a paint establishment, a plumbing shop, a dry cleaning establishment, and a with greasing operations and (4) four gasoline tanks. Results of the Remedial Investigation (RI) and prior investigations have identified petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and metals in soil at concentrations exceeding the Track 1 Unrestricted Use Soil Cleanup Objectives (USCOs) to depths of 30 feet below the ground surface (ft-bgs) across the Site\. Groundwater is similarly impacted by VOCs, SVOCs, per and polyfluoroalkyl substances (PFAS), and metals at concentrations exceeding the Ambient Water Quality Standards (AWQS). Groundwater samples from monitoring wells installed and sampled after implementation of the IRM work resulted in levels of methyl-tertiary-butyl-ether (MTBE) that exceed the AWQS. Based on the Site history and prior Site investigations, MTBE is emanating onto the Site in groundwater from the upgradient adjoining active Gulf Gas Station NYSDEC Spill site (NYSDEC Spill #9707877). The PHC VOCs including 2,2,4-trimethylpentane were detected in soil vapor samples collected on the southern portion of the Site near the historical gas station, and heptane. Other VOCs including benzene, toluene, ethylbenzene, xylenes (BTEX), ethanol, tertiary butyl alcohol were detected at elevated concentrations in vapor samples collected across the Site. Trichloroethene (TCE) was detected in the Site soil vapor exceeding its New York State

Department of Health (NYSDOH) Matrix A lower threshold value on the western portion of the Site.

Summary of Selected Remedial Actions

Interim Remedial Action Performed

In an effort to expedite remediation of the property several interim remedial measures (IRMs) were performed including asphalt asbestos abatement and demolition of the former mall building, installation of support of excavation (SOE) system around the eastern, northern, and southern property boundaries, excavation of soil impacted above USCOs, and dewatering of the remedial excavation and treating of contaminated groundwater during the soil IRM. These IRMs were performed in accordance with approved IRM Work Plan (IRMWP) that was last revised April 2022, the details of which are documented in Interim Remedial Actions Construction Completion Report (CCR) submitted by SESI in draft form July 2023.

Remedial Actions proposed

The Site will achieve a Track 1 remedy for soil Site-wide once all soil has been remediated to USCOs and a conditional Track 1 remedy for residual contamination in the groundwater is expected to be met until residual groundwater contamination, which will require monitoring post the certificate of completion (COC) to assess the performance of the remedy, reveals that the bulk reduction of groundwater contamination has been achieved to asymptotic levels.

The following is a summary of soil and groundwater remedial actions that were proposed in the approved IRM but were not completed due to the presence of the overlying Consolidated Edison, Inc.(Con Ed) vaults and will now be completed pursuant to the original IRM WP and this RAWP for the Site:

- The excavation of soil exceeding USCOs on the southern portion of the Site under the Con Ed vaults to achieve an unconditional Track 1 remedy for soil site-wide.
- Approximately 431 pounds of oxygen reducing compound (ORC) powder will be applied evenly across the excavated southern portion of the Site.
- Installation of a green remedial sub-slab vapor barrier used as the sealing methodology to mitigate against the potential for soil vapor intrusion into the future Site buildings.
- Recording of an Environmental Easement (EE) for conditional Track 1 remedy. The EE will remain effective until the Engineering Controls (EC) and Institutional Controls (ICs)

are removed if an unconditional Track 1 remedy is accomplished within five (5) years. If the unconditional Track 1 remedy is not achieved in this timeframe as a result of remaining on-Site groundwater contamination conditions, the EE will continue under a conditional Track 1 remedy in relation to any residual groundwater contamination from an on-Site source until post-COC monitoring should demonstrate if any remaining contamination is from an on-Site source or from an off-Site source. If from an on-Site source, the data must demonstrate that the bulk reduction of groundwater contamination has been achieved to asymptotic levels.

- Preparation of a Site Management Plan (SMP).

This Remedial Action Work Plan (RAWP) includes analyses of remedial alternatives and a preferred remedy for remaining contamination after conducting the Remedial Investigation (RI), performed between September and November 2022, and Interim Remedial Measures (IRM). To date, the IRM removed soil above USCOs across the majority of the site. However, the southern portion of the Site requires the removal of some Con Ed utility vaults and additional soil excavation under the vaults, as well as additional groundwater remediation. Upon completion of the remedial actions described above, a Conditional Track 1 will be achieved on the Site.

1.0 INTRODUCTION

This RAWP includes analyses of the remediation planned to address remaining contamination on the southern portion of the Site as determined from data gathered during the RI and after implementation of the IRM remedial work. The soil IRM for the majority of the Site was completed in April 2023 as documented in the July 2023 IRM CCR. The remaining soil and ORC groundwater IRM are anticipated to be completed in August 2023. Since a Track 1 remedy has been selected by the Volunteer as the preferred remedial alternative, an analysis of other alternatives is not required. A Track 1 with conditions for groundwater monitoring is anticipated for the Site as detailed in this RAWP.

1.1 SITE LOCATION AND DESCRIPTION

The Site consists of a 1.808-acre parcel and is identified as tax lot 125.67-5.1..1. The Site contains the former White Plains Mall parking lot and a portion of the former mall that was razed in September and October 2022. The Site is bounded to the north by Barker Avenue, to the east by Cottage Place, to the south by Hamilton Avenue, and to the west by the Hamilton Green BCP Site No. C360177. The nearest surface water body is the Bronx River located approximately 0.6 miles west of the Site. A Site Location Map (topographic map) is provided as **Figure 1.1**. The BCP Site is located in an urban downtown area. The Volunteer and NYSDEC have entered into a BCA for the Site, which is identified as BCA Index # C360221-03-22, with an effective date of April 22, 2022. A BCP Boundary Map is provided in **Figure 1.2**.

Historic Sanborn fire insurance maps, as outlined in AKRF's Phase I ESA dated May 2017, indicate that the Site contained several private residential dwellings with automotive garages along Cottage Place (address ranges 3 to 13 Cottage Place), a candy manufacturer, paint establishment, a plumbing shop, and a gasoline station located on the southern portion of the Site with greasing operations and (4) four gasoline tanks. This Site had a historic address of 250 Hamilton Avenue on the 1950 map. That address is now being used for the Site. There was an adjacent off-Site gas station with three (3) gasoline tanks at 230 Hamilton Avenue located west of the Site on the 1930 through 1950 maps, which is located on adjacent lot 125.67-5.1..2 and is the Hamilton Green BCP Site No. C360177. Numerous private dwellings were shown within the building footprint on historic Sanborn maps from 1894 to 1950. Based on these findings, the Phase I ESA identified the potential for abandoned USTs and/or associated petroleum contamination in the Site subsurface, associated with the gasoline station and/or heating oil for

the residential dwellings as a recognized environmental concern (REC). The on-Site gasoline station no longer appears on the Sanborn map before the mall was constructed in 1972 and this was before MTBE was introduced into gasoline in 1979. The construction of the two-story shopping mall (razed in September and October 2022) and the east-adjacent asphalt-paved parking lot was constructed in 1972 and operated as the White Plains Mall with a variety of tenants, including possible dry cleaners listed in historic City Directories.

1.2 PROPOSED REDEVELOPMENT PLAN

The Site is located in an urban downtown area, and is currently being redeveloped into a residential apartment building including 470 apartments, ground-floor retail and restaurants, green spaces, and 515 underground parking spaces.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The Site is located in an urban area. Surrounding properties are described on **Table 1.1** below.

Table 1.1 - Summary of Surrounding Properties

Direction	Adjacent Property Uses
North	Barker Ave, beyond which lies a six-story commercial office building
South	Hamilton Ave, beyond which lie commercial and residential parcels
East	Cottage Place, beyond which lies Berkeley College
West	An adjoining Hamilton Green BCP Site No, C360177 or S/B/L 125.67-5-1.2 on the Westchester County Tax Map

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The Site was investigated in accordance with the scope of work presented in the NYSDEC-approved RI/IRMWP prepared by SESI in April 2022, which was approved by the NYSDEC in May 2022. The investigation was conducted from September 2022 to November 2022. The RIR was submitted to NYSDEC in March 2023.

For purposes of evaluating the remedial alternatives associated with the proposed Site redevelopment, the analytical results of the soil samples were compared to the NYSDEC 6 New York Code of Rules and Regulations (NYCRR) Part 375 Track 1 USCOs. The constituent concentrations in groundwater were compared to the applicable 6 NYCRR Part 703 AWQS and Technical and Operational Guidance Series (TOGS) 1.1.1.

2.1 SOIL REMEDIAL INVESTIGATION FINDINGS

The RI consisted of collecting 116 soil samples from 23 soil borings. In addition to the RI borings and grab samples, 183 composite samples were collected from 33 soil borings for soil and waste characterization purposes. The RECs identified during previous investigations include historical Site operations such as automotive service with USTs.

Soil samples were analyzed for a combination of full TCL and TAL analytes. This included VOCs (USEPA Method 8260), metals (USEPA Methods 6010/7471), SVOCs (USEPA Method 8270), PCBs and pesticides (USEPA Methods 8081/8082). In addition, samples were analyzed for PFAS (USEPA Method 537)], and 1,4-dioxane (USEPA Method 8270). Duplicate samples were collected in general accordance with frequencies specified in DER-10.

Soil samples were submitted to SGS North America (SGS) for analyses of full suite TCL/TAL + 30, 1,4-dioxane and PFAS with NYSDEC Category B deliverables. A summary of the soil RIR finding is presented below.

- As shown on **Figure 2.1A** and **Figure 2.1B** results of the RI and prior investigations have identified VOCs, SVOCs, pesticides, and metals Site-wide in soil at concentrations exceeding the Track 1 USCOs to depths of 30 feet below ground surface (ft-bgs). VOCs were identified at concentrations exceeding the USCOs to depths of 26 ft-bgs on the southern portion of the Site in the vicinity of the historic gas station. SVOCs have been identified Site-wide exceeding the USCOs to a depth of 12.5 ft-bgs. Pesticides have been

identified exceeding the USCOs to a depth of 30 ft-bgs. Metals have been identified Site wide exceeding the USCOs to a depth of 30 ft-bgs. PCBs and the emerging contaminant perfluorooctanesulfonic acid (PFOS) were detected in one (1) boring on the southern portion of the Site exceeding the guidance USCO at a depth of 2 ft bgs and 6.5 ft-bgs.

2.2 GROUNDWATER INVESTIGATION RESULTS

2.2.1 GROUNDWATER REMEDIAL INVESTIGATION RESULTS

Two (2) rounds of groundwater samples were collected from September 2022 to November 2022 from nine (9) monitoring wells. Groundwater samples were submitted to SGS laboratories for analyses of full suite TCL/TAL + 30, 1,4-dioxane and PFAS with NYSDEC Category B deliverables. A summary of the groundwater RIR finding is presented below:

- As shown on **Figure 2.2**, the VOCs BTEX and isopropylbenzene were detected in monitoring wells MW-7 and TW-2 in the vicinity of the historic gas station at concentrations exceeding the AWQS. SVOC exceedances of 2,4-Dimethylphenol in MW-7 and naphthalene in TW-2 were detected at concentrations exceeding the AWQS. SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, ideno(1,2,3-cd)pyrene, and naphthalene were detected in monitoring well MW-5, and pentachlorophenol was detected in MW-1 at concentrations exceeding the AWQS. Both of these wells are located on the upgradient eastern edge of the Site.

- The metals antimony, arsenic, cadmium, chromium, iron, lead, manganese, selenium, and sodium were detected in at least one (1) well at concentrations exceeding the AWQS. The greatest concentrations of metals were detected in monitoring wells MW-1 and MW-5, which are located on the upgradient eastern edge of the Site. The pesticide alpha-BHC was detected in MW-7 at the southern end of the Site exceeding the AWQS. Finally, perfluorooctanoic acid (PFOA) and/or PFOS were detected Site-wide at concentrations exceeding the NYSDEC groundwater screening level of 10 ppt.

2.2.2 MID-IRM GROUNDWATER VOC RESULTS

Collection of groundwater samples mid-way through the soil IRM occurred in April 2023 and the data was presented in the July 2023 CCR. Three (3) monitoring wells located in the southern portion of the site were sampled for analysis of VOCs. As shown on **Figure 2.2**, the VOC MTBE

was detected in MW-102 (80 ug/L) and MW-103 (220 ug/L) at concentrations exceeding the AWQS of 10 ug/L. While other VOCs were detected above method detection limits, no other VOCs were detected above AWQS.

2.3 SOIL VAPOR REMEDIAL INVESTIGATION RESULTS

SESI collected ten (10) soil vapor samples (RI-SV-1 through RI-SV-10) across the Site. Soil vapor samples were collected at depths ranging from 6 to 14 ft-bgs. In addition, SESI collected three (3) outdoor ambient air samples (RI-AA-1, RI-AA-2, and AA-1) for comparison with the soil vapor samples.

As shown on **Figure 2.3** the highest concentrations of PHC VOCs were detected in soil vapor samples RI-SV5 (2,2,4-Trimethylpentane at 901,000 ug/m^3) and RI-SV-6 (hexane at 85,700 ug/m^3 and heptane at 30,400 ug/m^3). Other PHC VOCs including benzene, toluene, ethanol, ethylbenzene, tertiary butyl alcohol, and xylenes were detected at elevated concentrations in vapor samples collected across the Site.

The VOC cyclohexane was detected at concentrations in soil vapor in samples RI-SV-6 (191,000 ug/m^3) and RI-SV10 (444 ug/m^3). Cyclohexane was also detected at concentrations in ambient air sample RI-AA2 (939 ug/m^3). Acetone was detected at elevated concentrations in soil vapor samples collected across the Site. Finally, TCE was detected in the Site's soil vapor exceeding its NYSDOH Matrix A lower threshold value.

2.4 GEOLOGICAL CONDITIONS

Based on soil borings conducted during subsurface investigations conducted by AKRF, a preliminary geotechnical investigation conducted by GZA, and the SESI RI borings, the Site soils were characterized as fill material consisting of loose to dense brown fine to coarse sand with varying amounts of gravel and silt, and occasional trace vegetation and construction debris (brick, crushed stone) to depths of 8 ft-bgs. The fill material was underlain by clay and silt with varying sand content between 7 and 13 ft-bgs. The clay and silt layer was underlain by a layer of sand that was encountered at a depth of 10.7 to 18.3 ft-bgs. Bedrock is approximately 25 to 30 ft-bgs.

During the RI groundwater sampling in September through November 2022, groundwater was encountered at depths ranging from approximately 8.7 feet beneath the former mall lower level to

22.35 ft-bgs at the former parking lot. The groundwater generally flows from the northeast to the southwest through the site; typically, from an elevation high of 182.5 feet to an elevation low of 179.3 feet.

2.5 CONCEPTUAL SITE MODEL

All Site soil exceeding the Track 1 USCOs will be excavated and removed from the Site during the remaining soil IRM work, and thus no longer factor into the Conceptual Site Model.

The applicable standards criteria and guidance for the Site groundwater are the AWQS. Based on the RIR data the Site groundwater has been impacted with VOCs, SVOCs, and metal compounds above AWQS and PFOA/PFOS above the groundwater screening levels in several wells on the Site. Specifically, the Site groundwater has been impacted with PHC VOCs and SVOCs in the southern portion of the Site. Metals above the AWQS were identified Site-wide. PFAS were detected at concentrations exceeding the NYSDEC groundwater screening level of 10 ppt in several wells across the Site. The sources of these VOCs, metals, PFAS, and SVOCs include the historical automotive repair activities, on-site dry-cleaners and former USTs.

The Mid-IRM groundwater results identified the VOCs MTBE in monitoring wells MW-102 (80 ug/L) and MW-103 (220 ug/L) at concentrations exceeding the AWQS.

The groundwater has been measured at approximately 8.7 feet beneath the former mall lower level to 22.35 ft-bgs at the former parking lot. The groundwater generally flows from the northeast to the southwest through the site; typically, from an elevation high of 182.5 feet to an elevation low of 179.3 feet. The exposure pathway for the impacted groundwater to human receptors is limited to ingestion or direct dermal exposure through excavation work. The groundwater in this area of White Plains is not used for potable purposes. The groundwater remediation and ORC application are anticipated to remediate any on-Site residual impacts.

Finally, VOCs were detected in soil vapor in the southern portion of the Site. The source of these VOCs is likely historical automotive repair activities and former USTs. In addition, TCE was detected on the western portion of the Site. The source of the TCE is likely the historical dry cleaning operation. The VOCs detected in soil vapor could potentially result in soil vapor intrusion into the future on-Site buildings. However, the IRM is anticipated to remove all sources of VOCs in soil and groundwater, therefore, no contaminated soil vapor should remain under this Site. In

addition, this RAWP includes a vapor barrier under the building as a green remedial measure, and thus soil vapor intrusion potential is no longer factored into the Conceptual Site Model.

2.6 IDENTIFICATION OF STANDARDS, CRITERIA AND GUIDANCE

The following standards and criteria typically will apply to Site Characterizations, Remedial Investigations, remedy selection, UST closures, remedial actions and Site management activities:

- DER-10: Technical Guidance for Site Investigation and Remediation
- DER-13: Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York New York State Department of Environmental Conservation
- 6 NYCRR Part 257: Air Quality Standards
- 29 CFR Part 1910.120: Hazardous Waste Operations and Emergency Response
- TOGS 1.1.1: Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (October 1994)
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Final October 2006)
- DER Interim Strategy for Groundwater Remediation at Contaminated Sites in New York State
- 6 NYCRR Part 375 - Regulations Subparts 1, 3 and 6 applicable to the Brownfield Cleanup Program
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.047FS Presumptive Remedies: Policy and Procedures (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.048FS Presumptive Remedies
- Site Characterization and Technology Selection for CERCLA sites with Volatile Organic Compounds in Soils (September 1993)
- 6 NYCRR Part 612: Registration of Petroleum Storage Facilities (February 1992)
- 6 NYCRR Part 613: Handling and Storage of Petroleum (February 1992)
- 6 NYCRR Part 614: Standards for New and Substantially Modified Petroleum Storage Tanks (February 1992)

- 6 NYCRR Part 371: Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Subpart 374-2: Standards for the Management of Used Oil (November 1998)
- 6 NYCRR 375 Table 375-6.8(a) and Table 375-6.8(b)
- 6 NYCRR Parts 700-706: Water Quality Standards (June 1998)
- 40 CFR Part 280: Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks
- STARS #1: Petroleum-Contaminated Soil Guidance Policy
- STARS #2: Biocell and Biopile Designs for Small-Scale Petroleum-Contaminated Soil Projects
- SPOTS #14: Site Assessments at Bulk Storage Facilities (August 1994)
- Spill Response Guidance Manual
- Permanent Closure of Petroleum Storage Tanks (July 1988)
- NYSDOH Environmental Health Manual CSFP-530 - “Individual Water Supplies - Activated Carbon Treatment Systems”
- 40 CFR Part 144: Underground Injection Control Program
- 10 NYCRR Part 67: Lead
- 12 NYCRR Part 56: Industrial Code Rule 56 (Asbestos)
- 6 NYCRR Part 175: Special Licenses and Permits--Definitions and Uniform Procedures
- 6 NYCRR Part 371: Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Part 372: Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- 6 NYCRR Subpart 374-1: Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998)
- 6 NYCRR Subpart 374-3: Standards for Universal Waste (November 1998)
- 6 NYCRR Part 608: Use and Protection of Waters
- TAGM 4013: Emergency Hazardous Waste Drum Removal/ Surficial Cleanup Procedures (March 1996)
- TAGM 4059: Making Changes to Selected Remedies (May 1998)
- TOGS 1.3.8: New Discharges to Publicly Owned Treatment Works

- TOGS 2.1.2: Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites
- OSWER Directive 9200.4-17: Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (November 1997)
- CP-43: Groundwater Monitoring Well Decommissioning Policy (November 2009)
- Sampling, Analysis, and Assessment of Per-and-Polyfluoroalkyl Substances, Under NYSDEC Part 375 Remedial Programs (April 2023).
- The activity is a component of a program selected by a process complying with the public participation requirements of section 1.10, to the extent applicable.

2.7 ENVIRONMENTAL AND PUBLIC HEALTH ASSESSMENTS

2.7.1 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

This exposure assessment discusses potential migration routes by which chemicals in the environment may be able to reach human receptors in accordance with NYSDEC DER-10 sections 3.14(c)17, 3.3(c)4 and Appendix 3B. This discussion is based on current and hypothetical future Site conditions.

An exposure assessment must evaluate five (5) elements that comprise an exposure pathway. A complete exposure pathway includes the following:

1. A description of the contaminant source. If the original source is unknown, then a description of the contaminated environmental medium at the point of exposure;
2. An explanation of the transport mechanism;
3. An identification of all potential exposure points;
4. A description of the exposure route at the contact point; and
5. A receptor population.

There are some exposure pathways related to the contamination if left unaddressed under current conditions:

<u>Soil</u>

VOCs, SVOCs, metals, and pesticides were identified at concentrations in soil exceeding the NYSDEC USCOs. However, all soils exceeding the Track 1 USCOs will be fully removed throughout the entire Site footprint during the remaining IRM work, and upon completion there will no longer be an exposure point or exposure route for soil.

Groundwater

Potential groundwater exposure pathways include dermal contact and inhalation of vapors. The City of White Plains utilizes municipal treated water (not groundwater) for drinking purposes; therefore, ingestion of on-Site groundwater as a potential exposure point may be eliminated from further evaluation with adequate treatment.

Potential exposure through dermal contact and vapor inhalation could arise during future excavation, redevelopment, or utility repairs where workers, visitors, or trespassers may be exposed to on-Site groundwater.

Surface Water and Sediment

Surface water is not present on the Site. Thus, this exposure pathway may be eliminated from further evaluation.

Soil Vapor

When VOCs are detected in soil gas, there is potential exposure to building occupants through vapors accumulating beneath structures and impacting indoor air quality within a structure. The majority of soil has been excavated during the IRM and all remaining soil will be removed as part of the RAWP. Upon completion of the Track 1 soil remedy the source of soil vapor will be removed..

The planned excavation of all contaminated soil, remaining groundwater remediation, and the installation of a green remedial vapor barrier will address this potential exposure pathway.

2.7.2 FISH AND WILDLIFE IMPACT ANALYSIS

The Site does not contain any ecologically sensitive resources and hence the contaminated groundwater is not expected to have any impacts on any ecological resources.

2.8 SIGNIFICANT THREAT

The NYSDEC and NYSDOH have evaluated the RIR and determined that the Site does not pose a significant threat to human health and the environment.

2.9 REMEDIAL ACTION OBJECTIVES

Based on the results of the RI, the following Remedial Action Objectives (RAOs) have been identified for this Site.

2.9.1 GROUNDWATER

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
- Remove the source of ground or surface water contamination.

2.9.2 SOIL

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater contamination.

2.9.3 SOIL VAPOR

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from potential present and future soil vapor intrusion into buildings at the Site.

3.0 DESCRIPTION OF REMEDIAL ACTION WORK PLAN

3.1 EVALUATION OF REMEDIAL ALTERNATIVES

The objective of the remedy is to achieve an unconditional Track 1 cleanup for the entire Site. However, residual groundwater contamination resulting from an off-site source is expected to remain in the groundwater post the end of year 2023 COC and therefore a conditional Track 1 is expected to be achieved Site-wide as shown on **Figure 3.1**, by the end of 2023. The residual groundwater contamination is expected to reach AWQS or achieve asymptotic levels accepted by the NYSDEC and NYSDOH post the 2023 COC and therefore achieve a Track 1 within five

(5) years post the COC or will demonstrate that an off-site source is continuing to impact the Site. The forthcoming FER will document the removal of impacted material and treatment of groundwater with an ORC on the southern portion of the Site. In addition, the Track 1 soil remedy will remove the source of VOCs in soil vapor. The petroleum hydrocarbons in groundwater on the southern portion of the Site are being remediated through the active groundwater dewatering remediation system and the planned ORC application.

Track 1

A remedy pursuant to this track must achieve compliance with the USCOs set forth in 6 NYCRR Table 375-6.8(a) in the remaining soils on the Site after remedial excavation. The Site soils have been remediated to USCOs to depths ranging from 30 to 40 ft-bgs through the majority of the Site during the IRM and reported in the July 2023 CCR. The remaining soil exceeding the USCOs will be removed from the southern portion of the Site; therefore the Site is expected to achieve a conditional Track 1 remedy with conditions for groundwater monitoring.

In a conditional Track 1 remedy, institutional and engineering controls are allowed only for periods of less than five (5) years or until results for all parameters show a bulk reduction in groundwater contamination to compliance with New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards (AWQS) or asymptotic levels to the Department's satisfaction per 6 NYCRR Part 375-3.8(e)(1)(iii)(b) for a Track 1 cleanup.

The groundwater remediation IRM includes the treatment of groundwater entering the excavation by pumping and treating the water through carbon which is being conducted as reported in the CCR. In addition, the IRM includes the design and implementation of in-situ treatment of the PHC impacts using ORC. The design of the treatment, as presented in the SESI IRM ORC Applications Plan (March 2023), will include approximately 431 pounds of ORC powder applied evenly across the excavated southern portion of the Site. This ORC application will be completed upon removal of the remaining soil exceeding the USCOs.

Following remediation, groundwater will be monitored in groundwater monitoring wells. Groundwater monitoring will constitute an institutional control until the contaminants of concern in groundwater are below the standards, reach asymptotic levels that are accepted by the NYSDEC or enough data has been gathered that proves the source is emanating onto the Site from an off-

Site source. Given the complete excavation of contaminated soil to a maximum depth of 40+- ft-bgs, the groundwater dewatering treatment systems, and the ORC remediation, groundwater conditions are expected to meet the AWQS or stabilize at asymptotic levels within five (5) years after the remedial actions. PFAS levels on Site were slightly higher than surrounding BCP sites but post remediation levels are consistent with PFAS levels in urban areas. Therefore, asymptotic levels for PFAS in groundwater are expected to be reached shortly after the COC.

If groundwater levels do not reach AWQS, or if the asymptotic levels are not accepted by the NYSDEC or NYSDOH, then the remedy for the conditional Track 1 portion of the Site will be considered a Track 2 remedy for that portion of the Site, as described below.

Any soil and groundwater source will be remediated to Track 1 USCOs upon completion of remedial activities. In addition, the building design includes three (3) levels of ventilated subgrade parking and mechanical areas under the first level (street level) of the building, which will mitigate against vapor intrusion into the building, in addition to the green remedial measure vapor barrier that was proactively installed beneath the building to eliminate this potential exposure pathway. Therefore, no institutional or engineering controls will be required for soil vapor for the entire Site.

Track 2

Cleanups pursuant to this track may consider the intended future use in determining the appropriate cleanup levels for soil. This track requires the volunteer implement a cleanup that achieves an SCO from tables in 6 NYCRR 375-6.7(b) that is consistent with the intended Site use for the top 15 feet of soil (or bedrock, if bedrock exists less than 15 ft-bgs). The Site remediation pursuant to Track 2 would involve excavation and disposal of the contaminated soils to meet the objective SCOs.

The way to meet Track 2 would be to perform complete excavation down to at least 15 feet since the fill material contains contaminants that exceeded the Track 2 SCOs down to this depth, but this would leave contamination known to exist down to 40 ft-bgs. Institutional and engineering controls that limit Site use and on-Site groundwater use can be used without regard to duration. However, upon completion of the IRM, all soils exceeding the USCOs will be removed.

The groundwater remediation would be as described under Track 1 or groundwater monitoring. If the active remedy is applied and groundwater concentrations do not meet the AWQS or reach levels accepted by the NYSDEC within five (5) years, then the groundwater monitoring will be considered a long-term IC under this track.

Track 3

The Track 3 cleanup is not applicable to this site because the contaminants present on this Site are common and are listed in the SCOs in NYCRR 375-6.8(b) tables.

Track 4

A Track 4 remedy for a restricted residential use does not need to meet specific soil cleanup objectives but requires source removal and typically a Site-wide cover system. The cover in landscaped areas requires soil that meets the restricted use SCOs in the upper two (2) feet by means of either soil removal or installation of the cover system. The system must consist of 24 inches of soil meeting applicable SCOs, with the upper six (6) inches of soil of sufficient quality to maintain a vegetative cover. Short and long-term institutional and engineering controls are allowed to achieve protection of public health and the environment.

Because the soils on the Site exceeding USCOs will be excavated during the IRM to achieve an unconditional Track 1 remedy for soils, discussion of a Track 4 remedy is no longer relevant for this Site.

No-Action Alternative

Prior to the IRM, the no-action alternative would leave existing sources of contamination in soil, groundwater, and soil vapor. The no-action alternative would have been unacceptable for this Site; thus it was not compared to the factors below.

Remedy Selection Evaluation Criteria

In accordance with Section 4.2 of DER-10, we have evaluated the selected Track 1 remedy with respect to the following nine criteria:

(1) Protection of human health and the environment:

Although all tracks would provide adequate protection of human health and the environment, Track 1 is more protective than the other cleanup tracks because it would remove all soil contamination as compared to NY's most stringent SCOs. A Track 2 or 4 remedy could also

be protective of human health and the environment if the proper long-term engineering and institutional controls are put in place and managed in an SMP. However, a Track 1 soil remedy will be achieved upon completion of the IRMs.

(2) Compliance with standards, criteria, and guidelines (SCGs):

All cleanup tracks will achieve applicable cleanup standards, criteria or guidance. However, a Track 1 cleanup achieves a more stringent set of standards than a Track 2 cleanup. A Track 4 cleanup is not driven by standards but rather source removal and SMP engineering controls and institutional controls to manage the remaining contamination in place to enable the safe reuse of the site for restricted residential purposes. The vast majority of the Site has already achieved compliance with the Track 1 USCOs as documented in the July 2023 CCR, and the remainder of the soil on-Site exceeding the Track 1 USCOs will be excavated and documented in the FER.

(3) Short-term effectiveness and impacts:

Generally, Track 1 provides the best short-term effectiveness because it promptly removes the most contaminant mass from the Site. Track 2 also accomplishes this, but to a lesser extent. Track 4 is less effective in this regard. Tracks 1 and 2 are somewhat less favorable in terms of short-term impacts primarily because mass removal of the contaminated soils generates more truck trips and potential dust exposure than a Track 4 limited removal remedy. A Track 4 approach also reduces the risk of construction worker exposure by reducing the volume of contaminated soil being managed and has less potential to cause dust and traffic issues. Excavation may result in a greater potential for migration of impacts from the open excavation (e.g. wind erosion, storm water intrusion, etc.); however, an air monitoring program and erosion and sediment controls, implemented during the soil IRM, can help to minimize dust migration from the Site.

(4) Long-term effectiveness and performance:

Generally, Track 1 provides the best long-term effectiveness because it promptly removes the most contaminant mass from the Site. Track 1 is somewhat less favorable in terms of short-term impacts primarily because mass removal of the contaminated soils generates more truck trips than a Track 2 or 4 limited removal remedy. However, best management practices in relation to soil handling, the community air monitoring program (CAMP), erosion and sediment controls, and dust control measures implemented during the Track 1 IRM, can help to

minimize any migration of dust on and off-Site. The Track 1 soil IRM was successfully implemented to date to achieve long term effectiveness and will be completed when the remaining IRM work is completed.

(5) Reduction of toxicity, mobility, or volume of contaminated material:

Tracks 1 through 4 will reduce toxicity and mobility of contaminants. A Track 1 or 2 remedy would result in more reduction in the volume of contaminated soils than in a Track 4 clean-up. While Track 4 provides a relatively smaller reduction in volume than the other tracks, it relies primarily on the decrease of contaminant mobility. The Track 1 soil IRM was successfully implemented to date to reduce toxicity and mobility of contaminants and will be completed when the remaining IRM work is completed.

(6) Implementability (Constructability):

Track 1 is a constructable remedy given the location and the planned use for the Site. While there are greater short-term impacts from a Track 1 remedy, off-Site disposal of the contaminated soils in trucks would not pose a constructability problem. Moreover, these short-term impacts would be mitigated through implementation of the CAMP and health and safety plan (HASP), which employ truck washing and odor and dust control measures. The Track 1 remedy was an implementable remedy for this Site since it has mostly been accomplished.

(7) Cost Effectiveness:

The preferred Track 1 alternative provides the optimal suitability with regards to the nine (9) evaluation criteria with minimal remedial cost and the maximum long-term benefit. The contaminated soil/fill layer extended to a maximum depth of 40 ft. bgs. Removal of the soil exceeding the USCOs to achieve Track 1 Site-wide was the costliest of the remedial alternatives. However, this mass removal resulted in long-term savings by eliminating the need for indefinite cap monitoring and maintenance. Therefore, a Track 1 remedy for the Site was cost effective over the long term.

The addition of ORC to remediate groundwater on the southern portion of the Site will be a minimal cost. It will enhance the removal of dissolved VOCs on the Site and prevent off-site migration. Some cost savings may be derived if the duration of monitoring of groundwater is reduced. This is especially so in Track 1 or 2 if the mass of contaminants that could be a source of groundwater contamination is removed from the Site.

(8) Community Acceptance:

A community outreach program is incorporated into all remedial alternatives, per NYSDEC Brownfield Program law and regulations. The Site development will include a mix of modern residences and retail stores near the Metro North train station. The community should accept any of the remedies; however, the Track 1 remedy is likely preferable to the community since it reduced the most contamination and prevents future off-Site issues.

(9) Land use:

All cleanup tracks would achieve remediation for the planned residential use of the Site, which is consistent with White Plains proposed plans for the area. Developing the Site will create short-term construction impacts, but the creation of a new downtown transit-oriented housing project will provide significant community benefits.

Zoning: All of the proposed remedies under each track will facilitate the Site to be utilized for a proposed mixed commercial-residential development, which is consistent with applicable zoning laws, the local Master Plan, and the anticipated future use of the Site.

Applicable comprehensive community master plans or land use plans: Implementation of all Tracks (with institutional controls) cleanup will facilitate the proposed commercial-residential development, which is consistent with current local land use plan.

Surrounding property uses: Any cleanup approach is not expected to significantly impact land use of the surrounding properties as the truck traffic and access will be on public roads. There were short term impacts from the remediation and will be impacts from the ongoing construction project, but these will result in long-term benefits of converting contaminated property into new affordable housing and commercial uses.

Citizen Participation: Citizen Participation during implementation of a remedial program will proceed in accordance with the Citizen Participation Plan included as Appendix D of the RI/IRMWP and as noted above will have minimal community impact. Any short-term impacts were addressed by the CAMP and HASP.

Environmental justice concerns: There are no known environmental justice concerns associated with this project.

Land use designations: A Track 1 remedy, which will be achieved upon completion of the soil IRM, will not restrict any current or future land use designations. A restricted

residential Track 2 remedy will have very minimal restrictions on the future land use of the property.

Population growth patterns: Any of the proposed remedies will not impact reasonably anticipated population growth patterns in the area other than to better accommodate growth by providing for new downtown, transit-oriented housing.

Accessibility to existing infrastructure: Access to existing infrastructure is present in the surrounding area, and there is access to mass transit via the Metro North White Plains train station 0.2 miles away. Some on-site utility infrastructure will have to be demolished and removed as part of the remediation. However, new infrastructure will be installed subsequent to the remediation as part of the redevelopment.

Proximity to natural resources: The closest surface water body is the Bronx River, which is located 0.6 miles to the west of the subject property and leads to the Long Island Sound. Stormwater drainage patterns are generally consistent with the surrounding topography and primarily flow to the west.

Geography and geology of the Site: See Section 2.4 above.

Current Institutional Controls: There are no current institutional controls associated with the Site. Chapter 873, Article VII of the Laws of Westchester County prohibits potable use of groundwater, which prevents ingestion of groundwater at or around the Site.

3.2 SELECTION OF THE PREFERRED METHOD

The remedial alternatives analysis determined that a Track 1 remedy will be the goal for the Site.

3.3 SUMMARY OF SELECTED REMEDIAL ACTIONS

Interim Remedial Actions Performed

The following is a summary of soil and groundwater remedial actions for the Site that have been conducted under the approved IRMWP, dated April 2022. These actions have achieved a conditional Track 1 remedy Site-wide with residual contamination expected to require monitoring post-COC. The first round of groundwater sampling was performed in December 2023. The IRMs completed to date were reported in the Interim Remedial Actions CCR submitted by SESI in July 2023.

- **Asbestos Abatement and Demolition:** Removal and off-site disposal of existing structures (portion of the former mall building, light poles, surface concrete curbing and sidewalks, and asphalt), installation of a perimeter fence, and construction of a tracking

pad and equipment staging areas. Prior to building demolition asbestos abatement was conducted by Nova Development Group, Inc. Enviro-Pro, a New York State Department of Labor certified asbestos inspector, was retained to perform asbestos project sampling and air monitoring. All friable and non-friable ACM was removed and disposed. Upon removal of the ACM, Enviro-Pro conducted post-abatement air testing and monitoring. Results of the testing confirmed that all interior building materials did not contain greater than 1% ACM and that all air samples were below the New York State clearance level of 0.01f/cc.

- **Support of Excavation:** Installation of a SOE system around the eastern, northern and southern perimeters of the proposed development. The SOE extends to the bedrock, and is grouted one foot into the bedrock at the southeastern portion of the Site along Cottage Place and Hamilton Avenue as a cut-off wall downgradient of the Gulf gas station. The SOE served as the support for the excavation of the on-Site contaminated soil. All permits were obtained prior to the start of work. Note SOE was not installed on the western side of the Site since that side adjoins the adjacent Hamilton Green BCP Site which is being remediated to remove all contaminated Track 1 soil along that entire western boundary.
- **Site Soils**: Nearly all soil exceeding USCOs was excavated and disposed of off-Site at appropriate facilities in accordance with Federal, State and local rules and regulations for handling, transport, and disposal as part of the IRM work. Several unremedied cells in the southern portion of the Site remained. In addition, seven (7) tanks and one (1) drum that were discovered during the soil excavation were removed. End-point confirmation samples and/or documented bedrock at the bottom of the excavation has demonstrated that a Track 1 remedy for soils was achieved through the removal of contaminated fill and soil across the majority of the Site. Remedial end-point confirmatory samples were collected at the base of each grid location where final excavation has occurred to confirm remaining soil concentrations do not exceed USCOs. Remedial end-point sampling results are discussed in the CCR. Removal of soil at the southern portion of the Site along Hamilton Avenue has not been completed due to the presence of Con Ed electrical vaults. Soil in this area will be excavated in October 2023 pursuant to the IRMWP and this RAWP.
- **Groundwater:**
  - Groundwater Remediation through Dewatering:

Groundwater encountered during the excavation activities was dewatered in accordance with the dewatering plan provided in the RI-IRMWP. Encountered groundwater was treated as contaminated water and conveyed to the treatment system prior to discharge. The treatment system included settling tanks for sediment removal, bag filtration for further sediment removal, activated carbon adsorption for dissolved organics removal, and post-treatment discharge into the White Plains sanitary sewer system. A storage tank held the treated water to regulate the discharge flow rate in order not to exceed the allowable volume for daily discharge into the sewer system. Approximately 748,000 gallons of contaminated water was treated and discharged as of June 9, 2023. Effluent samples were collected monthly from the treatment system, the results of which were reported in the July 2023 CCR. Groundwater treatment will continue until the balance of contaminated soil in the southern portion of the Site under the Con Edison vaults has been removed and the in-situ application of ORC has been placed in the excavation. The Volunteer applied for and obtained permits from the Westchester County Department of Environmental Facilities in order to allow for this post-treatment discharge of groundwater into the sewer system. These permits were previously submitted to the NYSDEC under separate cover, in the July 2023 CCR.

Remedial Actions proposed

The following is a summary of the remaining soil and groundwater remedial actions that were proposed in the approved IRM but were not completed due to the presence of the overlying Con Ed vaults.

- The excavation of soils exceeding USCOs on the southern portion of the Site under the Con Ed vaults to achieve an unconditional Track 1 remedy for soils Site-wide.
- Approximately 431 pounds of ORC powder will be applied evenly across the excavated South Site.
- Installation of a green remedial sub-slab vapor barrier used as the sealing methodology to mitigate against the potential for soil vapor intrusion into the future Site buildings.
- If an unconditional Track 1 cleanup cannot be achieved for groundwater, the following additional actions may be required: Recording of an EE for the Site. The EE will remain effective until the ICs are removed if an unconditional Track 1 remedy is accomplished

within five (5) years. If the unconditional Track 1 remedy is not achieved in this timeframe the EE will continue under a Track 2 remedy for any residual groundwater contamination;

- Preparation of an SMP, for short-term management of residual groundwater contamination as required by the EE, including plans for: (1) ICs, (2) groundwater monitoring, and (3) reporting.

Remedial activities will be performed at the Site in accordance with the NYSDEC approved RI/IRMWP and this RAWP. All deviations from the RAWP will be promptly reported to NYSDEC for approval and fully explained in the FER.

4.0 REMEDIAL ACTION

Removal of contaminated soil for the majority of the Site exceeding the USCOs to depth ranging from 30 to 40 ft-bgs has been implemented under the approved IRM. The removal of soil at the southern portion of the Site along Hamilton Avenue has not been completed due to the presence of Con Ed electrical vaults as shown on **Figure 4.1**. Removal of the remaining contaminated soil will be implemented in accordance with the approved IRMWP and this RAWP.

Temporary ICs may be implemented to address contamination in Site groundwater. The groundwater remediation as proposed in the IRM ORC Application plan (March 2023) will address the residual PHC VOC groundwater impacts. The soil vapor pathway will be addressed with the soil vapor sealing layer.

4.1 CLEANUP OBJECTIVES

- The SCOs for this Site are the Track 1 USCOs.
- The groundwater cleanup objectives will be the NYSDEC TOGS AWQS.
- The soil vapor objectives will be the NYSDOH Guideline Values and Decision Matrices for the specific contaminants of concern.

4.2 REMEDIAL PERFORMANCE EVALUATION

4.2.1 END-POINT FREQUENCY SAMPLING

The Site soils excavated under the IRM have achieved a Track 1 remedy for soils exceeding the USCOs for the majority of the Site as documented in the July 2023 CCR. The remaining contaminated soil end point sampling, including bottom sampling, will be performed in accordance with DER-10 sample frequency requirements as shown on **Figure 4.1**. If bedrock is encountered before the design excavation depth of 30 ft-bgs, then the bedrock elevation and location will be surveyed and no soil samples will be collected. Sidewall samples will not be collected as soils have been removed on the northern and western excavation area boundaries during the IRM, and due to the SOE bounding the southern and eastern portions of the Site. Bottom samples will be collected at a rate of one (1) for every 900 square feet. The results will be shared with the NYSDEC in the weekly report. The FER will provide a tabular and map summary of all end-point sample results and exceedances of SCOs.

4.2.2 GROUNDWATER SAMPLING

4.2.2.1 GROUNDWATER MONITORING SYSTEM

A network of nine (9) groundwater monitoring wells will be installed in the lowest basement level of the buildings on the Site in locations approximate to the RI monitoring well network as shown on **Figure 4.2** The wells will be utilized to monitor the groundwater quality and to demonstrate the bulk reduction in groundwater contamination to asymptotic levels for on-Site sources of contamination or to prove that off-Site contamination is emanating onto the Site, in which case unconditional Track 1 will be achieved. The dissolved groundwater impacts detected during the RI are being remediated during the IRM in the southern portion of the Site, and only short-term monitoring may be needed. However, if needed, a long-term monitoring program with associated institutional controls will be a cost-effective remedial alternative to address these impacts. Short-term groundwater monitoring protocols and frequency will be described in the SMP and this SMP can be amended in five years if long-term monitoring is needed.

4.2.2.2 CRITERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF GROUNDWATER MONITORING

Groundwater monitoring activities will continue on the Site, as determined by the NYSDEC, until remaining groundwater contaminant of concern concentrations are found to be consistently below NYSDEC standards or have become asymptotic at levels accepted by the NYSDEC for on-Site sources of contamination or to demonstrate the source continues to be emanating onto the Site from off-Site sources. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC for on-Site sources, additional treatment and/or control measures will be evaluated. These monitoring activities will be outlined in the Monitoring Plan of the SMP.

4.2.3. VAPOR INTRUSION MITIGATION AND EVALUATION

Any soil source of VOCs in soils will be remediated to Track 1 SCOs upon completion of remediation. In addition, the building design includes three (3) levels of ventilated subgrade parking and mechanical areas under the first (street level) of the building. Finally, a green remedial vapor barrier will be installed under the building foundation which eliminates this potential exposure pathway. Therefore, no institutional or engineering controls will be required for soil vapor.

4.3 METHODOLOGY

Soil end-point and groundwater samples will be collected in accordance with the Quality Assurance Project Plan (QAPP) and associated decontamination and quality control procedures. Groundwater sampling will be conducted using low-flow purging and sampling methods.

4.4 REPORTING OF RESULTS

The samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory. The results will be reported in accordance with NYSDEC requirements for Category B data deliverables (as outlined in DER-10).

4.5 QA/QC

Collection of quality assurance/quality control (QA/QC) samples to evaluate potential cross-contamination from sampling equipment and during shipment of samples and repeatability of laboratory analytical practices will be in accordance with the QAPP (Appendix A of the RI/IRMWP). Field blanks, trip blanks and duplicate samples associated with daily sampling activities will be collected as a part of the QA/QC practices.

4.6 DATA USABILITY SUMMARY REPORT (DUSR)

To ensure that the field sampling and laboratory analytical practices are acceptable, the data associated with all the samples will be validated by a third party (in accordance with requirements of DER-10). The validation approach and results will be presented in a DUSR to be included in the FER.

4.7 REPORTING OF END-POINT DATA IN FER

The FER will include a table of final soil and groundwater sample data with highlights or a summary of exceedances of the Track 1 USCOs and AWQS.

The FER will include a table of end point data with highlights or a summary of exceedances of SCOs. A spider map showing all SCO exceedances will also be presented in the FER.

Chemical labs used for all end-point sample results and contingency sampling will be NYSDOH ELAP certified.

5.0 ENGINEERING CONTROLS

No engineering controls are required for this Track 1 remedy. Groundwater will be monitored to determine when the AWQS are achieved or asymptotic levels are achieved or if there are off-Site sources that are continuing to impact the Site. To the extent that the off-site wells being installed confirm that MTBE, PFAS or any other contaminant is emanating onto the Site, the Volunteer should have no further obligation to continue to remediate these off-Site sources of contamination in order to achieve the unconditional Track 1 remedy.

6.0 INSTITUTIONAL CONTROLS

An environmental easement will be imposed on the Site. In addition, Chapter 873, Article VII of the Laws of Westchester County prohibits potable use of groundwater.

7.0 SITE MANAGEMENT PLAN

Site management is the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion for the RA. If an SMP is needed because of remaining groundwater contamination on the Site, it will be submitted for approval prior to the approval of the FER. Site Management will not be discontinued unless prior written approval is granted by the NYSDEC and NYSDOH. The property owner is responsible to ensure that all Site Management responsibilities defined in the EE and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage the Site in the event that an unconditional Track 1 unrestricted use remedy for groundwater is not achieved. This includes: (1) development, implementation, and management of all ICs; (2) development and implementation of a Monitoring Plan; (3) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (4) defining criteria for termination of monitoring. The SMP for this Site will not require the development of a plan to operate and maintain treatment, collection, containment, or recovery systems because the only proposed ongoing remedy will be monitoring the wells.

To address these needs, this SMP will include three (3) plans as applicable: (1) an IC Plan for implementation and management of ICs; (2) a Monitoring Plan for implementation of Site Monitoring; and (3) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC Draft DER-10 and the guidelines provided by NYSDEC.

Site management activities, reporting, and IC certification will be scheduled on a certification period basis. A Periodic Review Report (PRR) will be submitted to the NYSDEC beginning 16 months after the Certificate of Completion is issued. After the initial PRR, the next PRR will be submitted annually to the NYSDEC. The SMP and the FER will include a monitoring plan for groundwater at the upgradient and the downgradient Site perimeter to evaluate Site-wide performance of the remedy. Groundwater monitoring wells will be installed immediately downgradient of all remediation areas to monitor groundwater quality.

8.0 FINAL ENGINEERING REPORT

A FER and SMP will be submitted to NYSDEC following completion of the RA defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The FER will include as-built drawings for all constructed elements, certifications, manifests, bills of lading as well as the complete SMP. The FER will provide a description of the changes in the RA from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. Applicable analytical data collected under this RAWP will be accompanied by DUSRs in the FER. The FER will document that all applicable analytical data was submitted to and accepted by the Department in the Department's approved Electronic Data Deliverable format. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the SMP and EE. This determination will be made by NYSDEC in the context of the FER review.

The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the RA.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 USCO in 6NYCRR Part 375-6. A table that shows exceedances of Track 1 USCOs for all soil/fill remaining at the Site after the RA will be included in the FER. A map that shows the location and summarizes exceedances of Track 1 USCOs for all soil/fill remaining at the Site after the RA will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the RA. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).

8.1.1 CERTIFICATIONS

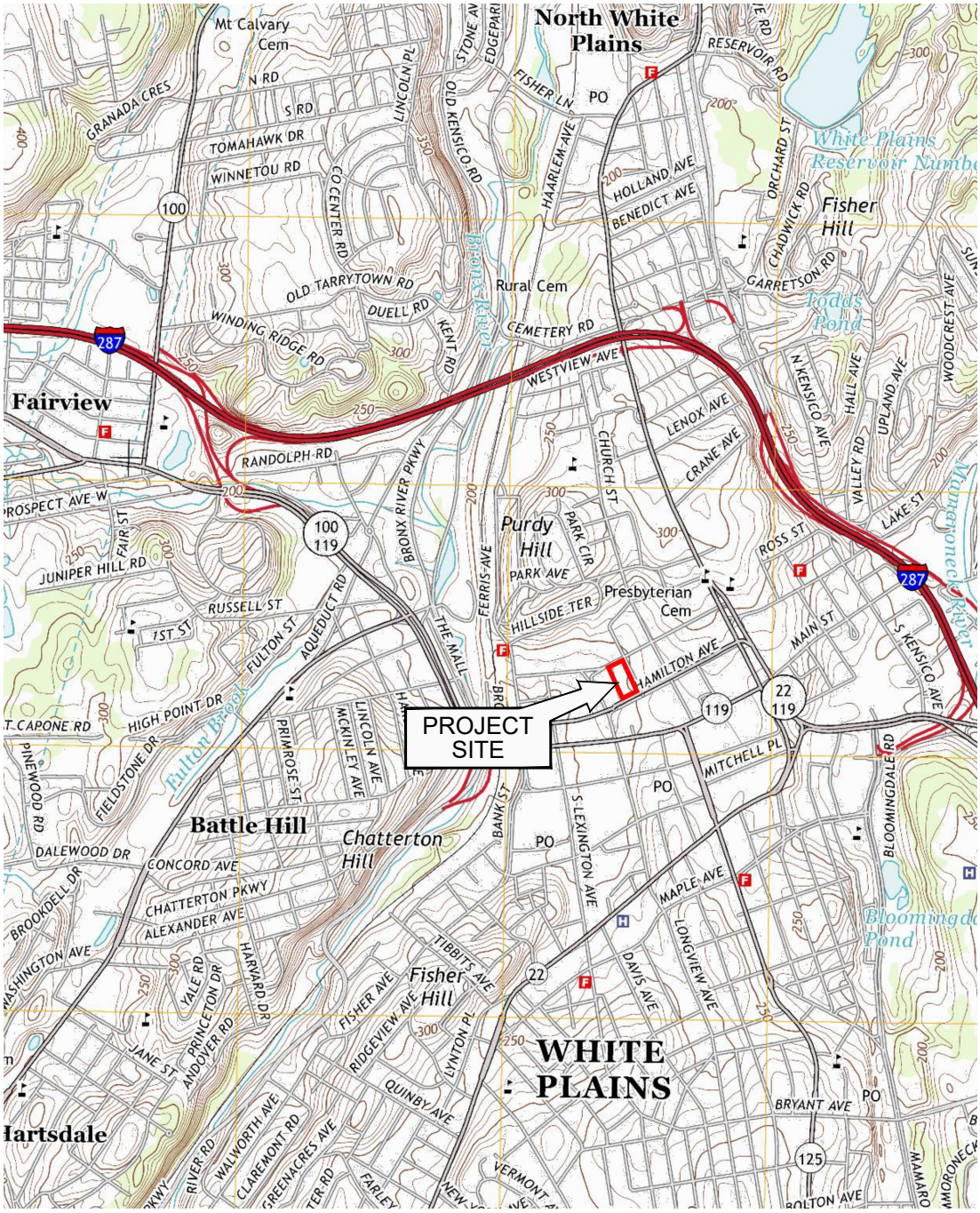
The following certification will appear in front of the Executive Summary of the FER. The certification will be signed by the Remedial Engineer, Fuad Dahan, who is a Professional Engineer registered in New York State. This certification will be appropriately signed and stamped. The certification will include the following statements:

I _____certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Work Plan.

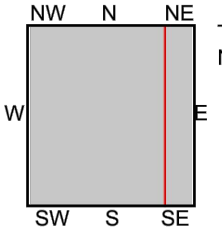
I certify that all use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a SMP has been submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site including the proper maintenance of any remaining monitoring wells, and that such plan has been approved by DER.

Figures



This report includes information from the following map sheet(s).



TP, White Plains, 2013, 7.5-minute
NE, Glenville, 2012, 7.5-minute

250 HAMILTON AVENUE
WHITE PLAINS, NY

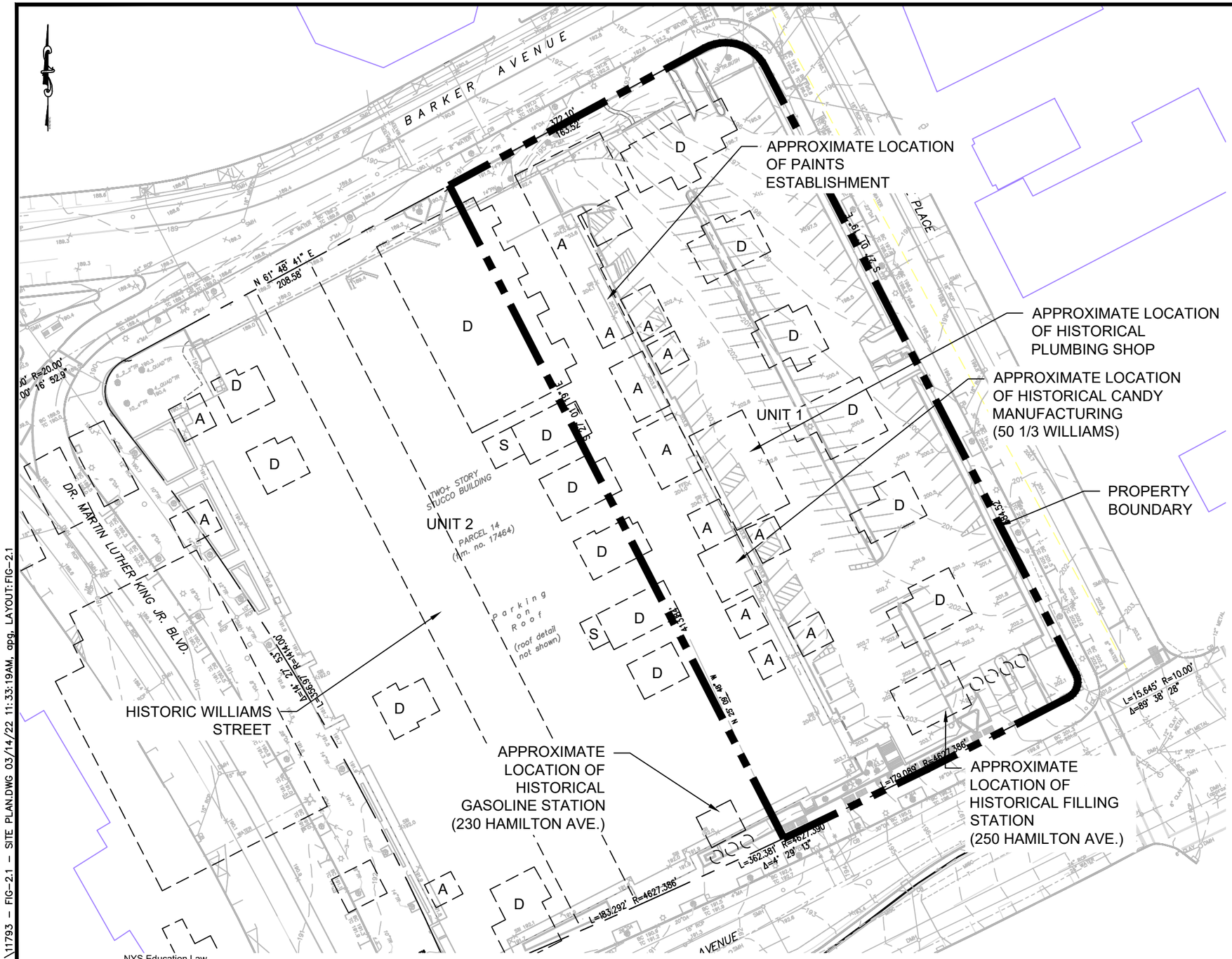
SITE LOCATION PLAN

SESI
CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

FIG-1.1

DRAWN BY: SG
CHECKED BY: SG
SCALE: N.T.S.
DATE: 1/3/2023
JOB NO.: 12636

N:\ACAD\11793\PHASE II\PARCEL 1\11793 FIG-1.1 SITE LOCATION MAP.DWG 08/02/21 03:33:13PM, jenny, LAYOUT:FIG-1.1



N:\ACAD\11793\RIWP\11793 – FIG–2.1 – SITE PLAN.DWG 03/14/22 11:33:19AM, gpg, LAYOUT:FIG–2.1

SCALE: 1"=60'
0 60 120

LEGEND:

A - HISTORICAL AUTO STORAGE/GARAGE

D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS

S - STORES

SESI CONSULTING ENGINEERS
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

dwg by: aas
chk by: FL
scale: AS NOTED
date: 03/11/2022

project: WP MALL CLEANERS & GAS STATION SITE (BCP C360221) 250 HAMILTON AVENUE WHITE PLAINS, NY

drawing title: BCP BOUNDARY MAP

job no: 12636
drawing no:

FIG-1.2

Client Sample ID:	R1-SB3(4.0-4.5)		R1-SB3(7.5-8)		R1-SB3(12-12.5)		R1-SB3(16.5-17)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022		9/9/2022	
Acetone	0.0509		0.0402		0.166		0.0047	J
4,4'-DDD	0.00074		ND (0.00068)		0.0051		ND (0.00069)	
4,4'-DDT	0.0037	B	0.0067	B	0.0129	B	0.0235	B
Chromium	23		26		20.9		33.5	
Copper	23		32.3		70.8		23.1	
Lead	52.8		57.4		310		21.6	
Zinc	58.7		78.9		168		52	

Client Sample ID:	B-2 S-1 (0-7.5)	
Date Sampled:	4/10/2021	
4,4'-DDD	0.0051	J
4,4'-DDT	0.0035	J
Client Sample ID:	B-2 S-2 (7.5-15)	
Acetone	0.053	
Client Sample ID:	B-2 S-3 (15-19)	
Copper	79.2	
Nickel	124	
Acetone	0.1	

Client Sample ID:	R1-SB1(3-3.5)		R1-SB1(6.5-7)		R1-SB1(15.5-16)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022	
Benzo(a)anthracene	0.0616		1.03		ND (0.040)	
Benzo(a)pyrene	0.0918		1.63		ND (0.040)	
Benzo(b)fluoranthene	0.115		2.67		ND (0.040)	
Benzo(k)fluoranthene	0.0416		0.972		ND (0.040)	
Chrysene	0.0756		1.68		ND (0.040)	
Dibenzo(a,h)anthracene	0.049		0.398		0.038	J
Indeno(1,2,3-cd)pyrene	0.11		1.57		0.0412	
4,4'-DDE	ND (0.00069)		0.0038		ND (0.00076)	
4,4'-DDT	0.0035	B	0.008	B	0.002	B
Chromium	20.1		27.8		50.7	
Lead	26.9		99.9		6.1	
Nickel	12.8		17.8		32.5	
Zinc	82.2		132		81.8	

Client Sample ID:	WC-C1(0-6)		WC-C1(6-12)	
Date Sampled:	9/28/2022		9/28/2022	
Matrix:	Soil		Soil	
Benzo(a)anthracene	1.06		0.173	
Benzo(b)fluoranthene	1.27		0.18	
Indeno(1,2,3-cd)pyrene	0.821		0.103	
4,4'-DDD	0.0066		ND (0.00074)	
4,4'-DDE	0.0055		ND (0.00074)	
4,4'-DDT	0.0096	B	0.0021	B
Barium	155		140	
Chromium	25.6		31.5	
Lead	102		7.3	
Zinc	116		92	

Client Sample ID:	WC-B2(0-6)		WC-B2(6-12)		WC-B2(11-11.5)		WC-B2(12-18)		WC-B2(18-24)	
Date Sampled:	9/28/2022		9/28/2022		9/28/2022		9/28/2022		9/28/2022	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Acetone	-		-		0.0674		-		-	
4,4'-DDT	0.0009	B	0.0041	B	-		0.0015	B	0.0041	B
Chromium	32.5		27.6		-		37.3		45.7	
Lead	31.9		161		-		7.7		<11	
Zinc	53		135		-		57.2		94.1	

Client Sample ID:	R1-SB2(4.5-5)		R1-SB2(6.5-7)		R1-SB2(11.5-12)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022	
4,4'-DDT	0.002	B	0.0014	B	0.0079	B
Mercury	<0.035		0.21		<0.034	
Silver	4.3		<0.59		<1.0	

Client Sample ID:	SB-1 (2-4)
Date Sampled:	8/8/2017
Zinc	568

Client Sample ID:	B-3 S-2 (13.5-14.0)
Date Sampled:	4/11/2021
Chromium	37.9

Client Sample ID:	WC-B1(0-6)		WC-B1(6.5-7)		WC-B1(18-24)	
Lab Sample ID:	JD52694-19		JD52694-22		JD52694-25	
Date Sampled:	9/28/2022		9/28/2022		9/28/2022	
Matrix:	Soil		Soil		Soil	
Acetone	-		0.0764		-	
Chromium	42.2		-		43.8	
Nickel	32.9		-		14.5	
Chromium, Hexavalent	1.1		-		<0.45	

Client Sample ID:	R1-SB4(3-3.5)		R1-SB4(11-11.5)		R1-SB4(14.5-15)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022	
4,4'-DDE	0.0044		ND (0.00067)		ND (0.00069)	
4,4'-DDT	0.0045	B	0.0102	B	0.0014	B
Chromium	27.9		17.8		35.2	

Client Sample ID:	WC-C2(0-6)		WC-C2(4.5-5)		WC-C2(6-12)		WC-C2(12-18)	
Date Sampled:	9/28/2022		9/28/2022		9/28/2022		9/28/2022	
Matrix:	Soil		Soil		Soil		Soil	
Acetone	-		0.184		-		-	
4,4'-DDD	0.0169		-		0.0144		0.0014	
4,4'-DDE	0.007		-		0.0029		ND (0.00068)	
4,4'-DDT	0.0033	B	-		0.004	B	0.00094	B
Lead	395		-		92.5		6.7	
Mercury	0.32		-		0.084		<0.025	
Nickel	16.2		-		17.6		32.7	
Zinc	233		-		141		71.8	

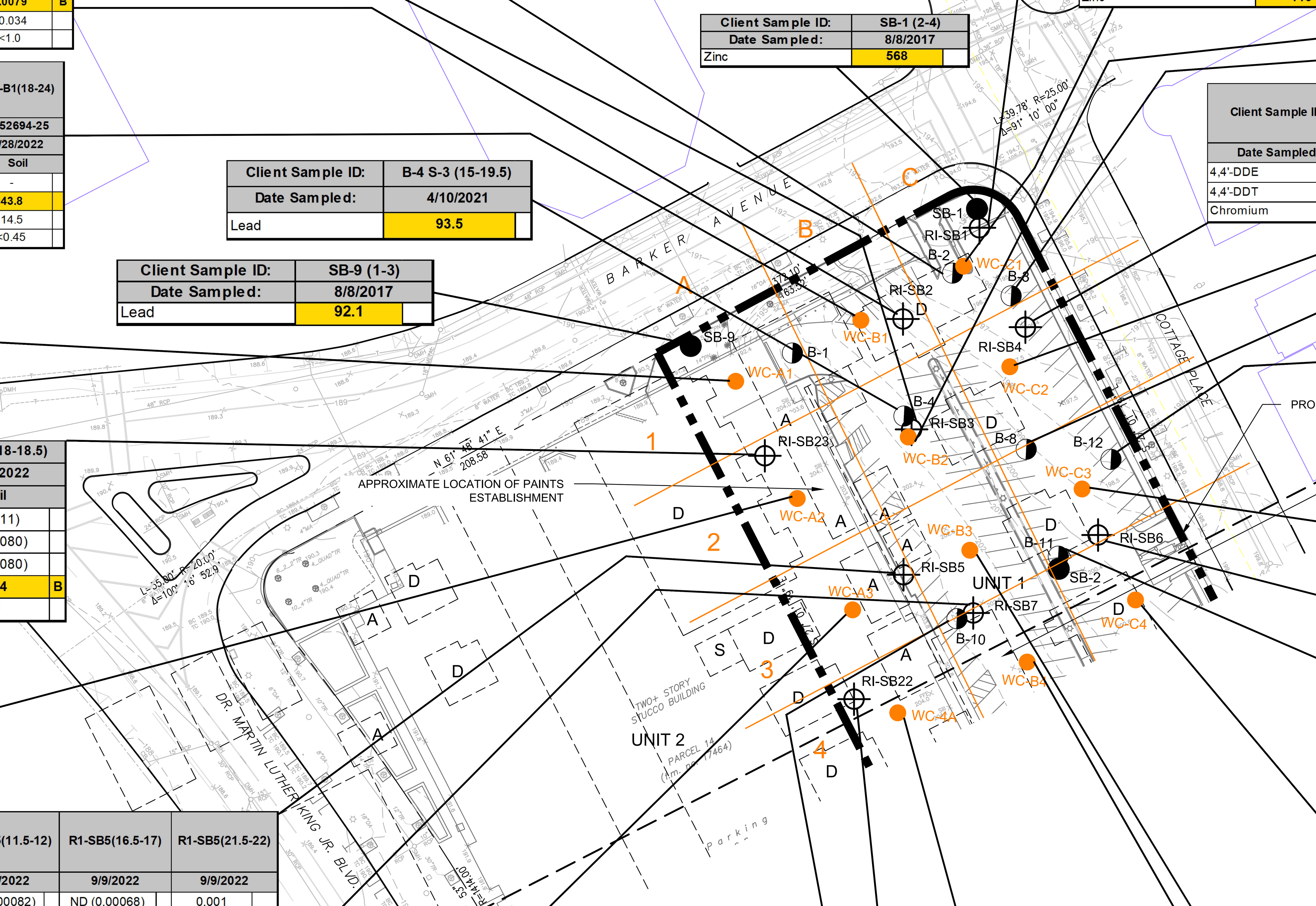
Client Sample ID:	B-4 S-3 (15-19.5)
Date Sampled:	4/10/2021
Lead	93.5

Client Sample ID:	SB-9 (1-3)
Date Sampled:	8/8/2017
Lead	92.1

Client Sample ID:	B-8 S-2 10-10.5
Date Sampled:	4/11/2021
Chromium	30.9

Client Sample ID:	B-12 S-2 (9.5-10)
Date Sampled:	4/11/2021
Chromium	31.9

Client Sample ID:	WC-A1(0-6)	
Date Sampled:	10/12/2022	
Matrix:	Soil	
4,4'-DDT	0.0048	B



Client Sample ID:	RI-SB23(3.5-4)		RI-SB23(18-18.5)	
Date Sampled:	10/10/2022		10/10/2022	
Matrix:	Soil		Soil	
Acetone	0.09		ND (0.011)	
4,4'-DDD	0.0041		ND (0.00080)	
4,4'-DDE	0.0061		ND (0.00080)	
4,4'-DDT	0.0048	B	0.0044	B
Chromium	31.1		24.9	

Client Sample ID:	WC-C3(0-6)		WC-C3(6-12)		WC-C3(12-18)	
Date Sampled:	9/28/2022		9/28/2022		9/28/2022	
Matrix:	Soil		Soil		Soil	
Benzo(a)anthracene	1.5		0.0205	J	ND (0.033)	
Benzo(a)pyrene	1.26		ND (0.036)		ND (0.033)	
Benzo(b)fluoranthene	1.48		0.0316	J	ND (0.033)	
Chrysene	1.25		0.0301	J	ND (0.033)	
Indeno(1,2,3-cd)pyrene	0.906		0.0185	J	ND (0.033)	
4,4'-DDD	-		0.0091		0.0027	
4,4'-DDT	-		0.0081	B	0.0021	B
Copper	83.9		11.7		66	
Lead	277		72.7		<11	
Nickel	15.7		12.9		40.5	
Zinc	125		58.2		38.7	

Client Sample ID:	WC-A2(0-6)
Date Sampled:	10/12/2022
Matrix:	Soil
4,4'-DDD	0.0066
4,4'-DDE	0.0064

Client Sample ID:	R1-SB6(4.5-5)		R1-SB6(11.5-12)		R1-SB6(16-16.5)		R1-SB6(20-20.5)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022		9/9/2022	
Acetone	0.0679		0.0576		ND (0.010)		0.0273	
Indeno(1,2,3-cd)pyrene	0.574		ND (0.040)		0.045		ND (0.038)	
4,4'-DDT	0.004	B	0.0047	B	0.0053	B	0.0099	B
Chromium	22.3		25.9		33.7		30	
Lead	445		11.2		41.2		9.1	

Client Sample ID:	R1-SB5(4.5-5)		R1-SB5(7.5-8)		R1-SB5(11.5-12)		R1-SB5(16.5-17)		R1-SB5(21.5-22)	
Date Sampled:	9/9/2022		9/9/2022		9/9/2022		9/9/2022		9/9/2022	
4,4'-DDD	ND (0.00071)		0.0046	B	ND (0.00082)		ND (0.00068)		0.001	
4,4'-DDT	0.0016	B	0.0038	B	0.0069	B	0.0037	B	0.0051	B
Chromium	38.8		25.1		27.1		13.8		11.5	

Client Sample ID:	B-11 S-1 (0-7.5)	B-11 S-2 (7.5-15)
Date Sampled:	4/10/2021	4/10/2021
Chromium	20.9	302
Lead	166	2.6
Nickel	14.5	79.1
Zinc	120	75.7

Client Sample ID:	WC-A3(6-12)		WC-A3(12-18)	
Date Sampled:	10/12/2022		10/12/2022	
Matrix:	Soil		Soil	
4,4'-DDD	ND (0.00079)		0.0045	
4,4'-DDE	0.0011		0.0037	
4,4'-DDT	0.0048	B	0.0134	

Client Sample ID:	RI-SB-7(4.5'-5')		RI-SB-7(9.5'-10')		RI-SB-7(14.5'-15')		RI-SB-7(24.5'-25')		RI-SB-7(29.5'-30')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022		9/10/2022		9/10/2022	
4,4'-DDD	0.0019		0.0065		0.001		0.00086		ND (0.00073)	
4,4'-DDT	0.0623	B	0.0026	B	0.0091	B	0.0071	B	0.0033	B
Chromium	31.1		22		33.7		13.8		15.2	
Lead	7.9		196		12.8		3.1		2.9	
Silver	<2.7		<0.54		<1.1		2		2.1	
Zinc	43.9		159		52.4		31.4		29.2	

Client Sample ID:	WCC4(0-6)		WCC4(6-12)		WCC4(11-11.5)		WCC4(18-24)	
Date Sampled:	9/29/2022		9/29/2022		9/29/2022		9/29/2022	
Acetone	-		-		0.0535		-	
Benzo(a)anthracene	1.02		0.0526	J	-		ND (0.035)	
Benzo(b)fluoranthene	1.12		ND (0.18)		-		ND (0.035)	
Indeno(1,2,3-cd)pyrene	0.621		ND (0.18)		-		ND (0.035)	
4,4'-DDD	0.0034		0.0136		-		ND (0.00065)	
4,4'-DDT	0.0084	B	0.0075	B	-		0.0021	B
Barium	122		140		-		378	
Chromium	23.6		24.1		-		54.2	
Lead	69.3		644		-		6.6	
Mercury	0.091		0.25		-		<0.033	
Zinc	95.2		234		-		72.2	

Client Sample ID:	WC-A4(0-6)
Date Sampled:	10/12/2022
Matrix:	Soil
Chromium, Hexavalent	1.3

Client Sample ID:	B-10 S-2 (15-19.5)
Date Sampled:	4/10/2021
Mercury	0.32
Lead	120
Zinc	111

LEGEND:

- RI-SB1 (boring symbol) - REMEDIAL INVESTIGATION BORINGS
- A - HISTORICAL AUTO STORAGE/GARAGE
- D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS
- S - STORES
- B-13 (symbol) - BORING NUMBER AND APPROX. LOCATION BY SESI (COMPLETED APRIL 2021)
- SB-4 (symbol) - SOIL BORING LOCATION (2018 BY AKRF 2017/2018)
- WC-A7 (symbol) - WASTE CLASS SAMPLE

Client Sample ID: / Lab Sample ID: / Date Sampled: / Matrix:	USCOs	RRSCOs
Acetone	0.05	100
Ethylbenzene	1	41
Xylene (total)	0.26	100
Benzo(a)anthracene	1	1
Benzo(a)pyrene	1	1
Benzo(b)fluoranthene	1	1
Chrysene	1	3.9
Indeno(1,2,3-cd)pyrene	0.5	0.5
Barium	350	400
Chromium	30	180
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Zinc	109	10000
Chromium, Hexavalent	1	110

Client Sample ID:	RI-SB22(2.5-3)		RI-SB22(7-7.5)		RI-SB22(12.5-13)		RI-SB22(24-24.5)	
Date Sampled:	10/11/2022		10/11/2022		10/11/2022		10/11/2022	
Dibenzo(a,h)anthracene	0.399		ND (0.037)		ND (0.041)		0.042	
Indeno(1,2,3-cd)pyrene	0.707		ND (0.037)		ND (0.041)		0.0921	
4,4'-DDD	0.0054		ND (0.00077)		ND (0.00084)		ND (0.00070)	
4,4'-DDT	0.007	B	0.0046	B	0.0036	B	0.0038	B
Barium	862		105		130		47.1	
Copper	59.2		17		23		11.1	
Lead	3120		10.2		6.2		2.4	
Mercury	0.24		<0.036		<0.040		<0.034	
Silver	3.5		0.78		0.98		<0.60	
Zinc	752		45.7		63.8		22.1	

Client Sample ID:	WCB4(0-6)	WCB4(6-12)
Date Sampled:	9/29/2022	9/29/2022
Matrix:	Soil	Soil
Chromium	37.1	23.2
Lead	68.1	553
Mercury	0.15	0.97
Zinc	78.5	138

Client Sample ID:	WC-B3(0-6)		WC-B3(6-12)		WC-B3(12-18)	
Date Sampled:	9/28/2022		10/12/2022		10/12/2022	
Matrix:	Soil		Soil		Soil	
4,4'-DDD	-		0.0037		ND (0.00079)	
4,4'-DDT	-		0.0042	B	0.0012	B
Lead	-		88.4		22	
Nickel	30.4		22.5		28.9	
Zinc	-		125		49.7	
Chromium	47.7		33.6		30.6	
Chromium, Hexavalent	-		2.9		<0.47	

REFERENCE
PREVIOUS INVESTIGATION & SITE INFORMATION TAKEN FROM "SOIL SAMPLE CONCENTRATIONS ABOVE NYSDEC SCO'S" PREPARED BY ARKF, DATED MAY 2, 2018.

Scale: 1"= 40'
0 20 40 80 120 160

SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

dwg by: AG
chk by: SG
scale: AS NOTED
date: 03/13/2023

WP MALL CLEANERS & GAS STATION SITE
(BCP C360221)
250 HAMILTON AVENUE
WHITE PLAINS, NY

title: SOIL SAMPLE LOCATIONS AND CONCENTRATION PLAN

job no. 12636
drawing no.
FIG-2.1A

N:\ACAD\12636\CAD\12636.DWG.PROP_SAMP_DATA-4.1A_B.DWG 03/13/23 02:52:35PM, apg, LAYOUT:FIG-4.1B

Client Sample ID:	RI-SB-8(4.5'-5')		RI-SB-8(9.5'-10')		RI-SB-8(14.5'-15')		RI-SB-8(19.5'-20')		RI-SB-8(24.5'-25')		RI-SB-8(29.5'-30')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022		9/10/2022		9/10/2022		9/10/2022	
Indeno(1,2,3-cd)pyrene	0.0488		0.629		ND (0.036)		ND (0.037)		ND (0.038)		ND (0.037)	
4,4'-DDD	ND (0.00066)		0.0045		0.0011		0.0011		ND (0.00069)		ND (0.00074)	
4,4'-DDT	0.0029	B	0.0096	B	0.0051	B	0.0058	B	0.005	B	0.0043	B
Arsenic	17.3		4.9		<4.3		<2.2		<2.4		<11	
Chromium	24.9		19.8		29.7		17.7		10.5		50	
Lead	210		234		9		3.6		<2.4		3.7	
Nickel	18.4		16.4		19		15.3		6.5		30.9	
Zinc	156		157		57.4		36.4		<24		59.7	

Client Sample ID:	B-16 S-1 (6-6.5)	
Date Sampled:	4/11/2021	
Mercury	0.19	
Copper	365	
Lead	773	
Zinc	617	
4,4'-DDD	0.011	
4,4'-DDE	0.006	J

Client Sample ID:	RI-SB-9(4.5'-5')		RI-SB-9(9.5'-10')		RI-SB-9(14.5'-15')		RI-SB-9(19.5'-20')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022		9/10/2022	
Dieldrin	0.0077		ND (0.00079)		ND (0.00065)		ND (0.00067)	
4,4'-DDD	0.0205		ND (0.00079)		0.0006	J	ND (0.00067)	
4,4'-DDE	0.0142		ND (0.00079)		ND (0.00065)		ND (0.00067)	
4,4'-DDT	0.0039	B	0.0026	B	0.0071	B	0.0052	B
Barium	1100		88.4		149		199	
Chromium	15.1		29		31.5		53.8	
Lead	667		7.3		2.9		4.2	
Silver	<0.56		3.4		<0.56		<2.8	
Zinc	693		47		45.9		67.3	

Client Sample ID:	WCC5(0-6)		WCC5(6-12)		WCC5(12-18)	
Date Sampled:	9/29/2022		9/29/2022		9/29/2022	
Matrix:	Soil		Soil		Soil	
Dieldrin	0.0062		ND (0.00071)		0.00085	
4,4'-DDD	0.0149		0.0028		0.0037	
4,4'-DDE	0.0191		0.0012		0.0037	
4,4'-DDT	0.0081	B	0.0034	B	0.0022	B
Barium	993		192		263	
Lead	1650		200		161	
Zinc	452		100		116	

Client Sample ID:	B-15 S-1 (0-7.5)	B-15 S-2 (7.5-15)
Date Sampled:	4/10/2021	4/10/2021
Lead	160	7.6
Zinc	276	30.5
Acetone	0.069	0.055

Client Sample ID:	B-18 S-1 1.5-5.5
Date Sampled:	4/11/2021
Chromium	33.1
Manganese	2050
Client Sample ID:	B-18 S-2 10-10.5
Chromium	34.2

Client Sample ID:	SB-11 (17-19)
Date Sampled:	2/6/2018
1,2,4-Trimethylbenzene	60
1,3,5-Trimethylbenzene	17
Ethylbenzene	11
Isopropylbenzene	4.1
n-Propylbenzene	15
Xylenes, Total	18

Client Sample ID:	WCB5(0-6)		WCB5(6-12)		WCB5(24-30)	
Date Sampled:	9/29/2022		9/29/2022		9/29/2022	
Matrix:	Soil		Soil		Soil	
Benzo(a)pyrene	0.275		1.05		ND (0.036)	
Benzo(b)fluoranthene	0.333		1.28		ND (0.036)	
Indeno(1,2,3-cd)pyrene	0.387		0.539		ND (0.036)	
4,4'-DDD	ND (0.00066)		0.01		0.0056	
4,4'-DDE	ND (0.00066)		0.0016		0.0047	
4,4'-DDT	0.0019	B	0.0031	B	0.045	B
Chromium	33.1		24.2		35.4	
Lead	49		219		<12	
Zinc	73.4		150		70.7	

Client Sample ID:	B-17 S-1 (0-7.5)	B-17 S-2 (7.5-15)
Date Sampled:	4/10/2021	4/10/2021
Lead	31	161
Zinc	43	163
Indeno[1,2,3-cd]pyrene	0.51	0.046

Client Sample ID:	RI-SB-11(4.5'-5')		RI-SB-11(9.5'-10')		RI-SB-11(14.5'-15')		RI-SB-11(19.5'-20')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022		9/10/2022	
alpha-Chlordane	ND (0.00068)		ND (0.00066)		ND (0.00067)		0.096	
Dieldrin	ND (0.00068)		ND (0.00066)		ND (0.00067)		ND (0.00071)	
4,4'-DDD	ND (0.00068)		ND (0.00066)		ND (0.00067)		0.0103	
4,4'-DDE	ND (0.00068)		ND (0.00066)		ND (0.00067)		0.475	E
4,4'-DDT	0.0046	B	0.0046	B	0.0031	B	0.0177	B
Barium	131		143		122		497	
Chromium	26.9		27.2		31.1		21.7	
Lead	2.8		2.9		5.8		836	
Zinc	38		44.2		45		618	

Client Sample ID:	RI-SB-10(4.5'-5')		RI-SB-10(9.5'-10')		RI-SB-10(14.5'-15')		RI-SB-10(19.5'-20')		RI-SB-10(29.5'-30')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022		9/10/2022		9/10/2022	
4,4'-DDT	0.0017	B	0.0035	B	0.0056	B	0.0047	B	0.0034	B
Arsenic	<11		26.4		<2.3		<2.2		<2.1	
Chromium	35.5		13.8		20		19.2		18.2	
Lead	7.1		975		27		4.5		3.1	
Selenium	<11		6.5		<2.3		<2.2		<2.1	
Zinc	94.3		286		39.2		32		32.6	

Client Sample ID:	WC-A5(0-6)
Date Sampled:	10/12/2022
Matrix:	Soil
Barium	85.7
Lead	85
Zinc	131

Client Sample ID:	RI-SB20(1-1.5)
Date Sampled:	10/11/2022
Benzo(a)anthracene	1.27
Benzo(a)pyrene	1.26
Benzo(b)fluoranthene	1.37
Chrysene	1.17
Indeno(1,2,3-cd)pyrene	0.869
Chromium	31.4
Lead	82
Zinc	113

Client Sample ID:	RI-SB21(1.5-2)		RI-SB21(18-18.5)		RI-SB21(22.5-23)		RI-SB21(26.5-27)	
Date Sampled:	10/11/2022		10/11/2022		10/11/2022		10/11/2022	
4,4'-DDT	0.0052	B	0.0042	B	0.0049	B	0.0063	B
Lead	288		3.5		4.3		3.3	
Zinc	136		31.8		46.1		24	

Client Sample ID:	SB-10 (3-5)
Date Sampled:	2/7/2018
Chromium	39.5

Client Sample ID:	SB-12 (2-4)
Date Sampled:	2/6/2018
Chromium	113

Client Sample ID:	WCC6(0-6)		WCC6(6-12)		WCC6(12-18)		WCC6(18-24)	
Date Sampled:	9/29/2022		9/29/2022		9/29/2022		9/29/2022	
Benzo(a)anthracene	1.36		0.0647	J	0.0799		ND (0.035)	
Benzo(a)pyrene	1.19		ND (0.19)		0.101		ND (0.035)	
Benzo(b)fluoranthene	1.51		ND (0.19)		0.14		ND (0.035)	
Chrysene	1.23		ND (0.19)		0.0986		ND (0.035)	
Indeno(1,2,3-cd)pyrene	0.786		ND (0.19)		0.0998		ND (0.035)	
4,4'-DDD	0.0016		0.0029		0.0071		ND (0.00070)	
4,4'-DDT	0.0069	B	0.009		0.0114	B	0.00094	B
Chromium	19.2		23.4		23.2		42	
Copper	67.4		16.2		22.4		23	
Lead	203		102		118		6.5	
Mercury	0.22		<0.032		<0.027		<0.028	
Zinc	146		86.8		95.9		45.1	

Client Sample ID:	SB-18 (12-14)
Date Sampled:	2/6/2018
1,2,4-Trimethylbenzene	100
1,3,5-Trimethylbenzene	34
Ethylbenzene	11
Isopropylbenzene	2.4
n-Propylbenzene	7.2
Xylenes, Total	78

Client Sample ID:	SB-13 (10-12)
Date Sampled:	2/6/2018
1,2,4-Trimethylbenzene	69
1,3,5-Trimethylbenzene	22
Ethylbenzene	14
n-Propylbenzene	12
Toluene	0.87
Xylenes, Total	68

Client Sample ID:	RI-SB13 (4.5-5)		RI-SB13 (8-8.5)		RI-SB13 (12-12.5)	
Date Sampled:	9/12/2022		9/12/2022		9/12/2022	
4,4'-DDT	0.0066	B	0.0036	B	0.0032	B
Copper	7.4		18.5		78.8	

Client Sample ID:	SB-14 (2-4)		SB-14 (15-16)	
Date Sampled:	2/6/2018		2/6/2018	
Lead	140		NE	
1,2,4-Trimethylbenzene	NE		19	
1,3,5-Trimethylbenzene	NE		11	
Benzene	NE		0.12	J
Ethylbenzene	NE		4.9	
Isopropylbenzene	NE		2.5	
n-Propylbenzene	NE		4.1	
Xylenes, Total	NE		17	J

Client Sample ID:	RI-SB19(11.5-12)		RI-SB19(29-29.5)	
Date Sampled:	10/11/2022		10/11/2022	
4,4'-DDT	0.0041	B	0.0032	B
Chromium	16.2		36.3	

Client Sample ID:	RI-SB18(22.5-23)	
Date Sampled:	10/11/2022	
4,4'-DDT	0.004	B

Client Sample ID:	WCC7(0-6)		WCC7(12-18)	
Date Sampled:	9/29/2022		9/29/2022	
4,4'-DDT	0.0041	B	0.0035	B
Chromium	19.8		39.8	
Lead	73.1		6.2	

Client Sample ID:	WC-A7(0-6)		WC-A7(18-24)	
Date Sampled:	10/12/2022		10/12/2022	
Matrix:	Soil		Soil	
Barium	80		464	
Chromium, Hexavalent	1.3		<0.42	

Client Sample ID:	RI-SB-12(4.5'-5')		RI-SB-12(9.5'-10')		RI-SB-12(14.5'-15')	
Date Sampled:	9/10/2022		9/10/2022		9/10/2022	
4,4'-DDT	0.005	B	0.0087	B	0.0036	B
Barium	427		111		97.2	
Chromium	120		27.6		31.3	
Nickel	75.7		18.5		16.4	

Client Sample ID:	RI-SB17(1.5-2)		RI-SB17(6-6.5)		RI-SB17(21-21.5)	
Date Sampled:	10/11/2022		10/11/2022		10/11/2022	
4,4'-DDT	0.0036	B	0.0035	B	0.0041	B
Aroclor 1260	0.308		0.0197	J	ND (0.040)	
Lead	186		50.9		4.2	
Mercury	0.38		<0.033		<0.033	
Zinc	121		99.6		40.8	

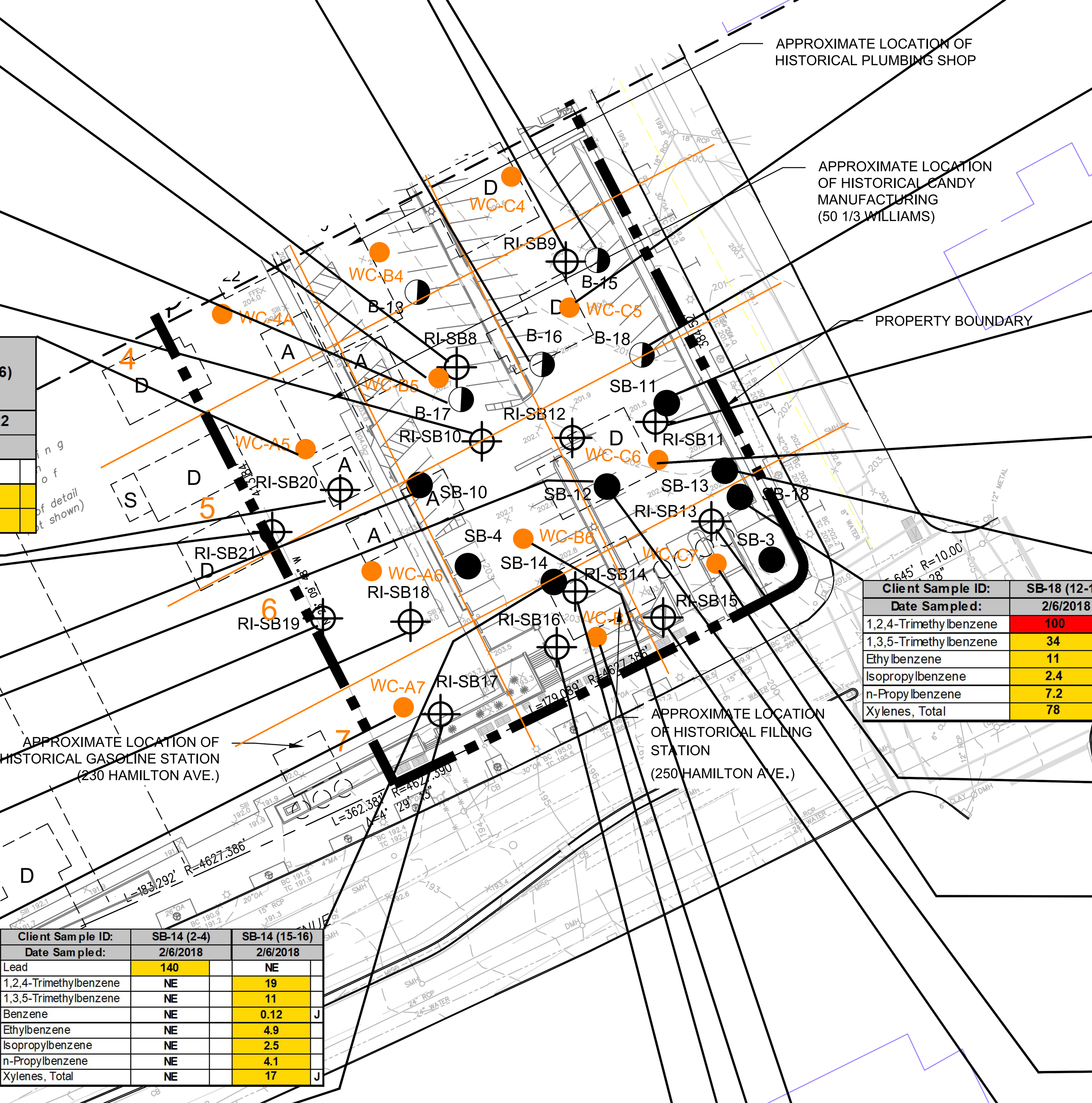
Client Sample ID:	RI-SB16 (4.5-5)		RI-SB16 (7.5-8)		RI-SB16 (12-12.5)	
Date Sampled:	9/12/2022		9/12/2022		9/12/2022	
Indeno(1,2,3-cd)pyrene	0.0521		0.0955		0.554	
4,4'-DDT	0.0049	B	0.0022	B	0.0074	B
Chromium	29.1		32.2		22.2	
Zinc	67.9		115		54.4	

Client Sample ID:	RI-SB15(4.5-5)	RI-SB15(17-17.5)	RI-SB15(20.5-21)	RI-SB15(29.5-30)
Date Sampled:	9/28/2022	9/28/2022	9/28/2022	9/28/2022
Ethylbenzene	ND (0.00082)	1.92	2.44	ND (0.0010)
Xylene (total)	ND (0.00082)	3.17	0.293	ND (0.0010)
Chromium	25.6	19.2	29.4	34.9
Lead	79.3	21.6	5.3	13.3
Manganese	318	3320	244	1240

Client Sample ID:	RI-SB14(4.5-5)	RI-SB14(9.5-10)	RI-SB14(14.5-15)	RI-SB14(19.5-20)	RI-SB14(21.5-22)	RI-SB14(25.5-26)
Date Sampled:	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022
Acetone	ND (0.0091)	0.0947	0.0272	ND (0.56)	ND (0.54)	ND (0.58)
Ethylbenzene	ND (0.00091)	ND (0.0012)	ND (0.00099)	2.02	37.3	26.9
Xylene (total)	ND (0.00091)	ND (0.0012)	0.0015	5.94	110	80.8
Chromium	45.5	28.4	30.3	16.7	34.3	32.6
Nickel	30.2	17.8	20.4	12.1	20.4	18.8

Client Sample ID:	WCB7(6-12)		WCB7(12-18)		WCB7(15.5-16)		WCB7(18-24)		WCB7(18-18.5)		WCB7(24-30)	
Date Sampled:	9/29/2022		9/29/2022		9/29/2022		9/29/2022		9/29/2022		9/29/2022	
Matrix:	Soil		Soil		Soil		Soil				Soil	
Acetone	-		-		0.0639		-		ND (0.57)		-	
Ethylbenzene	-		-		ND (0.00093)		-		2.9		-	
Xylene (total)	-		-		ND (0.00093)		-		4.33		-	
4,4'-DDT	0.0034		0.0024	B	-		0.0038	B	-		0.0025	B
Chromium	29.5		33.7		-		39.4		-		32.4	
Lead	67.1		37.3		-		8.9		-		7.7	

Client Sample ID:	WCB6(6-12)	WCB6(9.5-10)	WCB6(24-30)
Date Sampled:	9/29/2022	9/29/2022	9/29/2022
Matrix:	Soil	Soil	Soil
Acetone	-	0.0622	-
Copper	25.2	-	60.1
Lead	100	-	<12
Mercury	0.29	-	<0.033



LEGEND:

- RI-SB1 - REMEDIAL INVESTIGATION BORINGS
- A - HISTORICAL AUTO STORAGE/GARAGE
- D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS
- S - STORES
- B-13 - BORING NUMBER AND APPROX. LOCATION BY SESI (COMPLETED APRIL 2021)
- SB-4 - SOIL BORING LOCATION (2018 BY AKRF 2017/2018)
- WC-A7 - WASTE CLASS SAMPLE

Client Sample ID:	USCOs	RRSCOs
Lab Sample ID:		
Date Sampled:		
Matrix:		
Acetone	0.05	100
Ethylbenzene	1	41
Xylene (total)	0.26	100
Benzo(a)anthracene	1	1
Benzo(a)pyrene	1	1
Benzo(b)fluoranthene	1	1
Chrysene	1	3.9
Indeno(1,2,3-cd)pyrene	0.5	0.5
Barium	350	400
Chromium	30	180
Copper	50	270
Lead	63	400
Mercury	0.18	0.81
Nickel	30	310
Zinc	109	10000
Chromium, Hexavalent	1	110

REFERENCE
PREVIOUS INVESTIGATION & SITE INFORMATION TAKEN FROM "SOIL SAMPLE CONCENTRATIONS ABOVE NYSDEC SCO'S" PREPARED BY ARKF, DATED MAY 2, 2018.

Scale: 1"= 40'
0 20 40 80 120 160

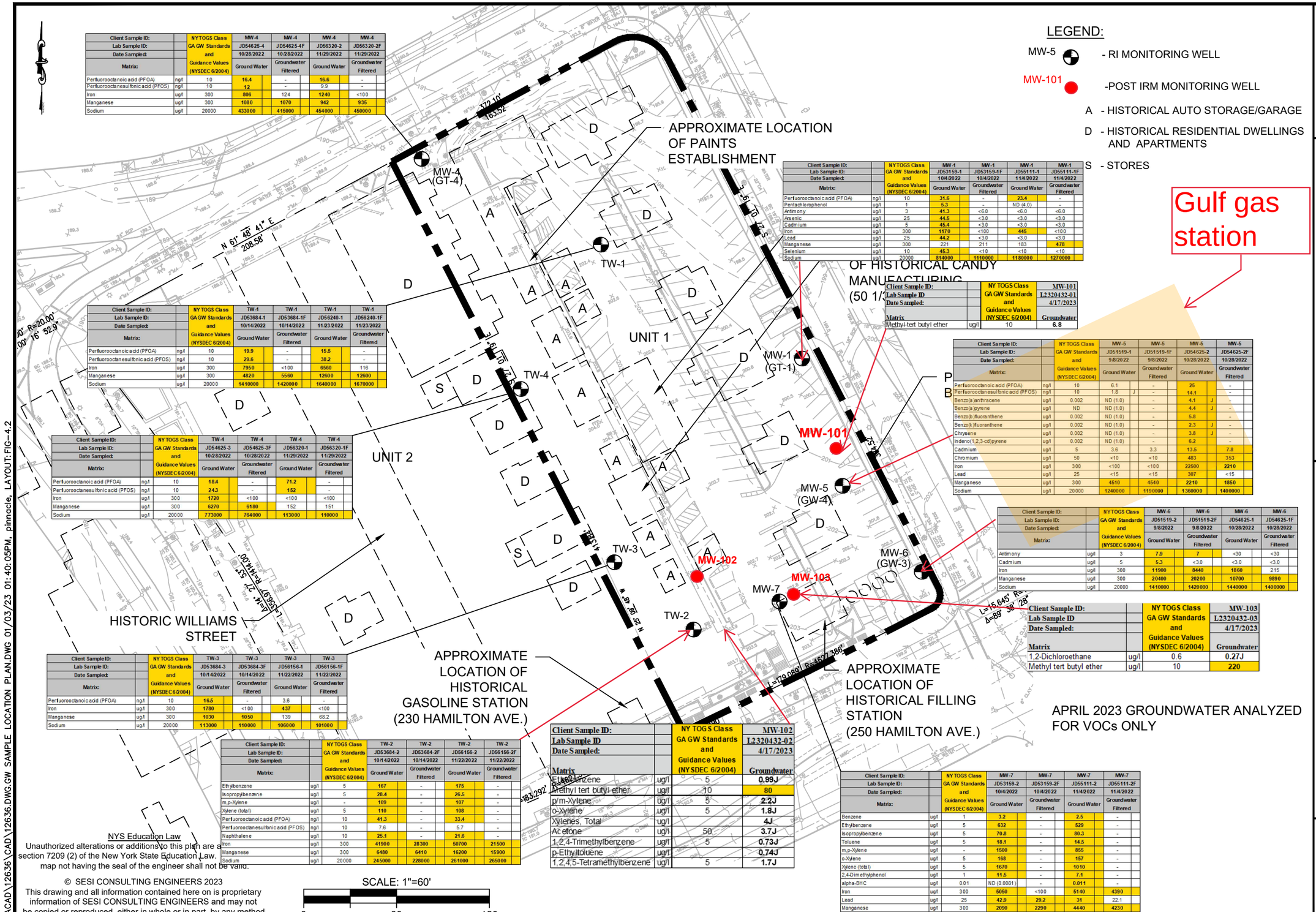
SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

dwg by: AG
chk by: SG
scale: AS NOTED
date: 03/13/2023

WP MALL CLEANERS & GAS STATION SITE
(BCP C360221)
250 HAMILTON AVENUE
WHITE PLAINS, NY

title: SOIL SAMPLE LOCATIONS AND CONCENTRATION PLAN

job no. 12636
drawing no.
FIG-2.1B



Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-4	MW-4	MW-4	MW-4
Lab Sample ID:			JD54625-4	JD54625-4F	JD56320-2	JD56320-2F
Date Sampled:			10/28/2022	10/28/2022	11/29/2022	11/29/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	16.4	-	16.6	-
Perfluorooctanesulfonic acid (PFOS)	ng/l	10	12	-	9.9	-
Iron	ug/l	300	806	124	1240	<100
Manganese	ug/l	300	1080	1070	942	935
Sodium	ug/l	20000	433000	415000	454000	450000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	TW-1	TW-1	TW-1	TW-1
Lab Sample ID:			JD53684-1	JD53684-1F	JD56240-1	JD56240-1F
Date Sampled:			10/14/2022	10/14/2022	11/23/2022	11/23/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	19.9	-	15.5	-
Perfluorooctanesulfonic acid (PFOS)	ng/l	10	29.6	-	38.2	-
Iron	ug/l	300	7950	<100	6560	116
Manganese	ug/l	300	4820	5560	12600	12600
Sodium	ug/l	20000	1410000	1420000	1640000	1670000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	TW-4	TW-4	TW-4	TW-4
Lab Sample ID:			JD54625-3	JD54625-3F	JD56320-1	JD56320-1F
Date Sampled:			10/28/2022	10/28/2022	11/29/2022	11/29/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	18.4	-	71.2	-
Perfluorooctanesulfonic acid (PFOS)	ng/l	10	24.3	-	152	-
Iron	ug/l	300	1720	<100	<100	<100
Manganese	ug/l	300	6270	6180	152	151
Sodium	ug/l	20000	773000	764000	113000	110000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	TW-3	TW-3	TW-3	TW-3
Lab Sample ID:			JD53684-3	JD53684-3F	JD56156-1	JD56156-1F
Date Sampled:			10/14/2022	10/14/2022	11/22/2022	11/22/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	16.5	-	3.6	-
Iron	ug/l	300	1780	<100	437	<100
Manganese	ug/l	300	1030	1050	139	68.2
Sodium	ug/l	20000	113000	110000	106000	101000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	TW-2	TW-2	TW-2	TW-2
Lab Sample ID:			JD53684-2	JD53684-2F	JD56156-2	JD56156-2F
Date Sampled:			10/14/2022	10/14/2022	11/22/2022	11/22/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Ethylbenzene	ug/l	5	167	-	175	-
Isopropylbenzene	ug/l	5	28.4	-	26.5	-
m,p-Xylene	ug/l	-	109	-	107	-
Xylene (total)	ug/l	5	110	-	108	-
Perfluorooctanoic acid (PFOA)	ng/l	10	41.3	-	33.4	-
Perfluorooctanesulfonic acid (PFOS)	ng/l	10	7.6	-	5.7	-
Naphthalene	ug/l	10	25.1	-	21.6	-
Iron	ug/l	300	41900	28300	50700	21500
Manganese	ug/l	300	6480	6410	16200	15900
Sodium	ug/l	20000	245000	228000	261000	265000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-1	MW-1	MW-1	MW-1
Lab Sample ID:			JD53159-1	JD53159-1F	JD55111-1	JD55111-1F
Date Sampled:			10/4/2022	10/4/2022	11/4/2022	11/4/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	31.6	-	23.4	-
Pentachlorophenol	ug/l	1	5.3	-	ND (4.0)	-
Antimony	ug/l	3	41.3	<6.0	<6.0	<6.0
Arsenic	ug/l	25	44.5	<3.0	<3.0	<3.0
Cadmium	ug/l	5	45.4	<3.0	<3.0	<3.0
Iron	ug/l	300	117	<100	445	<100
Lead	ug/l	25	44.2	<3.0	<3.0	<3.0
Manganese	ug/l	300	221	211	183	478
Selenium	ug/l	10	45.3	<10	<10	<10
Sodium	ug/l	20000	814000	1110000	1180000	1270000

Client Sample ID:		NY TOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-101
Lab Sample ID			L2320432-01
Date Sampled:			4/17/2023
Matrix			Groundwater
Methyl-tert butyl ether	ug/l	10	6.8

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-5	MW-5	MW-5	MW-5
Lab Sample ID:			JD51519-1	JD51519-1F	JD54625-2	JD54625-2F
Date Sampled:			9/8/2022	9/8/2022	10/28/2022	10/28/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Perfluorooctanoic acid (PFOA)	ng/l	10	6.1	-	25	-
Perfluorooctanesulfonic acid (PFOS)	ng/l	10	1.8 J	-	14.1	-
Benzo(a)anthracene	ug/l	0.002	ND (1.0)	-	4.1 J	-
Benzo(a)pyrene	ug/l	ND	ND (1.0)	-	4.4 J	-
Benzo(b)fluoranthene	ug/l	0.002	ND (1.0)	-	5.8	-
Benzo(k)fluoranthene	ug/l	0.002	ND (1.0)	-	2.3 J	-
Chrysene	ug/l	0.002	ND (1.0)	-	3.8 J	-
Indeno(1,2,3-cd)pyrene	ug/l	0.002	ND (1.0)	-	6.2	-
Cadmium	ug/l	5	3.6	3.3	13.5	7.8
Chromium	ug/l	50	<10	<10	483	353
Iron	ug/l	300	<100	<100	22500	2210
Lead	ug/l	25	<15	<15	307	<15
Manganese	ug/l	300	4510	4540	2210	1850
Sodium	ug/l	20000	1240000	1190000	1360000	1400000

Client Sample ID:		NY TOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-102
Lab Sample ID			L2320432-02
Date Sampled:			4/17/2023
Matrix			Groundwater
Ethylbenzene	ug/l	5	0.99J
Methyl tert butyl ether	ug/l	10	80
p/m-Xylene	ug/l	5	2.2J
o-Xylene	ug/l	5	1.8J
Xylenes, Total	ug/l		4J
Acetone	ug/l	50	3.7J
1,2,4-Trimethylbenzene	ug/l	5	0.73J
p-Ethyltoluene	ug/l		0.74J
1,2,4,5-Tetramethylbenzene	ug/l	5	1.7J

Client Sample ID:		NY TOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-103
Lab Sample ID			L2320432-03
Date Sampled:			4/17/2023
Matrix			Groundwater
1,2-Dichloroethane	ug/l	0.6	0.27J
Methyl tert butyl ether	ug/l	10	220

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-6	MW-6	MW-6	MW-6
Lab Sample ID:			JD51519-2	JD51519-2F	JD54625-1	JD54625-1F
Date Sampled:			9/8/2022	9/8/2022	10/28/2022	10/28/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Antimony	ug/l	3	7.9	7	<30	<30
Cadmium	ug/l	5	5.3	<3.0	<3.0	<3.0
Iron	ug/l	300	11900	8440	1860	215
Manganese	ug/l	300	20400	20200	10700	9890
Sodium	ug/l	20000	1410000	1420000	1440000	1400000

Client Sample ID:		NYTOGS Class GA GW Standards and Guidance Values (NYSDEC 6/2004)	MW-7	MW-7	MW-7	MW-7
Lab Sample ID:			JD53159-2	JD53159-2F	JD55111-2	JD55111-2F
Date Sampled:			10/4/2022	10/4/2022	11/4/2022	11/4/2022
Matrix:			Ground Water	Groundwater Filtered	Ground Water	Groundwater Filtered
Benzene	ug/l	1	3.2	-	2.5	-
Ethylbenzene	ug/l	5	632	-	529	-
Isopropylbenzene	ug/l	5	70.8	-	80.3	-
Toluene	ug/l	5	18.1	-	14.5	-
m,p-Xylene	ug/l	-	1500	-	855	-
o-Xylene	ug/l	5	168	-	157	-
Xylene (total)	ug/l	5	1670	-	1010	-
2,4-Dimethylphenol	ug/l	1	11.5	-	7.1	-
alpha-BHC	ug/l	0.01	ND (0.0081)	-	0.011	-
Iron	ug/l	300	5050	<100	5140	4390
Lead	ug/l	25	42.9	29.2	31	22.1
Manganese	ug/l	300	2090	2290	4440	4230
Sodium	ug/l	20000	87200	97500	208000	196000

LEGEND:

MW-5 - RI MONITORING WELL

MW-101 -POST IRM MONITORING WELL

A - HISTORICAL AUTO STORAGE/GARAGE

D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS

S - STORES

APRIL 2023 GROUNDWATER ANALYZED FOR VOCs ONLY

NYS Education Law
Unauthorized alterations or additions to this plan are a violation of section 7209 (2) of the New York State Education Law. A copy of this map not having the seal of the engineer shall not be valid.

SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

dwg by: EC
chk by: FL
scale: AS NOTED
date: 12/27/2022

project: WP MALL CLEANERS & GAS STATION SITE (BCP C360221) 250 HAMILTON AVENUE WHITE PLAINS, NY

drawing title: GROUNDWATER SAMPLE LOCATIONS AND CONCENTRATIONS

job no: 12636
drawing no:

FIG-2.2

N:\ACAD\12636\CAD\12636.DWG,GW SAMPLE LOCATION PLAN.DWG 01/03/23 01:40:05PM, pinnacle, LAYOUT:FIG-4.2

Client Sample ID:	RI-SV8
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	23
Benzene	5.4
Carbon disulfide	75.4
Chloroform	17
Cyclohexane	39.6
Ethylbenzene	42
Ethyl Acetate	31
Heptane	19
Hexane	33
Isopropyl Alcohol	4.7
Propylene	56.2
2,2,4-Trimethylpentane	869
Tetrachloroethylene	37
Toluene	8.7
m,p-Xylene	142
o-Xylene	36
Xylenes (total)	178

Client Sample ID:	RI-SV1	
Date Sampled:	10/3/2022	
Matrix:	Soil Vapor Comp.	
Acetone (2-Propanone)	418	
Benzene	6.1	
Carbon disulfide	23	
Chloroform	2.7	J
Cyclohexane	30	
Dichlorodifluoromethane	27	
Ethanol	67.3	
Ethylbenzene	102	
Ethyl Acetate	23	
4-Ethyltoluene	2.5	J
Heptane	17	
Hexane	26	
Isopropyl Alcohol	15	
Methylene chloride	3	
Methyl ethyl ketone	19	
Methylmethacrylate	5.7	
Propylene	41.9	
Styrene	3.6	
1,2,4-Trimethylbenzene	6.4	
1,3,5-Trimethylbenzene	2.2	J
2,2,4-Trimethylpentane	128	
Tertiary Butyl Alcohol	120	
Tetrachloroethylene	30	
Tetrahydrofuran	4.4	
Toluene	49.4	
Trichlorofluoromethane	9	
m,p-Xylene	61.2	
o-Xylene	42	
Xylenes (total)	103	

Client Sample ID:	RI-SV2
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	72
Benzene	16
Carbon disulfide	14
Chloroform	3.1 J
Chloromethane	4.3
Cyclohexane	33
Dichlorodifluoromethane	2.6 J
Ethylbenzene	189
Ethyl Acetate	32
Heptane	41.4
Hexane	87.8
Methylene chloride	12
Methyl ethyl ketone	5
Propylene	1040
Styrene	2 J
2,2,4-Trimethylpentane	143
Tetrachloroethylene	22
Tetrahydrofuran	11
Toluene	65.2
m,p-Xylene	187
o-Xylene	50.4
Xylenes (total)	237

Client Sample ID:	RI-AA2
Date Sampled:	10/3/2022
Matrix:	Ambient Air Comp.
Acetone (2-Propanone)	3.5
Benzene	0.54 J
Carbon disulfide	0.47 J
Chloromethane	0.83
Cyclohexane	5.2
Dichlorodifluoromethane	2
Ethanol	4.5
Ethylbenzene	0.87
Ethyl Acetate	27
Freon 113	1
Heptane	1.3
Isopropyl Alcohol	1.5
Methylene chloride	1.3
Methyl ethyl ketone	0.71
Propylene	1.2
2,2,4-Trimethylpentane	939
Tertiary Butyl Alcohol	0.61
Tetrachloroethylene	0.64
Toluene	2
Trichloroethylene	0.59
Trichlorofluoromethane	1.7
m,p-Xylene	1.3
o-Xylene	0.61 J
Xylenes (total)	1.9

Client Sample ID:	RI-SV3
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	321
Benzene	13
Carbon disulfide	19
Chloroform	7.3
Chloromethane	1.8
Cyclohexane	42
Dichlorodifluoromethane	4.5
Ethanol	27.5
Ethylbenzene	8.3
Heptane	47.1
Hexane	152
Methyl ethyl ketone	11
Propylene	1000
2,2,4-Trimethylpentane	472
Tertiary Butyl Alcohol	51.2
Tetrachloroethylene	43
Tetrahydrofuran	10
Toluene	40.3
Trichlorofluoromethane	2.4
m,p-Xylene	15
o-Xylene	3.6
Xylenes (total)	19

Analyte (ug/m3)	SV-5 8/9/2017
1,3-Butadiene	5.4
Acetone	750
Isopropylbenzene	13
Ethylbenzene	10
Methyl Ethyl Ketone	26
Methylene Chloride	53
n-Heptane	17
n-Hexane	100
Toluene	45
Trichloroethene	13

Client Sample ID:	RI-SV9
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	46.3
Benzene	18 J
Carbon disulfide	150
Cyclohexane	21 J
Ethylbenzene	76
Ethyl Acetate	82.8
Heptane	57.4
Hexane	69.4
Propylene	335
2,2,4-Trimethylpentane	5840
Tetrachloroethylene	18
Toluene	20 J
m,p-Xylene	142
o-Xylene	72.1
Xylenes (total)	214

Client Sample ID:	RI-SV7
Date Sampled:	10/28/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	57.7
Benzene	1.6 J
Carbon disulfide	4
Chloroform	61.5
Cyclohexane	3.8
Dichlorodifluoromethane	31
Ethanol	23.4
Ethylbenzene	3.5
Heptane	3 J
Hexane	8.8
Isopropyl Alcohol	3.2
Methylene chloride	5.6
1,2,4-Trimethylbenzene	2.2 J
2,2,4-Trimethylpentane	4.1
Tertiary Butyl Alcohol	3.6
Tetrachloroethylene	9.5
Toluene	5.3
Trichloroethylene	0.97
m,p-Xylene	7.8
o-Xylene	3.1 J
Xylenes (total)	11

Client Sample ID:	AA-1
Lab Sample ID:	JD54595-1
Date Sampled:	10/28/2022
Matrix:	Ambient Air Comp.
Acetone (2-Propanone)	12
1,3-Butadiene	0.42 J
Benzene	0.58 J
Chloromethane	0.95
Dichlorodifluoromethane	1.9
Ethanol	9.6
Ethylbenzene	0.35 J
Ethyl Acetate	8.3
Hexane	1.2
Isopropyl Alcohol	2.2
Methylene chloride	4.9
Methyl ethyl ketone	0.83
1,1,1-Trichloroethane	4.6
1,2,4-Trimethylbenzene	0.74 J
2,2,4-Trimethylpentane	1
Tetrachloroethylene	0.56
Toluene	1.4
Trichloroethylene	0.23
Trichlorofluoromethane	1.5
m,p-Xylene	0.65 J
Xylenes (total)	0.65 J

Analyte (ug/m3)	SV-2 8/9/2017
2,2,4-Trimethylpentane	15
Acetone	170
Benzene	52
Carbon disulfide	100
Ethylbenzene	38
Methyl Ethyl Ketone	44
n-Heptane	240
n-Hexane	590
Toluene	23

Client Sample ID:	RI-SV6
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Cyclohexane	191000
Heptane	30400
Hexane	85700

Analyte (ug/m3)	SV-1 8/8/2017
1,3-Butadiene	7.2
2,2,4-Trimethylpentane	25
Acetone	170
Benzene	11
Ethylbenzene	50
Methyl Ethyl Ketone	36
n-Hexane	40
n-Propylbenzene	8.6
Toluene	23
Xylene (total)	26

Client Sample ID:	RI-SV10
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	76.3
Benzene	2.7
Carbon disulfide	24
Chloroform	11
Cyclohexane	444
1,2-Dichloroethane	3.6
Dichlorodifluoromethane	2.1 J
Ethanol	4
Ethylbenzene	495
Heptane	90.6
Hexane	206
Methylene chloride	3.8
Methyl ethyl ketone	2.6
Propylene	173
Styrene	2.3 J
2,2,4-Trimethylpentane	649
Tertiary Butyl Alcohol	5.2
Tetrachloroethylene	18
Toluene	18
m,p-Xylene	95.6
o-Xylene	249
Xylenes (total)	345

Client Sample ID:	RI-SV4
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Acetone (2-Propanone)	51.1
Benzene	8
Carbon disulfide	138
Cyclohexane	20
Dichlorodifluoromethane	5.4
Ethanol	4
Ethylbenzene	4.1
Ethyl Acetate	99
Heptane	14
Hexane	29
Methylene chloride	4.2
Methyl ethyl ketone	13
Propylene	75.8
2,2,4-Trimethylpentane	430
Tertiary Butyl Alcohol	4.5
Tetrachloroethylene	46
Tetrahydrofuran	2.2 J
Toluene	27
Trichlorofluoromethane	1.7 J
m,p-Xylene	10
o-Xylene	3 J
Xylenes (total)	13

Client Sample ID:	RI-AA1
Date Sampled:	10/3/2022
Matrix:	Ambient Air Comp.
Acetone (2-Propanone)	4
Benzene	0.31 J
Chloromethane	0.87
Cyclohexane	5.9
Dichlorodifluoromethane	1.8
Ethanol	2.8
Ethyl Acetate	13
Heptane	1.1
Hexane	3
Isopropyl Alcohol	0.79
Methylene chloride	1
Methyl ethyl ketone	0.38 J
2,2,4-Trimethylpentane	88.7
Toluene	0.72 J
Trichlorofluoromethane	1.5
m,p-Xylene	0.61 J
Xylenes (total)	0.61 J

Client Sample ID:	RI-SV5
Date Sampled:	10/3/2022
Matrix:	Soil Vapor Comp.
Cyclohexane	1230 J
2,2,4-Trimethylpentane	901000

Analyte	Matrix A Lower Threshold Level	Matrix B Lower Threshold Level	Matrix C Lower Threshold Level
Vinyl Chloride			6
1,1-Dichloroethene	6		
Methylene Chloride		100	
cis-1,2-Dichloroethene	6		
1,1,1-Trichloroethane		100	
Carbon tetrachloride	6		
Trichloroethene	6		
Tetrachloroethene		100	

LEGEND:

RI-SV1 - REMEDIAL INVESTIGATION SOIL VAPOR SAMPLE LOCATION (OCTOBER 2022)

SV-5 - SOIL VAPOR SAMPLE LOCATION (BY AKRF) (SEPTEMBER 2017)

RI-AA1 - AMBIENT AIR SAMPLE LOCATION

A - HISTORICAL AUTO STORAGE/GARAGE

D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS

S - STORES

APPROXIMATE LOCATION OF PAINTS ESTABLISHMENT

APPROXIMATE LOCATION OF HISTORICAL PLUMBING SHOP

APPROXIMATE LOCATION OF HISTORICAL CANDY MANUFACTURING (50 1/3 WILLIAMS)

PROPERTY BOUNDARY

UNIT 1

UNIT 2

HISTORIC WILLIAMS STREET

APPROXIMATE LOCATION OF HISTORICAL GASOLINE STATION (230 HAMILTON AVE.)

APPROXIMATE LOCATION OF HISTORICAL FILLING STATION (250 HAMILTON AVE.)

SCALE: 1"=60'

0 60 120

NYS Education Law

Unauthorized alterations or additions to this plan are a violation of section 7209 (2) of the New York State Education Law. Copies of this map not having the seal of the engineer shall not be valid.

dwg by: AW
chk by: --
scale: AS NOTED
date: 11/21/2022

SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

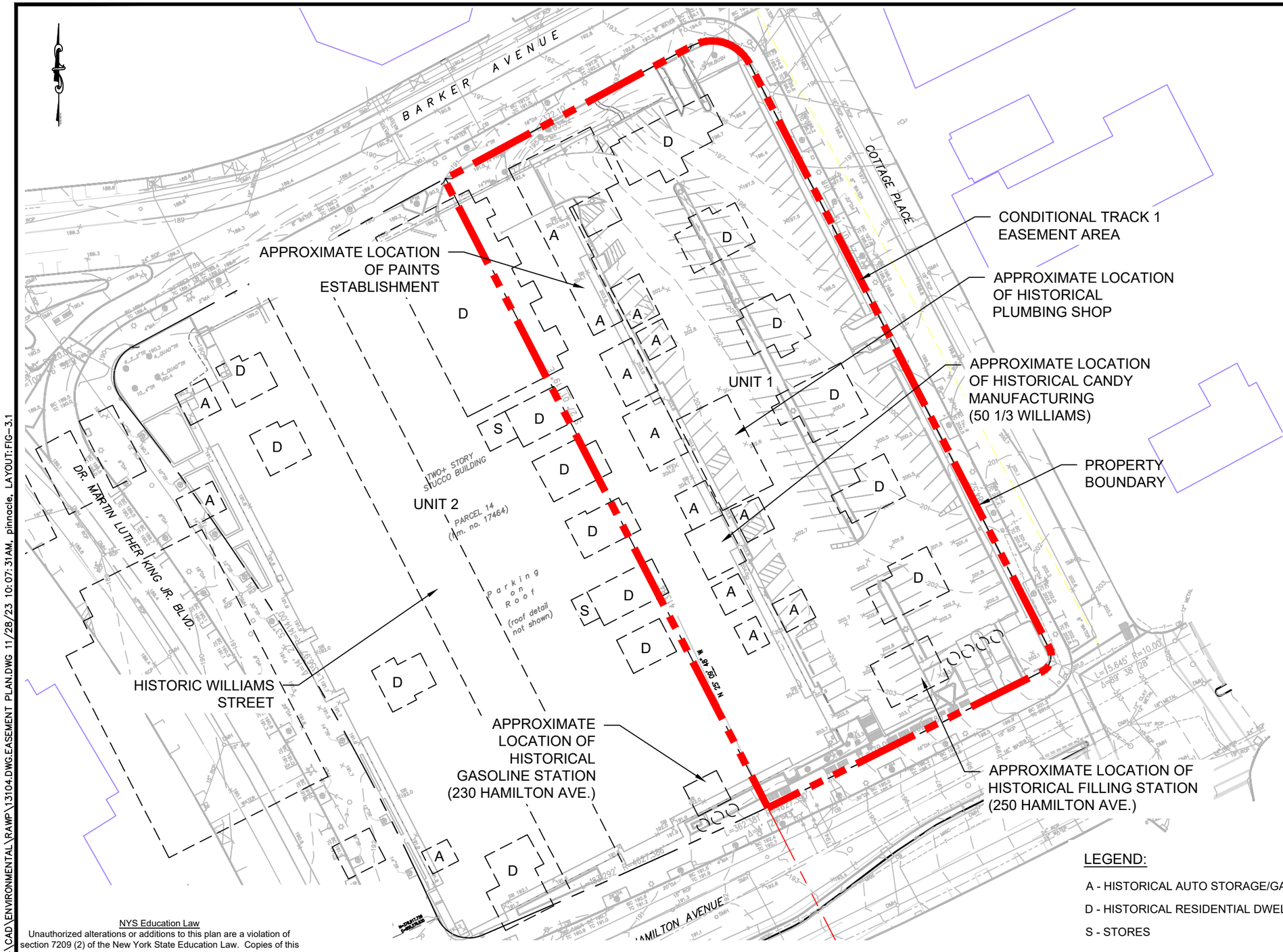
project: WP MALL CLEANERS & GAS STATION SITE (BCP C360221) 250 HAMILTON AVENUE WHITE PLAINS, NY

drawing title: SOIL VAPOR SAMPLE LOCATIONS AND CONCENTRATION PLAN

job no: 12636
drawing no:

FIG-2.3

N:\ACAD\12636\CAD\12636.DWG,SOIL_VAPOR_CONS_SAMPLE_LOCATION_PLAN.DWG 01/03/23 01:32:51PM, pinnacle, LAYOUT: FIG-4.3



LEGEND:

A - HISTORICAL AUTO STORAGE/GARAGE

D - HISTORICAL RESIDENTIAL DWELLINGS AND APARTMENTS

S - STORES

SCALE: 1"=60'

0 60 120

REFERENCE

1. CONDITIONAL BOUNDARIES ARE TAKEN FROM "BROWNFIELD CLEANUP PROGRAM", PREPARED BY LINE & GRADE SURVEYORS D.P.C.. DATED JULY 27, 2023, REV. AUGUST 11, 2023.

N:\ACAD\13104\CAD\ENVIRONMENTAL\RAWP\13104.DWG:EASEMENT PLAN.DWG 11/28/23 10:07:31AM, pinnacle, LAYOUT:FIG-3.1

dwg by: EC
chk by: SG
scale: AS NOTED
date: 11/28/2023

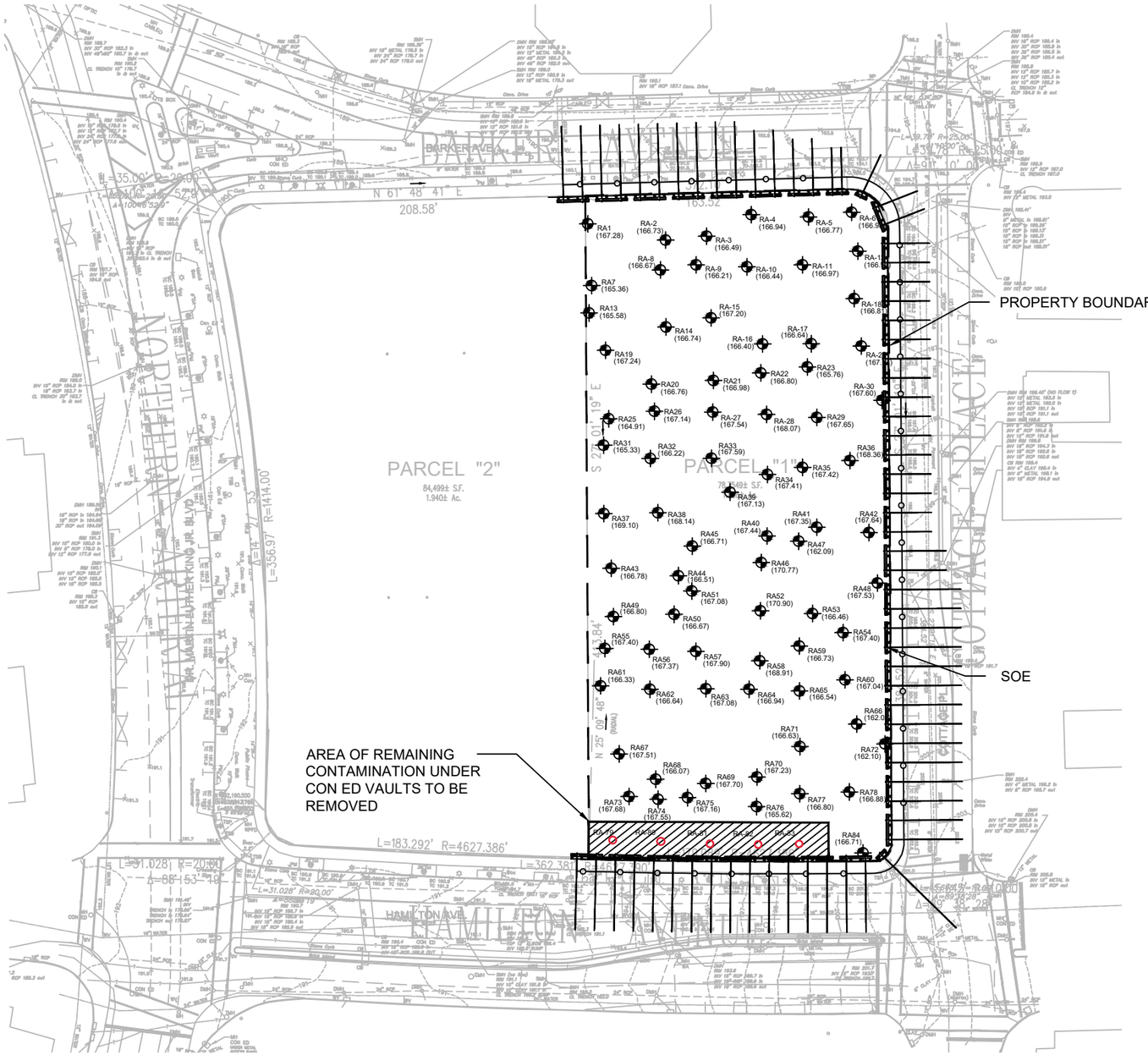
SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 ROUTE 46E, 3RD FLOOR, PARSIPPANY, NJ 07054 PH: 973.808.9050

project: WP MALL CLEANERS & GAS STATION SITE (BCP C360221)
250 HAMILTON AVENUE
WHITE PLAINS, NY

drawing title: BCP ENVIRONMENTAL EASEMENT PLAN

job no: 13104
drawing no:

FIG-3.1



NOTE:
THIS PLAN IS FOR LOCATING BORINGS ONLY.
OTHER SITE WORK SHOWN HERE IS NOT INTENDED FOR CONSTRUCTION.

REFERENCE
1. EXISTING CONDITIONS & BOUNDARYS ARE TAKEN FROM "END-POINT SAMPLE LOCATION SKETCH", PREPARED BY LINE & GRADE SURVEYORS D.P.C, INC. DATED APRIL 27, 2023, REV. 5/9/23.

LEGEND:

RA84 - SAMPLE POINT NUMBER & LOCATION

(166.71) - SAMPLE POINT ELEVATION

RA-79 - PROPOSED SAMPLE NUMBER & LOCATION

SCALE: 1"=80'

0 80 160

dwg by: AW
chk by: SG
scale: AS NOTED
date: 06/28/2023

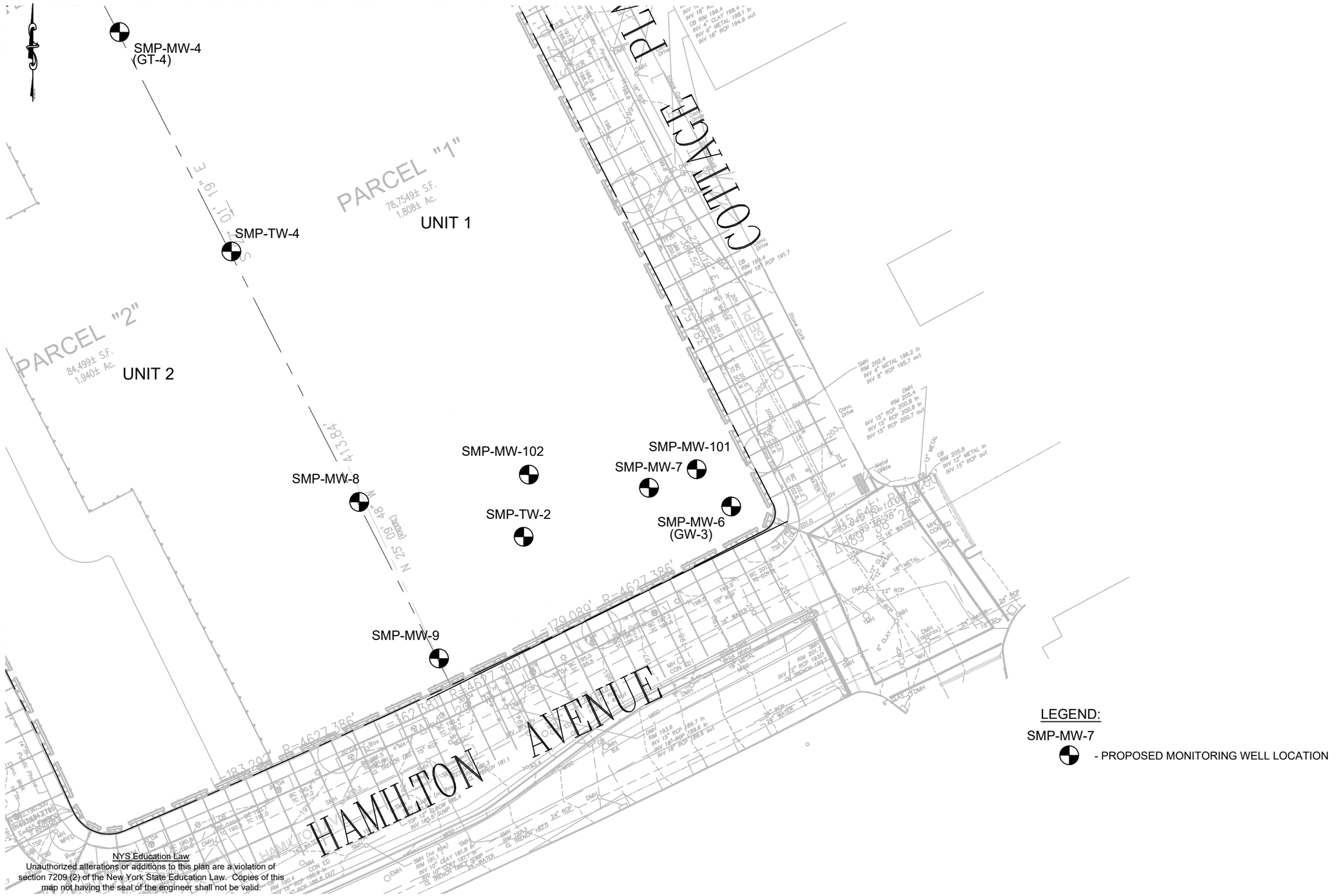
SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

project:
HAMILTON GREEN CONDOMINIUM
HAMILTON AVENUE, CITY OF WHITE PLAINS
COUNTY OF WESTCHESTER, NEW YORK

title:
SOIL EXCAVATION PLAN

job no: 12636
drawing no:
FIG-4.1
1 of 1

N:\ACAD\12636\CAD\12636.DWG.ENDPOINT SAMPLE PLAN.DWG 06/29/23 02:22:45PM, alan.ward, LAYOUT:DWG-1 SAMPLE PLAN



LEGEND:

SMP-MW-7 - PROPOSED MONITORING WELL LOCATION

SCALE: 1"=50'

0 50 100

REFERENCE

1. PLAN TAKEN FROM "MONITOR WELL LOCATION SKETCH PREPARED BY LINE & GRADE SURVEYORS D.P.S. DATED 11/14/2022.
2. SOE SHOWN TAKEN FROM SOE PLAN BY JZN DATED 09/21/2022.

dwg by: EC
chk by: SG
scale: AS NOTED
date: 12/14/2023

SESI CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | SITE CIVIL
959 route 46e, 3rd floor, parsippany, nj 07054 ph: 973.808.9050

project: WP MALL CLEANERS & GAS STATION SITE
(BCP C360221)
250 HAMILTON AVENUE
WHITE PLAINS, NY

title: PROPOSED GROUNDWATER SAMPLE LOCATION PLAN

job no: 12636
drawing no: FIG-4.2

Appendix A:

Typical Monitoring Well Construction Well

SESI CONSULTING ENGINEERS	PROJECT NAME:		MONITORING WELL NO.	
	PROJECT LOCATION:		JOB NO.	
			GROUND ELEVATION:	

BORING BY:	DATE STARTED		DEVELOPMENT PERIOD		INSIDE CASING DIAMETER (in)	
INSPECTOR:	DATE COMPLETED		DEVELOPMENT METHOD		BOREHOLE DIAMETER (in)	
NJ DEP PERMIT NO.:	DATE DEVELOPED		DEVELOPMENT RATE	# gpm	INITIAL WATER LEVEL (ft):	

WELL CONSTRUCTION	DEPTH (ft)	Sample	Blows on Spoon 0/6	6/12	12/18	18/24	REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D.
Depth (feet below grade)	0								
Top of Casing: #									
Ground Surface 0									
Top of Riser #									
	5								
Well Cap:									
Top of Seal # Grout Type:									
Top of Sand Pack Well Key:									
	10								
Riser Pipe:									
Top of Screen	15								
Sand/Gravel									
Pack Size:	20								
Screen Size:									
	25								
	30								
	35								
Bottom of Screen									
Bottom of Boring									
Remarks:	40								

Approximate Change in Strata: _____ Inferred Change in Strata: _ _ _ _ _ _ _ _ _ _ _ _

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE #